



Table of Contents

Tutorials	2
Optical Materials	3
Optical Design Data	7
Optical Coatings	11
Lenses	14
Spherical Lenses	15
Cylindrical Lenses	39
Windows	51
Laser Mirrors	65
Mirror Substrates	66
Laser Mirrors	77
Prisms	107
Beamsplitters	118
Polarizers	126
Optical Filters	136
Optical Equipment	151

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index



Table of Contents

Optical Materials

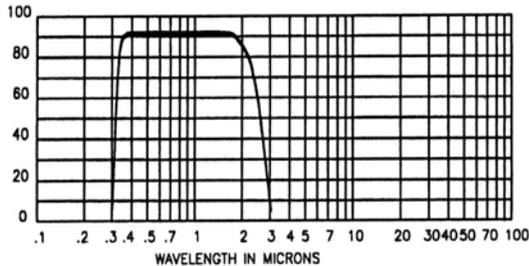
Borosilicate Glass, Bk7	3
UV grade Fused Silica (SiO ₂)	3
Calcium Fluoride (CaF ₂)	3
Magnesium Fluoride (MgF ₂)	3
Crystal Quartz	4
Silicon (Si)	4
Germanium (Ge)	4
Zinc Selenide (ZnSe)	5
Zinc Sulfide (ZnS)	5
Index of Refraction	5

Optical Design Data

Lens Terminology	7
Focal Length Formulas for Singlet Lenses & Mirrors	7
Effective Focal length of Two Thin Lenses	8
F-Number (F/#)	8
Numerical Aperture (N/A)	8
Sagitta (Sag)	8
Using Wedged Windows	9
Selecting a Prism	9
Waveplates	10

Optical Coatings

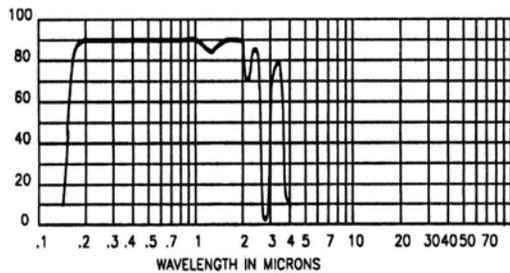
Single Layer Anti-reflection(AR) Coatings	11
Laser Line V-Coatings	11
Double-V Anti-reflection Coatings	11
Broadband Multilayer Anti-reflection Coatings	12
Laser Line High Reflector	12
Partial Reflector	12
Edge Pass Coatings	12
Beamsplitter Coatings	13
Metallic Coatings	13



Borosilicate Glass, BK7

BK7 is one of the most common borosilicate crown glass with high homogeneity and low bubble content. BK7 is an excellent all-around material widely used in visible and NIR windows, lenses, and prisms.

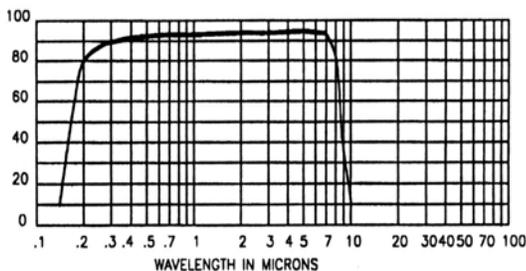
Refractive Index, n :	1.51872 @ 546.1nm
Transmission Range :	0.35 - 2.0 μ
Thermal expansion coeff. :	$8.3 \times 10^{-6}/^{\circ}\text{C}$ at 30-300 $^{\circ}\text{C}$
Density :	2.51 g/cm ³



UV Fused Silica(SiO₂)

UV grade Fused Silica is synthetic amorphous silicon dioxide of extremely high purity. Properties include high UV transmission, low thermal expansion coefficient, and high damage threshold.

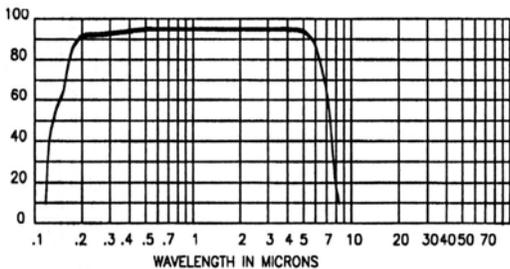
Refractive Index, n :	1.50855 @ 250.0nm
Transmission Range :	0.18 - 3.5 μ
Thermal expansion coeff. :	$5.5 \times 10^{-7}/^{\circ}\text{C}$ at 0-200 $^{\circ}\text{C}$
Density :	2.20 g/cm ³



Calcium Fluoride(CaF₂)

Calcium Fluoride is a cubic single crystal material grown using the vacuum Stockbarger technique with good vacuum UV to Infrared transmission. Care must be used when thermally cycling CaF₂.

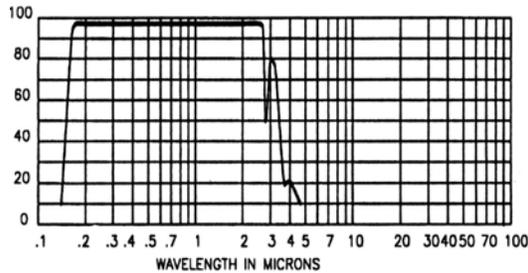
Refractive Index, n :	1.4349 @ 546.1nm
Transmission Range :	0.15 - 9.0 μ
Thermal expansion coeff. :	$1.75 \times 10^{-5}/^{\circ}\text{C}$ at -60-60 $^{\circ}\text{C}$
Density :	3.18 g/cm ³



Magnesium Fluoride(MgF₂)

Magnesium Fluoride is a positive birefringent crystal grown using the vacuum Stockbarger technique with good vacuum UV to IR transmission. MgF₂ is resistant to thermal and mechanical shock.

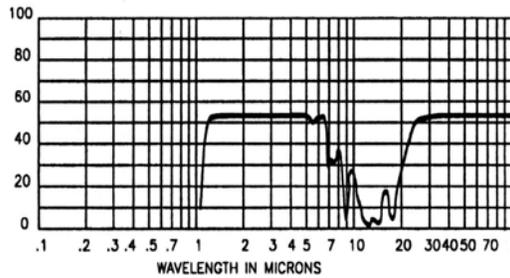
Refractive Index, n _o /n _e :	1.4231/1.4367 @ 200.0nm
Transmission Range :	0.13 - 7.0 μ
Thermal expansion coeff. :	$1.0 \times 10^{-6}/^{\circ}\text{C}$ at -60-60 $^{\circ}\text{C}$
Density :	3.177 g/cm ³



Crystal Quartz

Crystal Quartz is a positive uniaxial birefringent single crystal grown using a hydrothermal process. Due to its birefringent nature, crystal quartz is most commonly used for waveplates.

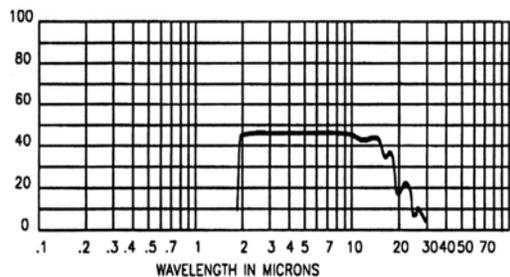
Refractive Index, n_o/n_e :	1.54617/1.55535 @ 546.1nm
Transmission Range :	0.16 - 2.5 μ
Thermal expansion coeff. :	7.1x10 ⁻⁶ /°C(II) , 13.2x10 ⁻⁶ /°C(⊥)
Density :	2.649 g/cm ³



Silicon(Si)

Silicon is used as a mirror substrate for lasers because of its thermal conductivity, light weight, and hardness. Due to the strong absorption at 9.0 μ m, Silicon is widely used for CO₂ mirrors.

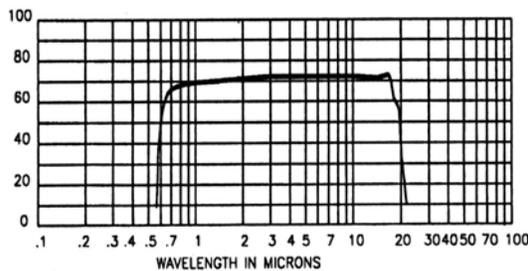
Refractive Index, n :	3.436 @ 3.0 μ
Transmission Range :	1.2 - 8.0 μ
Thermal expansion coeff. :	2.55 x 10 ⁻⁶ /°C at 20°C
Density :	2.329 g/cm ³



Germanium(Ge)

Germanium is used widely for lenses and windows in infrared laser systems. Germanium is the hotter it gets the more the absorption increases. At 200°C it becomes non-transmissive.

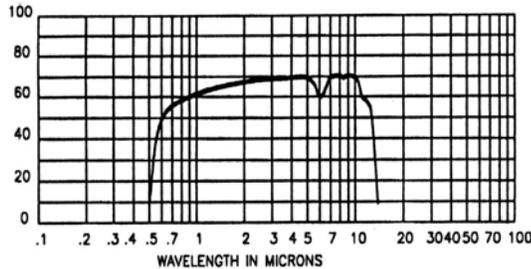
Refractive Index, n :	4.0106 @ 6.0 μ
Transmission Range :	2.0 - 17.0 μ
Thermal expansion coeff. :	5.5 x 10 ⁻⁶ /°C at -60-60°C
Density :	5.33 g/cm ³



Zinc Selenide(ZnSe)

Zinc Selenide has a very low absorption coefficient and is used extensively for high power infrared laser optics. Zinc Selenide is a relatively soft material and scratches rather easily.

Refractive Index, n :	2.4028 @ 10.6 μ
Transmission Range :	0.63 - 18.0 μ
Thermal expansion coeff. :	7.57 x 10 ⁻⁶ /°C at 20°C
Density :	5.27 g/cm ³



Zinc Sulfide(ZnS)

Zinc Sulfide is used in harsh environments as it is harder and more resistant to scratching. It can be used for infrared windows in high speed aircraft and vacuum applications.

Refractive Index, n :	2.201 @ 10.6 μ
Transmission Range :	0.4 - 14.0 μ
Thermal expansion coeff. :	6.5 x 10 ⁻⁶ /°C
Density :	4.09 g/cm ³

Zerodur

Zerodur is used for mirror substrate where extremely thermal stability is desired.

Refractive Index, n :	1.5447 @ 546.1nm
Transmission Range :	0.4 - 2.8 μ
Thermal expansion coeff. :	0.05 x 10 ⁻⁶ /°C
Density :	2.53 g/cm ³

Index of Refraction

λ (nm)	Source	BK7	SF2	UVFS	CaF2	MgF2		Crystal Quartz	
						no	ne	no	ne
193	ArF excimer laser	1.65528	2.03127	1.56077	1.50133	1.42767	1.44127	1.66091	1.67455
213	Nd:YAG laser	1.62679	2.01156	1.53539	1.48887	1.41606	1.42933	1.63224	1.64452
244	Ar-Ion laser	1.58265	1.98102	1.51086	1.46957	1.40447	1.41735	1.60439	1.61562
248	KrF excimer laser	1.57957	1.93639	1.50855	1.46803	1.40334	1.41618	1.60175	1.61289
257	Ar-Ion laser	1.57336	1.86967	1.50383	1.46488	1.40102	1.41377	1.59637	1.60731
266	Nd:YAG laser	1.56796	1.82737	1.49968	1.46209	1.39896	1.41164	1.59164	1.60242
308	XeCl excimer laser	1.55006	1.73604	1.48564	1.45255	1.39188	1.40429	1.57556	1.58577
325	HeCd laser	1.54505	1.71771	1.48164	1.44981	1.38983	1.40216	1.57097	1.58102
337.1	N2 laser	1.54202	1.70749	1.47919	1.44813	1.38858	1.40085	1.56817	1.57812
351	XeF excimer laser	1.53896	1.69778	1.47672	1.44672	1.38730	1.39952	1.56533	1.57518
351.1	Ar-Ion laser	1.53894	1.69771	1.47671	1.44641	1.38729	1.39951	1.56531	1.57516
354.7	Nd:YAG laser	1.53821	1.69548	1.47612	1.44601	1.38699	1.39920	1.56463	1.57446
363.8	Ar-Ion laser	1.53649	1.69029	1.47472	1.44504	1.38626	1.39844	1.56302	1.57279
404.7	Mercury arc, h line	1.53023	1.67263	1.46961	1.44151	1.38360	1.39567	1.55714	1.56670
416	Kr-Ion laser	1.52885	1.66893	1.46847	1.44072	1.38301	1.39505	1.55583	1.56535
435.8	Mercury arc, g line	1.52669	1.66331	1.46670	1.43949	1.38207	1.39408	1.55379	1.56323
441.6	HeCd laser	1.52611	1.66184	1.46622	1.43916	1.38183	1.39382	1.55324	1.56266
457.9	Ar-Ion laser	1.52461	1.65807	1.46498	1.43830	1.38118	1.39314	1.55181	1.56119
465.8	Ar-Ion laser	1.52395	1.65641	1.46443	1.43792	1.38088	1.39284	1.55118	1.56053
472.7	Ar-Ion laser	1.52339	1.65505	1.46397	1.43760	1.38064	1.39258	1.55065	1.55998
476.5	Ar-Ion laser	1.52309	1.65432	1.46372	1.43744	1.38051	1.39245	1.55036	1.55969
480	Cadmium arc, F line	1.52283	1.65367	1.46350	1.43728	1.38040	1.39233	1.55011	1.55943
486.1	Hydrogen arc, F line	1.52238	1.65258	1.46313	1.43703	1.38020	1.39212	1.54968	1.55898

continued

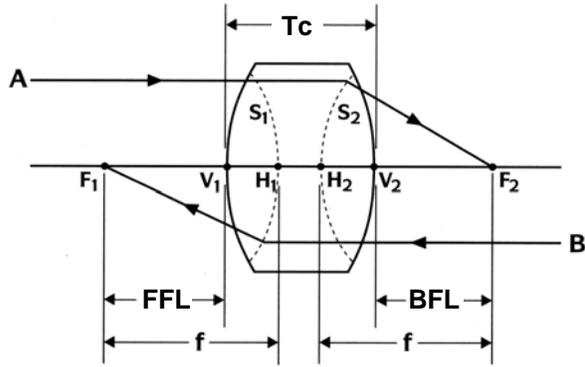


λ (nm)	Source	BK7	SF2	UVFS	CaF ₂	MgF ₂		Crystal Quartz	
						n _o	n _e	n _o	n _e
488	Ar-Ion laser	1.52224	1.65225	1.46301	1.43695	1.38014	1.39206	1.54955	1.55885
496.5	Ar-Ion laser	1.52165	1.65083	1.46252	1.43661	1.37988	1.39179	1.54898	1.55826
501.7	Ar-Ion laser	1.52130	1.65000	1.46223	1.43641	1.37973	1.39163	1.54865	1.55792
510.6	Cu vapor laser	1.52073	1.64865	1.46176	1.43609	1.37948	1.39137	1.54810	1.55735
514.5	Ar-Ion laser	1.52049	1.64808	1.46156	1.43595	1.37937	1.39216	1.54787	1.55711
532	Nd:YAG laser	1.51947	1.64570	1.46071	1.43537	1.37892	1.39079	1.54869	1.55610
543.5	HeNe laser	1.51886	1.64427	1.46019	1.43502	1.37865	1.39051	1.54630	1.55549
546.1	Mercury arc, e line	1.51872	1.64397	1.46008	1.43494	1.37859	1.39044	1.54617	1.55535
578.2	Cu vapor laser	1.51720	1.64053	1.45880	1.43408	1.37792	1.38794	1.54470	1.55383
587.6	Helium arc, d line	1.51680	1.63963	1.45846	1.43385	1.37774	1.38956	1.54431	1.55343
589.3	Sodium arc, D line	1.51673	1.63947	1.45850	1.43381	1.37771	1.38952	1.54424	1.55336
594.1	HeNe laser	1.51653	1.63904	1.45824	1.43370	1.37762	1.38943	1.54405	1.55316
611.9	HeNe laser	1.51584	1.63752	1.45765	1.43331	1.37732	1.38911	1.54337	1.55247
628	Ruby laser	1.51526	1.63626	1.45716	1.43298	1.37706	1.38884	1.54281	1.55188
632.8	HeNe laser	1.51509	1.63590	1.45702	1.43289	1.37698	1.38876	1.54264	1.55171
635	Laser diode	1.51501	1.63574	1.45695	1.43284	1.37695	1.38873	1.54257	1.55164
643.8	Cadmium arc, C line	1.51472	1.63512	1.45671	1.43268	1.37682	1.38859	1.54228	1.55134
647.1	Kr-Ion laser	1.51461	1.63489	1.45661	1.43262	1.37677	1.38854	1.54218	1.55123
650	Laser diode	1.51452	1.63469	1.45653	1.43257	1.37673	1.38850	1.54209	1.55114
656.3	Hydrogen arc, C line	1.51432	1.63427	1.45637	1.43246	1.37664	1.38840	1.54189	1.55093
670	Laser Diode	1.51391	1.63340	1.45601	1.43223	1.37646	1.38821	1.54148	1.55051
676.4	Kr-Ion laser	1.51372	1.63301	1.45585	1.43212	1.37637	1.38812	1.54130	1.55032
694.3	Ruby laser	1.51322	1.63198	1.45542	1.43185	1.37615	1.38789	1.54080	1.54981
750	Laser Diode	1.51184	1.62922	1.45424	1.43109	1.37553	1.38724	1.53943	1.54839
755	Alexandrite laser	1.51172	1.62901	1.45414	1.43103	1.37548	1.38719	1.53932	1.54827
780	Laser Diode	1.51118	1.62796	1.45367	1.43074	1.37524	1.38693	1.53878	1.54771
830	Laser Diode	1.51020	1.62613	1.45282	1.43023	1.37480	1.38647	1.53779	1.54668
850	Laser Diode	1.50984	1.62548	1.45250	1.43004	1.37464	1.38630	1.53742	1.54630
852.1	Cesium arc, s line	1.50980	1.62541	1.45247	1.43002	1.37462	1.38628	1.53739	1.54626
905	Laser Diode	1.50892	1.62387	1.45168	1.42957	1.37422	1.38586	1.53648	1.54532
980	Laser Diode	1.50779	1.62202	1.45067	1.42902	1.37371	1.38533	1.55531	1.54409
1014	Mercury arc, t line	1.50731	1.62128	1.45024	1.42879	1.37350	1.38510	1.53481	1.54357
1053	Nd:YLF laser	1.50678	1.62049	1.44976	1.42854	1.37326	1.38485	1.53425	1.54229
1060	Nd:Glass laser	1.50669	1.62035	1.44968	1.42850	1.37322	1.38480	1.53415	1.54288
1064	Nd:YAG laser	1.50663	1.62028	1.44963	1.42848	1.37319	1.38478	1.53410	1.54282
1300	Laser Diode	1.50370	1.61644	1.44692	1.42721	1.37188	1.38338	1.53094	1.53950
1320	Nd:YAG laser	1.50346	1.61616	1.44669	1.42711	1.37177	1.38327	1.53068	1.53922
1540	Er:Glass laser	1.50077	1.61342	1.44414	1.42606	1.37507	1.38199	1.52774	1.53610
1550	Laser Diode	1.50065	1.61312	1.44402	1.42602	1.37052	1.38194	1.52761	1.53596
1970.1	Mercury arc	1.49495	1.60780	1.43582	1.42401	1.36803	1.37928	1.52138	1.52932
2100	Ho:YAG laser	1.49296	1.60608	1.43659	1.42334	1.36718	1.37837	1.51924	1.52703
2325.4	Mercury arc	1.48921	1.60291	1.43293	1.42212	1.36559	1.37667	1.51524	1.52277
2940	Er:YAG laser	1.47670	1.59273	1.42065	1.41827	1.36051	1.37123	1.50246	1.50908



Lens Terminology

The lens is the most basic optical Component. It collects light from a source and refracts that light form a usable image of the source. The source may be an illuminated object or produce the light itself.



When designing experiments or assembling systems with simple lenses or lens combinations, there are a few formula that are very useful. The following definitions refer to the singlet lens diagram above. In the paraxial limits, however, any optical system can be reduced to the specification of the position of the principal and focal point. Shown on this diagram is the *effective focal length* (EFL or *f*), the *back focal length* (BFL), the *front focal length* (FFL), the *center thickness* (*Tc*), and the locations of the elements' *principle points* (*H1* and *H2*). The *radii of curvature* *R1* and *R2* refer to the left and right surfaces respectively. *R1* or *R2* is positive(negative) if the center of curvature is to the right(left) side of the lens. The EFL is positive(negative) if the focal point is to the right(left).

Focal Length Formulas for Singlet Lenses & Mirrors

Type	Orientation	Effective Focal Length (f)	
		Lens	Mirror
General	$R_1 = R_1$ $R_2 = R_2$	$\left[(n-1) \cdot \left(\frac{1}{R} - \frac{1}{R} \right) + \frac{T_c(n-1)^2}{nR_1R_2} \right]^{-1}$	
Plano-Convex	$R_1 = R$ $R_2 = \infty$	$\frac{R}{n-1}$	$-\frac{R}{2}$
Plano-Concave	$R_1 = -R$ $R_2 = \infty$	$\frac{-R}{n-1}$	$\frac{R}{2}$
Bi-Convex	$R_1 = R$ $R_2 = -R$	$\left[\frac{2(n-1)}{R} - \frac{T_c(n-1)^2}{nR^2} \right]^{-1}$	
Bi-Concave	$R_1 = -R$ $R_2 = R$	$-\left[\frac{2(n-1)}{R} - \frac{T_c(n-1)^2}{nR^2} \right]^{-1}$	

where, *n* is index of refraction of lens material

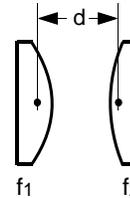


Effective Focal Length of Two Thin Lenses

The following formulas show how to calculate the effective focal length and principal point locations for a combination of any two thin lenses. Calculate the values for the first two elements, then perform the same calculation for this combination with next lens. The expression for the combination focal length is the same whether lens separation distances are large or small and whether f_1 and f_2 are positive or negative.

$$f = \frac{f_1 f_2}{f_1 + f_2 - d} \quad \text{or}$$

$$\frac{1}{f} = \frac{1}{f_1} + \frac{1}{f_2} - \frac{d}{f_1 f_2}$$



F-Number (F/#)

The f-number (also known as speed) of a lens system is defined to be the effective focal length divided by system clear aperture (effective diameter D). The f-number defines the angle of the cone of light leaving the lens which ultimately forms the image. This is an important concept when the throughput or light-gathering power of an optical system is critical, such as when focusing light into a monochromator or projecting a high power image.

$$F / \# = \frac{f}{D}$$

Numerical Aperture (NA)

The numerical aperture of a lens system is defined to be the sine of cone angle, θ , that the marginal ray makes with the optical axis multiplied by the index of refraction (n) of the medium. The numerical aperture can be defined for any ray as the sine of the angle made by that ray with the optical axis multiplied by the index of refraction :

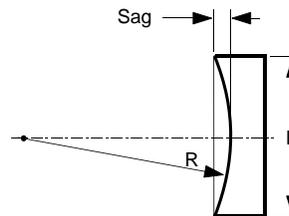
$$NA = n \sin \theta = \frac{1}{2 \cdot (F / \#)}$$

Sagitta

The Sagitta (or Sag) of a spherical or cylindrical surface is an essential value to calculate when determining the edge and center thickness of a lens. The Sagitta is the thickness of material required to accommodate a surface of given radius of curvature with a given aperture.

The Sag of surface may be calculated from :

$$Sag = R - \sqrt{R^2 - \left(\frac{D}{2}\right)^2}$$





Using Wedged Window

A problem with parallel substrate is that the second surface reflection can overlap the first surface reflection and lead unwanted spectral channeling through interference. The higher the parallelism, the worse the problem. Wedged windows are laser quality windows manufactured with wedges of $0.5^\circ \sim 3^\circ$.

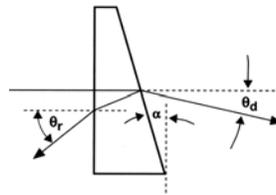
For small angles of incidence, the deviation of a ray incident on a wedged window with wedge angle α is

$$\theta_d = (n - 1)\alpha$$

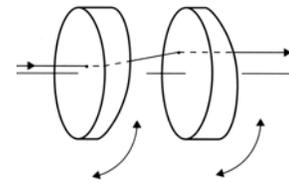
The first reflected ray is misaligned from the initial axis by an angle defined by

$$\theta_r = 2n\alpha$$

To create an adjustable beamsteering device, use a pair of identically wedged windows. Any deflection angle from 0 to 2θ , can be obtained by suitable rotation of the individual wedges. The direction of deflection is along a plane midway between the rotation angles of the two individual prisms. The magnitude of deflection varies smoothly from the maximum value, 2θ where the thinnest points of the two wedges coincide to zero, when the two wedges are oriented antiparallel, thereby canceling each other.



Deviation and reflection of a beam by a wedged window of wedge α



A beamsteering wedge formed from two wedged prisms

Selecting a Prism

Prisms are blocks of optical material having flat polished sides arranged at precisely controlled angles to each other. Prisms may be used in an optical system to deflect or deviate a beam of light. They can invert or rotate an image, disperse light into its components wavelength, and be used to separate states of polarization. Prisms will introduce aberrations when used with convergent or divergent beam of light. Using prisms with collimated or nearly collimated light will help minimize aberrations.

Type	Orientation	Usage	Applications
Inversion		The image in an incident beam emerges upside down, i.e. rotated 180° about a horizontal center line.	<ul style="list-style-type: none"> - Image rotation - Microfilm viewer - Optical profiler
Reversion		The image in an incident beam emerge left to right and right to left i.e. rotated 180° about vertical center line.	<ul style="list-style-type: none"> - Image reversal without deviation
Deviation		The incident beam emerges in a different direction of propagation.	<ul style="list-style-type: none"> - Range-finding, surveying, alignment - Cine photography
Displacement		The incident beam emerges in the same direction of propagation but along a different axis	<ul style="list-style-type: none"> - Periscope systems - Beam folding - Stereoscopic systems
Dispersion		The incident beam emerges split up into its constituent spectral components.	<ul style="list-style-type: none"> - Prism spectrometers - Pre-dispersers in high power systems



Waveplates

Waveplates operate by imparting unequal phase shifts to orthogonally polarized field components of an incident wave. This causes the conversion of one polarization state into another. These are two cases.

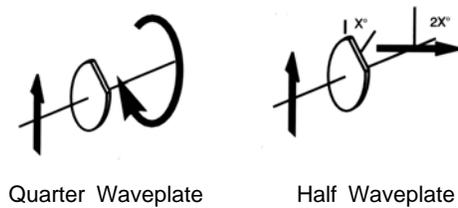
With linear birefringence, the index of refraction and hence phase shift differs for two orthogonally polarized linear polarization states. This is the operation mode of standard waveplates.

With circular birefringence, the index of refraction and hence phase shift differs for left and right circularly polarized components. This is the operation mode of polarization rotators.

Quarter and Half Waveplates

A quarter waveplate transforms polarized light between linear and circular polarization. Input linearly polarized light must be incident at 45° to the crystalline axis.

A half waveplate rotates the orientation of input polarized light. The rotation angle is twice the angle between the incident polarized light and the crystalline axis.



Dual Wavelength & Harmonic Waveplates

These are multiple order waveplates which provide specific retardance at two different wavelengths (ex. quarter wave at 1064nm and half wave at 532nm). Dual wavelength waveplates are offered at a variety of popular laser wavelengths and harmonic waveplates are used at 1064nm and various harmonics.

Dual Wavelength waveplates provide separation of different wavelengths with a polarization beamsplitter by rotating the polarization of one wavelength by 90° .

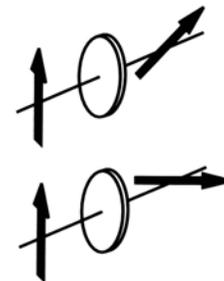
These components are particularly useful when used in conjunction with other polarization sensitive components to separate coaxial laser beams of different wavelength.



Polarization Rotators

The optical axis in a polarization rotator is perpendicular to the polished face of the optic. The result is that the orientation of input linearly polarized light is rotated as it propagates through the device. Standard devices offer 45° and 90° rotation at a number of common laser wavelengths. Unlike a half waveplate, the rotation is invariant to the polarization of the incident light.

The polarization rotators is highly dependent(nearly inverse square ratio) upon wavelength.



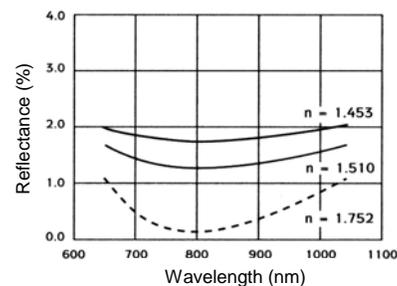


Coating

Optical coatings can be used to enhance or reduce the reflectance, transmittance, or polarization properties of optical components. Rainbow Research Optics offers a wide variety of standard coating for the optics listed throughout this catalog. They include narrow band and broad band anti-reflection coatings, full and partial reflectors, filters, as well as beamsplitter coatings. Most of our products are available either coated or uncoated, and if coated, either with standard or custom coating designs. Our coating equipment includes resistance heated and electron beam evaporation sources, making possible the use of range from the ultraviolet to the far infrared.

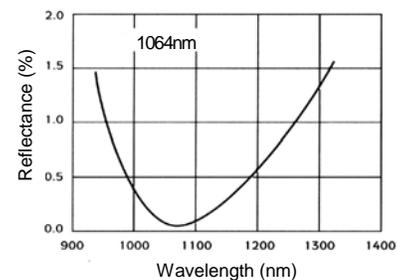
Single Layer Anti-reflection(AR) Coatings

Magnesium Fluoride is commonly used anti-reflection coating for lenses, windows, and beamsplitters because of its almost ideal refractive index(1.35 at 550nm) and high durability. Single layer anti-reflection coatings are available for almost any angle of incidence and any wavelength from ultraviolet to Infrared. A layer of MgF₂ on a glass of fused silica substrate reduces surface reflectance to less than 1.5% per surface over a wide range.



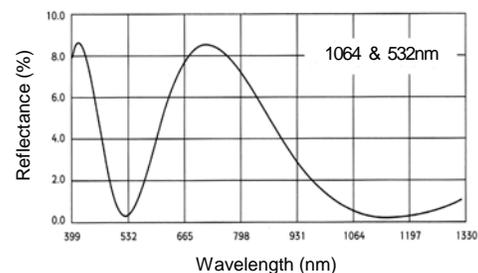
Laser Line V-Coatings

V-Coatings are multilayer anti-reflection coatings that reduce surface reflectance less than 0.25% for 0° incidence or 0.75% for 45° incidence at the chosen single wavelength. Using V-coatings on fused silica substrate can provide exceptionally high external transmittance. Rainbow Research Optics will manufacture V-type anti-reflection coatings for any wavelength from 193nm to 2940nm.



Double-V Anti-reflection Coatings

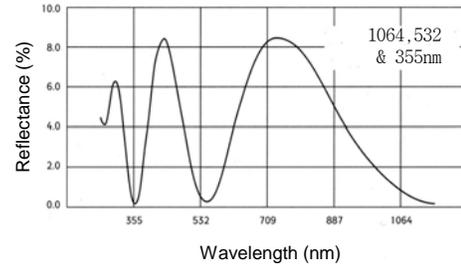
These Double-V AR coatings will provide the performance of V-type coats for two selected wavelengths. They are useful for optics which must transmit a visible alignment laser as well as NIR process beam (ex. Nd:YAG laser system). Double-V coatings will provide an average reflectance $\leq 0.3\%$ for NIR region and $\leq 0.6\%$ for visible region at normal incidence.





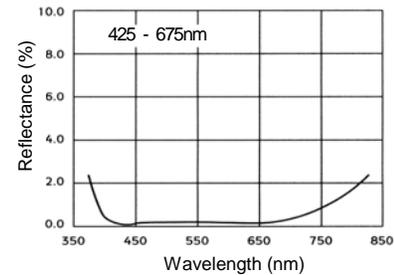
Triple-V Anti-reflection Coatings

These Triple-V AR coatings will provide the performance of V-type coats for three selected wavelengths. They are useful for optics which must transmit a visible alignment laser as well as NIR process beam. Triple-V coatings will provide an average reflectance $\leq 0.3\%$ for NIR region and $\leq 0.6\%$ for visible region and $\leq 1.0\%$ for UV region at normal incidence.



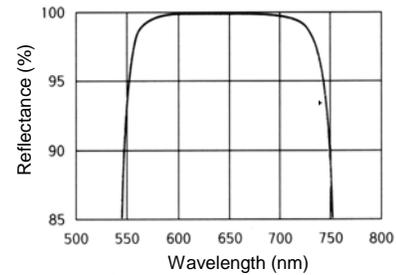
Broadband Multilayer Anti-reflection Coatings

These multilayer AR coatings provide the minimum reflectance for wide spectral range. Average reflectance losses are reduced to $\leq 0.5\%$ per surface for specified wavelength range. Due to the high number layers, these coatings are more sensitive to incident angle than the single layer AR. Rainbow Research Optics offers broadband AR coatings optimized over the entire range of UV to NIR for normal and 45° angle of incidence.



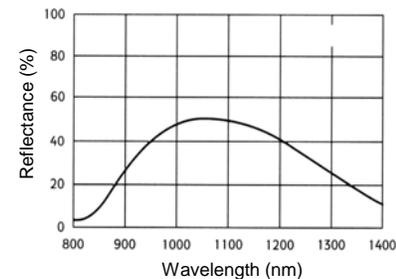
Laser Line High Reflector

These coatings are optimized to give greater than 99% reflectance at specific laser wavelength. They may be used as a rear cavity reflector at 0° incident angle, extra cavity use in beam deliver or turning at 45° incident angle. In addition to the standard laser laser line coating, we offer broadband high reflector for multi-spectral applications. They are more efficient than any metal coatings and may be used with laser or broadband sources.



Partial Reflector

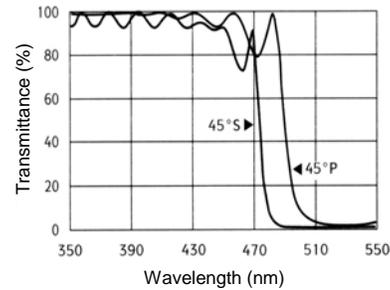
Partial reflective coatings may be used as laser output couplers at 0° incident angle. An appropriate output coupler should be selected to maximize the output power/energy ratio. We offer high quality laser cavity coatings for low scattering. Also these coatings may be used as extra cavity beam divider at 45° incident angle for the specific wavelength. They have an anti-reflection V-coating applied to the rear surface.





Edge Pass Coatings

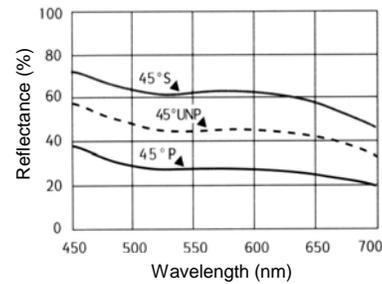
Edge pass coatings are characterized by an abrupt change between a region of transmittance and reflectance. A long wave pass coating reflects shorter wavelengths and transmits longer wavelengths. A short wave pass coating reflects longer wavelengths and transmits shorter wavelengths. Cut-on/off wavelength is the wavelength at which the transmission is 50% of its peak value. A common use for these coatings is to combine them with a filter or detector response in order to define a wavelength range.



Beamsplitter Coatings.

Beamsplitters are used to separate or combine two beams of light. Plates are used for most laser applications as they exhibit low absorption. Cubes are a convenient, protected form for low power applications. Polarizing beamsplitter coatings provide an extremely efficient method of dividing a randomly polarized incident laser beam into the "s" and "p" components of the beam for specific wavelength or wavelength range.

They have an AR coating applied to the exterior or rear surface.



Metallic Coatings

Metallic coatings have lower peak reflectance, mechanical durability and damage threshold than dielectric coatings. Their advantages are low cost, extremely broadband performance, and insensitivity to input angle of incidence and polarization.

Unfortunately the freshly deposited metals tarnish very quickly with the formation of oxide or other compound. To prevent significant loss of reflectance we overcoat the metal films with thin dielectric films.

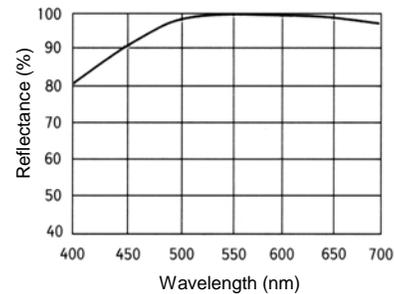




Table of Contents

Spherical Lenses

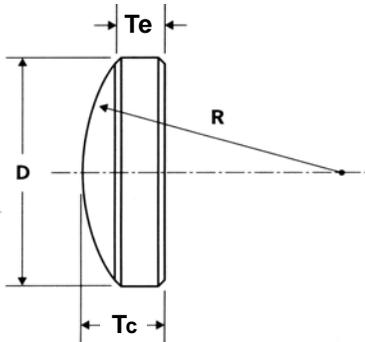
Spherical BK7 Plano-Convex Lenses	15
Spherical Fused Silica Plano-Convex lenses	19
Spherical VUV CaF2 Plano-Convex Lenses	22
Spherical VUV MgF2 Plano-Convex Lenses	23
Spherical SF11 Plano-Convex Lenses	24
Spherical IR CaF2 Plano-Convex Lenses	25
Spherical BK7 Plano-Concave Lenses	26
Spherical Fused Silica Plano-Concave Lenses	28
Spherical SF11 Plano-Concave Lenses	30
Spherical BK7 Bi-Convex Lenses	31
Spherical Fused Silica Bi-Convex Lenses	33
Spherical BK7 Bi-Concave Lenses	35
Spherical Fused Silica Bi-Concave Lenses	36
Spherical Positive Bestform Lenses	37
Achromatic Doublet Lenses	38

Cylindrical Lenses

Round Cylindrical Plano-Convex Lenses	39
Round Cylindrical Plano-Concave Lenses	41
Square Cylindrical Plano-Convex Lenses	43
Square Cylindrical Plano-Concave Lenses	45
Rectangular Cylindrical Plano-Convex Lenses	47
Rectangular Cylindrical Plano-Concave Lenses	49



Spherical BK7 Plano-Convex Lenses



SPECIFICATIONS

Substrate material :	BK7
Surface Flatness :	$\lambda/10$ @ 633nm
Surface Quality :	10-5 laser quality
Centration Error :	≤ 3 arcmin.
Focal Length Tolerance :	± 0.5 %
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)			Tc(mm)
				532nm	633nm	1064nm	
PX-3.6-1.8-C	3.5	3.6	1.8	3.5	3.5	3.6	2.0
PX-4.0-6.0-C	6.0	4.0	3.1	6.0	6.1	6.2	1.5
PX-5.0-5.2-C	10.0	5.0	5.2	10.0	10.1	10.3	3.9
PX-8.0-5.2-C	10.0	8.0	5.2	10.0	10.1	10.3	3.9
PX-7.5-6.4-C	12.0	7.5	6.4	12.3	12.4	12.6	2.2
PX-8.0-7.7-C	15.0	8.0	7.7	14.8	14.9	15.2	3.1
PX-10.0-7.7-C	15.0	10.0	7.7	14.8	14.9	15.2	3.8
PX-13.3-8.8-C	17.0	13.3	8.8	16.9	17.1	17.4	3.7
PX-8.0-9.3-C	18.0	8.0	9.3	17.9	18.1	18.4	2.9
PX-15.0-9.3-C	18.0	15.0	9.3	17.9	18.1	18.4	5.7
PX-10.0-10.3-C	20.0	10.0	10.3	19.8	20.2	20.3	3.9
PX-12.0-10.3-C	20.0	12.0	10.3	19.8	20.2	20.3	3.9
PX-18.0-11.3-C	22.0	18.0	11.3	21.8	21.9	22.3	6.0
PX-6.3-13.1-C	25.0	6.3	13.1	25.2	25.4	25.9	2.9
PX-8.0-12.9-C	25.0	8.0	12.9	24.8	25.0	25.5	4.0
PX-10.0-12.9-C	25.0	10.0	12.9	24.8	25.0	25.5	4.0
PX-12.7-12.9-C	25.0	12.7	12.9	24.8	25.0	25.5	4.0
PX-15.0-12.9-C	25.0	15.0	12.9	24.8	25.0	25.5	4.9
PX-25.4-12.9-C	25.0	25.4	12.9	24.8	25.0	25.5	12.7
PX-10.0-15.5-C	30.0	10.0	15.5	29.8	30.1	30.6	1.8
PX-15.0-15.5-C	30.0	15.0	15.5	29.8	30.1	30.6	5.0
PX-10.0-16.0-C	31.0	10.0	16.0	30.8	31.1	31.6	1.9
PX-15.0-16.5-C	32.0	15.0	16.5	31.8	32.0	32.6	4.0
PX-25.0-16.5-C	32.0	25.0	16.5	31.8	32.0	32.6	7.0
PX-8.0-18.0-C	35.0	8.0	18.0	34.7	34.9	35.5	1.5
PX-10.0-18.0-C	35.0	10.0	18.0	34.7	34.9	35.5	2.2
PX-15.0-18.0-C	35.0	15.0	18.0	34.7	34.9	35.5	3.1
PX-19.1-18.0-C	35.0	19.1	18.0	34.7	34.9	35.5	4.2
PX-25.4-18.0-C	35.0	25.4	18.0	34.7	34.9	35.5	7.2

continued



Spherical BK7 Plano-Convex Lenses

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)			Tc(mm)
				532nm	633nm	1064nm	
PX-25.4-19.6-C	38.0	25.4	19.6	37.7	38.1	38.7	7.2
PX-10.0-20.6-C	40.0	10.0	20.6	39.7	40.0	40.7	2.6
PX-19.1-20.6-C	40.0	19.1	20.6	39.7	40.0	40.7	5.3
PX-25.4-20.6-C	40.0	25.4	20.6	39.7	40.0	40.7	5.3
PX-8.0-25.8-C	50.0	8.0	25.8	49.7	50.1	50.9	2.0
PX-10.0-25.8-C	50.0	10.0	25.8	49.7	50.1	50.9	2.0
PX-12.7-25.8-C	50.0	12.7	25.8	49.7	50.1	50.9	2.0
PX-15.0-25.8-C	50.0	15.0	25.8	49.7	50.1	50.9	5.3
PX-19.1-25.8-C	50.0	19.1	25.8	49.7	50.1	50.9	5.3
PX-25.0-25.8-C	50.0	25.0	25.8	49.7	50.1	50.9	6.1
PX-25.4-25.6-C	50.0	25.4	25.6	49.3	49.7	50.5	5.3
PX-25.4-25.8-C	50.0	25.4	25.8	49.7	50.1	50.9	5.3
PX-8.0-30.9-C	60.0	8.0	30.9	59.5	60.0	61.0	2.1
PX-15.0-30.9-C	60.0	15.0	30.9	59.5	60.0	61.0	2.1
PX-25.4-30.9-C	60.0	25.4	30.9	59.5	60.0	61.0	4.2
PX-38.1-30.9-C	60.0	38.1	30.9	59.5	60.0	61.0	8.0
PX-25.4-32.5-C	63.0	25.4	32.5	63.1	64.1	64.6	3.9
PX-38.1-32.7-C	63.0	38.1	32.7	62.9	63.5	64.5	8.0
PX-25.4-36.1-C	70.0	25.4	36.1	69.5	70.1	71.3	4.5
PX-38.1-36.1-C	70.0	38.1	36.1	69.5	70.1	71.3	7.9
PX-8.0-38.6-C	75.0	8.0	38.6	74.3	74.9	76.2	2.0
PX-10.0-38.6-C	75.0	10.0	38.6	74.3	74.9	76.2	2.0
PX-15.0-38.6-C	75.0	15.0	38.6	74.3	74.9	76.2	2.0
PX-25.4-38.6-C	75.0	25.4	38.6	74.3	74.9	76.2	5.2
PX-38.1-38.6-C	75.0	38.1	38.6	74.3	74.9	76.2	7.0
PX-50.8-38.6-C	75.0	50.8	38.6	74.3	74.9	76.2	11.5
PX-25.4-39.2-C	76.0	25.4	39.2	75.5	76.1	77.4	4.1
PX-50.8-39.2-C	76.0	50.8	39.2	75.5	76.1	77.4	12.1
PX-19.1-41.2-C	80.0	19.1	41.2	79.3	80.0	81.3	3.5
PX-38.1-41.2-C	80.0	38.1	41.2	79.3	80.0	81.3	7.7
PX-25.4-43.8-C	85.0	25.4	43.8	84.3	85.0	87.0	5.6
PX-25.4-46.2-C	90.0	25.4	46.2	88.9	89.7	91.2	5.0
PX-10.0-51.5-C	100.0	10.0	51.5	99.1	100.0	101.7	2.5
PX-15.0-51.5-C	100.0	15.0	51.5	99.1	100.0	101.7	2.5
PX-19.1-51.5-C	100.0	19.1	51.5	99.1	100.0	101.7	4.0
PX-25.4-51.5-C	100.0	25.4	51.5	99.1	100.0	101.7	4.0
PX-30.0-51.5-C	100.0	30.0	51.5	99.1	100.0	101.7	4.0
PX-38.1-51.5-C	100.0	38.1	51.5	99.1	100.0	101.7	6.0
PX-50.8-51.5-C	100.0	50.8	51.5	99.1	100.0	101.7	10.0
PX-25.0-54.1-C	105.0	25.0	54.1	104.1	105.0	106.8	3.4
PX-19.1-56.7-C	110.0	19.1	56.7	109.1	110.1	111.9	4.0
PX-15.0-61.8-C	120.0	15.0	61.8	119.0	120.0	122.0	1.6

continued



Spherical BK7 Plano-Convex Lenses

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)			Tc(mm)
				532nm	633nm	1064nm	
PX-10.0-64.4-C	125.0	10.0	64.4	124.0	125.0	127.1	2.6
PX-15.0-64.4-C	125.0	15.0	64.4	124.0	125.0	127.1	2.6
PX-25.4-64.4-C	125.0	25.4	64.4	124.0	125.0	127.1	4.0
PX-38.1-64.4-C	125.0	38.1	64.4	124.0	125.0	127.1	5.5
PX-25.4-65.4-C	127.0	25.4	65.4	125.9	127.0	129.1	4.0
PX-50.8-65.4-C	127.0	50.8	65.4	125.9	127.0	129.1	8.0
PX-76.2-65.4-C	127.0	76.2	65.4	125.9	127.0	129.1	15.0
PX-50.8-67.0-C	130.0	50.8	67.0	129.0	130.1	132.2	7.2
PX-25.0-69.5-C	135.0	25.0	69.5	133.8	134.9	137.2	4.0
PX-25.0-72.1-C	140.0	25.0	72.1	138.8	140.0	142.3	4.0
PX-10.0-77.3-C	150.0	10.0	77.3	148.8	150.1	152.6	1.9
PX-15.0-77.3-C	150.0	15.0	77.3	148.8	150.1	152.6	2.5
PX-25.4-77.3-C	150.0	25.4	77.3	148.8	150.1	152.6	4.0
PX-38.1-77.3-C	150.0	38.1	77.3	148.8	150.1	152.6	5.0
PX-50.8-77.3-C	150.0	50.8	77.3	148.8	150.1	152.6	7.0
PX-25.4-78.5-C	152.0	25.4	78.5	151.1	152.4	154.9	4.0
PX-50.8-78.5-C	152.0	50.8	78.5	151.1	152.4	154.9	7.2
PX-10.0-82.4-C	160.0	10.0	82.4	158.6	160.0	162.6	2.1
PX-15.0-82.4-C	160.0	15.0	82.4	158.6	160.0	162.6	5.0
PX-25.0-87.6-C	170.0	25.0	87.6	168.6	170.1	172.9	4.1
PX-50.8-91.2-C	177.0	50.8	91.2	175.6	177.1	180.0	6.6
PX-10.0-103.0-C	200.0	10.0	103.0	198.3	200.0	203.3	2.3
PX-19.1-103.0-C	200.0	19.1	103.0	198.3	200.0	203.3	2.6
PX-25.4-103.0-C	200.0	25.4	103.0	198.3	200.0	203.3	4.0
PX-38.1-103.0-C	200.0	38.1	103.0	198.3	200.0	203.3	5.1
PX-50.8-103.3-C	200.0	50.8	103.3	198.3	200.0	203.3	6.4
PX-25.4-128.8-C	250.0	25.4	128.8	247.9	250.1	254.2	4.0
PX-38.1-128.8-C	250.0	38.1	128.8	247.9	250.1	254.2	4.5
PX-50.8-128.8-C	250.0	50.8	128.8	247.9	250.1	254.2	6.4
PX-25.4-129.6-C	252.0	25.4	129.6	249.5	251.6	255.8	9.6
PX-50.8-130.8-C	254.0	50.8	130.8	251.8	253.9	258.2	5.5
PX-10.0-138.4-C	269.0	10.0	138.4	266.4	268.7	273.2	3.0
PX-25.4-154.5-C	300.0	25.4	154.5	297.4	299.9	305.0	4.0
PX-25.4-178.5-C	347.0	25.4	178.5	343.6	346.5	352.3	6.0
PX-25.4-180.3-C	350.0	25.4	180.3	347.1	350.0	355.9	4.0
PX-38.1-180.3-C	350.0	38.1	180.3	347.1	350.0	355.9	5.0
PX-50.8-180.3-C	350.0	50.8	180.3	347.1	350.0	355.9	6.4
PX-19.1-180.5-C	360.0	19.1	185.0	356.1	359.2	365.2	3.0
PX-25.4-206.0-C	400.0	25.4	206.0	396.6	399.9	406.6	4.1
PX-38.1-206.7-C	400.0	38.1	206.7	397.9	401.3	408.0	5.0
PX-10.0-238.4-C	460.0	10.0	238.4	458.9	462.8	470.6	3.0
PX-10.0-250.0-C	485.0	10.0	250.0	481.3	485.4	493.5	4.0

continued



Spherical BK7 Plano-Convex Lenses

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

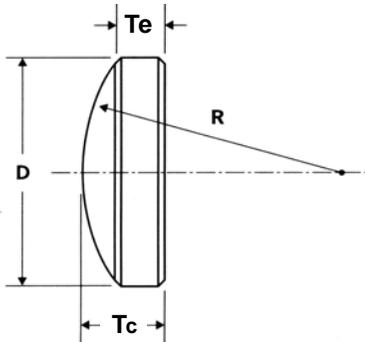
Index

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)			Tc(mm)
				532nm	633nm	1064nm	
PX-25.4-257.5-C	500.0	25.4	257.5	495.7	499.9	508.3	4.0
PX-38.1-257.5-C	500.0	38.1	257.5	495.7	499.9	508.3	5.0
PX-50.8-257.5-C	500.0	50.8	257.5	495.7	499.9	508.3	6.4
PX-25.4-309.1-C	600.0	25.4	309.1	595.0	600.1	610.1	4.0
PX-38.1-309.1-C	600.0	38.1	309.1	595.0	600.1	610.1	5.0
PX-50.8-309.1-C	600.0	50.8	309.1	595.0	600.1	610.1	6.4
PX-25.4-360.6-C	700.0	25.4	360.6	694.2	700.1	711.8	4.0
PX-25.4-386.3-C	750.0	25.4	386.3	743.6	750.0	762.5	4.0
PX-50.8-386.3-C	750.0	50.8	386.3	743.6	750.0	762.5	6.4
PX-25.4-412.1-C	800.0	25.4	412.1	793.3	800.1	813.4	4.0
PX-50.8-412.1-C	800.0	50.8	412.1	793.3	800.1	813.4	6.4
PX-25.4-463.5-C	900.0	25.4	463.5	892.3	899.8	914.9	4.2
PX-50.8-463.5-C	900.0	50.8	463.5	892.3	899.8	914.9	6.4
PX-25.4-515.1-C	1000.0	25.4	515.1	991.6	1000.0	1016.7	4.0
PX-38.1-515.1-C	1000.0	38.1	515.1	991.6	1000.0	1016.7	5.0
PX-50.8-515.1-C	1000.0	50.8	515.1	991.6	1000.0	1016.7	6.4
PX-25.4-772.6-C	1500.0	25.4	772.6	1487.3	1499.9	1525.0	4.0
PX-50.8-772.6-C	1500.0	50.8	772.6	1487.3	1499.9	1525.0	6.3
PX-25.4-1030.2-C	2000.0	25.4	1030.2	1983.2	2000.0	2033.4	4.0
PX-50.8-1030.2-C	2000.0	50.8	1030.2	1983.2	2000.0	2033.4	6.4
PX-25.4-1545.0-C	3000.0	25.4	1545.0	2974.2	2999.5	3049.5	4.0
PX-50.8-1545.0-C	3000.0	50.8	1545.0	2974.2	2999.5	3049.5	6.4
PX-25.4-2060.0-C	4000.0	25.4	2060.0	3965.6	3999.3	4066.0	4.0
PX-50.8-2060.0-C	4000.0	50.8	2060.0	3965.6	3999.3	4066.0	6.4
PX-25.4-2575.0-C	5000.0	25.4	2575.0	4957.0	4999.1	5082.6	4.0
PX-50.8-2575.0-C	5000.0	50.8	2575.0	4957.0	4999.1	5082.6	6.4
PX-25.4-3863.0-C	7500.0	25.4	3863.0	7436.4	7499.7	7624.8	4.0
PX-50.8-3863.0-C	7500.0	50.8	3863.0	7436.4	7499.7	7624.8	6.4
PX-25.4-5151.0-C	10000.0	25.4	5151.0	9915.8	10000.2	10167.1	4.0
PX-50.8-5151.0-C	10000.0	50.8	5151.0	9915.8	10000.2	10167.1	6.4

* Other sizes and focal lengths available in prototype and production quantities.



Spherical Fused Silica Plano-Convex Lenses



SPECIFICATIONS

Substrate material :	UV grade fused silica
Surface Flatness :	$\lambda/10$ @ 633nm
Surface Quality :	10-5 laser quality
Centration Error :	≤ 3 arcmin.
Focal Length Tolerance :	$\pm 0.5\%$
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)				Tc(mm)
				248nm	266nm	532nm	1064nm	
PX-2.5-1.5-UV	3.0	2.5	1.5	2.9	3.0	3.25	3.3	2.0
PX-4.0-3.1-UV	6.0	4.0	3.1	6.1	6.2	6.7	6.9	1.5
PX-4.0-4.1-UV	8.0	4.0	4.1	8.1	8.2	8.9	9.1	2.5
PX-5.0-5.2-UV	10.0	5.0	5.2	10.2	10.4	11.3	11.6	3.9
PX-8.0-5.2-UV	10.0	8.0	5.2	10.2	10.4	11.3	11.6	3.9
PX-7.5-6.4-UV	12.0	7.5	6.4	12.6	12.8	13.9	14.2	2.2
PX-8.0-7.7-UV	15.0	8.0	7.7	15.1	15.4	16.7	17.1	3.1
PX-10.0-7.7-UV	15.0	10.0	7.7	15.1	15.4	16.7	17.1	3.8
PX-8.0-9.3-UV	18.0	8.0	9.3	18.3	18.6	20.2	20.7	2.9
PX-10.0-10.3-UV	20.0	10.0	10.3	20.3	20.6	22.4	22.9	3.9
PX-8.0-12.9-UV	25.0	8.0	12.9	25.4	25.8	28.0	28.7	4.0
PX-10.0-12.9-UV	25.0	10.0	12.9	25.4	25.8	28.0	28.7	4.0
PX-12.7-12.9-UV	25.0	12.7	12.9	25.4	25.8	28.0	28.7	4.0
PX-15.0-12.9-UV	25.0	15.0	12.9	25.4	25.8	28.0	28.7	4.9
PX-25.4-12.9-UV	25.0	25.4	12.9	25.4	25.8	28.0	28.7	12.7
PX-10.0-16.0-UV	31.0	10.0	16.0	31.5	32.0	34.7	35.6	1.9
PX-10.0-16.0-UV	35.0	8.0	18.0	35.4	36.0	39.1	40.0	1.5
PX-25.4-18.0-UV	35.0	25.4	18.0	35.4	36.0	39.1	40.0	7.2
PX-25.4-19.6-UV	38.0	25.4	19.6	38.5	39.2	41.2	42.5	7.2
PX-19.1-20.6-UV	40.0	19.1	20.6	40.5	41.2	44.7	45.8	5.3
PX-25.4-20.6-UV	40.0	25.4	20.6	40.5	41.2	44.7	45.8	5.3
PX-8.0-25.8-UV	50.0	8.0	25.8	50.7	51.6	56.0	57.4	2.0
PX-12.7-25.8-UV	50.0	12.7	25.8	50.7	51.6	56.0	57.4	2.0
PX-15.0-25.8-UV	50.0	15.0	25.8	50.7	51.6	56.0	57.4	5.3
PX-25.4-25.8-UV	50.0	25.4	25.8	50.7	51.6	56.0	57.4	5.3
PX-8.0-30.9-UV	60.0	8.0	30.9	60.8	61.8	67.1	68.7	2.1
PX-15.0-30.9-UV	60.0	15.0	30.9	60.8	61.8	67.1	68.7	4.2
PX-25.4-30.9-UV	60.0	25.4	30.9	60.8	61.8	67.1	68.7	4.2
PX-38.1-30.9-UV	60.0	38.1	30.9	60.8	61.8	67.1	68.7	8.0

continued



Spherical Fused Silica Plano-Convex Lenses

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)				Tc(mm)
				248nm	266nm	532nm	1064nm	
PX-12.7-33.7-UV	65.0	12.7	33.7	66.3	67.4	73.1	75.0	3.0
PX-25.4-33.7-UV	65.0	25.4	33.7	66.3	67.4	73.1	75.0	5.0
PX-15.0-38.6-UV	75.0	15.0	38.6	75.9	77.2	83.8	85.8	2.0
PX-25.4-38.6-UV	75.0	25.4	38.6	75.9	77.2	83.8	85.8	3.6
PX-38.1-38.6-UV	75.0	38.1	38.6	75.9	77.2	83.8	85.8	7.0
PX-50.8-38.6-UV	75.0	50.8	38.6	75.9	77.2	83.8	85.8	11.5
PX-12.7-41.2-UV	80.0	12.7	41.2	81.0	82.5	89.4	91.6	2.7
PX-15.0-41.2-UV	80.0	15.0	41.2	81.0	82.5	89.4	91.6	3.5
PX-50.8-45.8-UV	89.0	50.8	45.8	90.1	91.6	99.4	101.9	10.6
PX-25.4-46.4-UV	91.0	25.4	46.4	91.2	92.9	100.7	103.2	5.0
PX-8.0-51.5-UV	100.0	8.0	51.5	101.3	103.1	111.8	114.5	2.5
PX-15.0-51.5-UV	100.0	15.0	51.5	101.3	103.1	111.8	114.5	2.5
PX-25.4-51.5-UV	100.0	25.4	51.5	101.3	103.1	111.8	114.5	4.0
PX-38.1-51.5-UV	100.0	38.1	51.5	101.3	103.1	111.8	114.5	6.0
PX-50.8-51.5-UV	100.0	50.8	51.5	101.3	103.1	111.8	114.5	10.0
PX-50.8-61.8-UV	120.0	50.8	61.8	121.5	123.7	134.1	137.4	7.3
PX-15.0-64.4-UV	125.0	15.0	64.4	126.6	128.9	139.8	143.2	2.6
PX-25.4-64.4-UV	125.0	25.4	64.4	126.6	128.9	139.8	143.2	4.0
PX-38.1-64.4-UV	125.0	38.1	64.4	126.6	128.9	139.8	143.2	5.5
PX-50.8-64.4-UV	125.0	50.8	64.4	126.6	128.9	139.8	143.2	7.3
PX-50.8-65.4-UV	127.0	50.8	65.4	128.6	130.9	142.0	145.5	8.0
PX-50.8-67.0-UV	130.0	50.8	67.0	131.7	134.1	145.4	149.0	7.2
PX-25.0-72.1-UV	140.0	25.0	72.1	141.8	144.3	156.3	160.4	4.0
PX-50.8-72.1-UV	140.0	50.8	72.1	141.8	144.3	156.3	160.4	6.6
PX-15.0-77.3-UV	150.0	15.0	77.3	152.0	154.7	167.8	171.9	2.5
PX-25.4-77.3-UV	150.0	25.4	77.3	152.0	154.7	167.8	171.9	4.0
PX-50.8-77.3-UV	150.0	50.8	77.3	152.0	154.7	167.8	171.9	7.0
PX-10.0-82.4-UV	160.0	10.0	82.4	162.0	164.9	178.9	183.3	2.1
PX-50.8-91.2-UV	177.0	50.8	91.2	179.3	182.5	198.0	202.8	6.6
PX-5.0-100.0-UV	194.0	5.0	100.0	196.6	200.1	217.1	22.4	11.0
PX-15.0-101.0-UV	196.0	15.0	101.0	198.6	202.1	219.2	224.6	2.3
PX-10.0-103.0-UV	200.0	10.0	103.0	202.5	206.1	223.6	229.1	2.3
PX-25.4-103.0-UV	200.0	25.4	103.0	202.5	206.1	223.6	229.1	4.0
PX-38.1-1030-UV	200.0	38.1	103.0	202.5	206.1	223.6	229.1	5.1
PX-50.8-103.0-UV	200.0	50.8	103.0	202.5	206.1	223.6	229.1	6.4
PX-25.4-128.8-UV	250.0	25.4	128.8	253.3	257.8	279.6	286.5	4.0
PX-38.1-128.8-UV	250.0	38.1	128.8	253.3	257.8	279.6	286.5	5.5
PX-50.8-130.8-UV	254.0	50.8	130.8	257.2	261.8	283.9	290.9	6.4
PX-25.4-154.5-UV	300.0	25.4	154.5	303.8	309.2	335.4	343.6	4.0
PX-38.1-154.5-UV	300.0	38.1	154.5	303.8	309.2	335.4	343.6	3.8
PX-50.8-154.5-UV	300.0	50.8	154.5	303.8	309.2	335.4	343.6	6.4
PX-25.4-180.3-UV	350.0	25.4	180.3	354.5	360.8	391.3	401.0	4.0

continued



Spherical Fused Silica Plano-Convex Lenses

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)				Tc(mm)
				248nm	266nm	532nm	1064nm	
PX-50.8-180.3-UV	350.0	50.8	180.3	354.5	360.8	391.3	401.0	6.4
PX-25.4-206.0-UV	400.0	25.4	206.0	405.1	412.3	447.1	458.2	4.0
PX-25.4-257.5-UV	500.0	25.4	257.5	506.3	515.3	558.9	572.7	4.0
PX-38.1-257.5-UV	500.0	38.1	257.5	506.3	515.3	558.9	572.7	5.0
PX-50.8-257.5-UV	500.0	50.8	257.5	506.3	515.3	558.9	572.7	6.4
PX-25.4-309.1-UV	600.0	25.4	309.1	607.8	618.6	670.9	687.5	4.0
PX-38.1-309.1-UV	600.0	38.1	309.1	607.8	618.6	670.9	687.5	6.0
PX-50.8-309.1-UV	600.0	50.8	309.1	607.8	618.6	670.9	687.5	6.4
PX-25.4-360.6-UV	700.0	25.4	360.6	709.1	721.7	782.7	802.0	4.0
PX-50.8-360.6-UV	700.0	50.8	360.6	709.1	721.7	782.7	802.0	6.4
PX-25.4-515.1-UV	1000.0	25.4	515.1	1012.9	1030.9	1118.1	1145.6	4.0
PX-38.1-515.1-UV	1000.0	38.1	515.1	1012.9	1030.9	1118.1	1145.6	5.0
PX-50.8-515.1-UV	1000.0	50.8	515.1	1012.9	1030.9	1118.1	1145.6	6.4
PX-25.4-772.6-UV	1500.0	25.4	772.6	1519.2	1546.2	1677.0	1718.3	4.0
PX-50.8-772.6-UV	1500.0	50.8	772.6	1519.2	1546.2	1677.0	1718.3	6.3
PX-25.4-1030.2-UV	2000.0	25.4	1030.2	2025.8	2061.7	2236.1	2291.2	4.0
PX-50.8-1030.2-UV	2000.0	50.8	1030.2	2025.8	2061.7	2236.1	2291.2	6.4
PX-25.4-1545.0-UV	3000.0	25.4	1545.0	3038.0	3092.0	3353.5	3436.2	4.0
PX-50.8-1545.0-UV	3000.0	50.8	1545.0	3038.0	3092.0	3353.5	3462.2	6.4
PX-25.4-2060.0-UV	4000.0	25.4	2060.0	4050.7	4122.6	4471.4	4581.5	6.4
PX-50.8-2060.0-UV	4000.0	50.8	2060.0	4050.7	4122.6	4471.4	4581.5	6.4
PX-25.4-2575.0-UV	5000.0	25.4	2575.0	5063.4	5153.3	5589.2	5726.9	4.0
PX-50.8-2575.0-UV	5000.0	50.8	2575.0	5063.4	5153.3	5589.2	5726.9	6.4
PX-25.4-3863.0-UV	7500.0	25.4	3863.0	7596.1	7730.9	8384.9	8591.5	4.0
PX-50.8-3863.0-UV	7500.0	50.8	3863.0	7596.1	7730.9	8384.9	8591.5	6.4
PX-25.4-5151.0-UV	10000.0	25.4	5151.0	10128.8	10308.6	11180.6	11456.1	4.0
PX-50.8-5151.0-UV	10000.0	50.8	5151.0	10128.8	10308.6	11180.6	11456.1	6.4

* Other sizes and focal lengths available in prototype and production quantities.

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

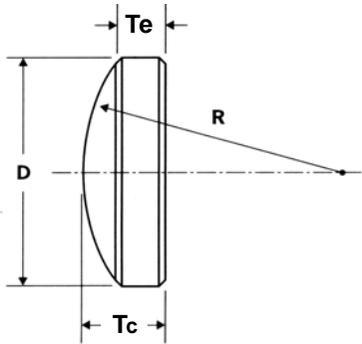
Polarizers

Filters

Index



Spherical VUV CaF₂ Plano-Convex Lenses



SPECIFICATIONS

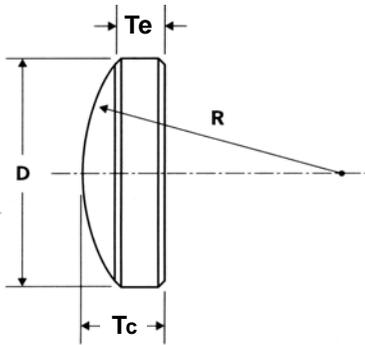
Substrate material :	VUV grade CaF ₂
Surface Flatness :	$\lambda/10$ @ 633 nm
Surface Quality :	20-10 laser quality
Centration Error :	≤ 3 arcmin.
Focal Length Tolerance :	± 0.5 %
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)			Tc(mm)
				193nm	248nm	308nm	
PX-12.7-11.9-CF	25.0	12.7	11.9	23.6	25.3	26.2	3.8
PX-25.4-23.6-CF	50.0	25.4	23.6	47.0	50.4	52.1	6.7
PX-25.4-35.0-CF	75.0	25.4	35.0	69.8	74.8	77.3	5.4
PX-25.4-46.4-CF	100.0	25.4	46.4	92.5	99.1	102.5	4.8
PX-38.1-46.4-CF	100.0	38.1	46.4	92.5	99.1	102.5	8.1
PX-25.4-70.6-CF	150.0	25.4	70.6	140.8	150.9	156.0	4.2
PX-50.8-70.6-CF	150.0	50.8	70.6	140.8	150.9	156.0	9.7
PX-25.4-93.2-CF	200.0	25.4	93.2	185.9	199.2	206.0	3.9
PX-50.8-93.2-CF	200.0	50.8	93.2	185.9	199.2	206.0	8.6
PX-25.4-118.0-CF	250.0	25.4	118.0	235.2	252.1	260.7	3.7
PX-50.8-118.0-CF	250.0	50.8	118.0	235.2	252.1	260.7	7.8
PX-25.4-231.8-CF	500.0	25.4	231.8	462.2	495.3	512.2	3.3
PX-50.8-231.8-CF	500.0	50.8	231.8	462.2	495.3	512.2	6.4
PX-25.4-469.5-CF	1000.0	25.4	469.5	936.2	1003.2	1037.5	3.2
PX-50.8-469.5-CF	1000.0	50.8	469.5	936.2	1003.2	1037.5	5.7

* Other sizes and focal lengths available in prototype and production quantities.



Spherical VUV MgF₂ Plano-Convex Lenses



SPECIFICATIONS

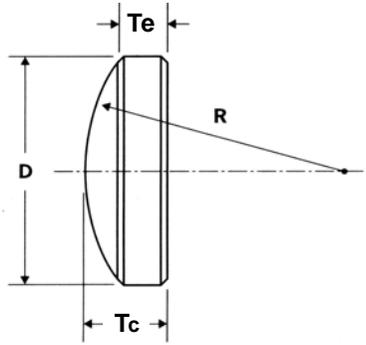
Substrate material :	VUV grade MgF ₂
Surface Flatness :	
Surface Quality :	20-10 laser quality
Centration Error :	≤ 3 arcmin.
Focal Length Tolerance :	± 0.5 %
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)			Tc(mm)
				193nm	248nm	308nm	
PX-25.4-103.0-MF	250.0	25.4	103.0	240.8	262.7	267.7	4.0
PX-50.8-103.0-MF	250.0	50.8	103.0	240.8	262.7	267.7	6.4
PX-25.4-154.5-MF	380.0	25.4	154.5	316.2	383.0	394.1	4.0
PX-50.8-154.5-MF	380.0	50.8	154.5	316.2	383.0	394.1	6.4
PX-25.4-257.5-MF	625.0	25.4	257.5	602.0	638.3	656.9	4.0
PX-50.8-257.5-MF	625.0	50.8	257.5	602.0	638.3	656.9	6.4
PX-254.-515.1-MF	1250.0	25.4	515.1	1204.3	1276.8	1314.0	4.0
PX-50.8-515.1-MF	1250.0	50.8	515.1	1204.3	1276.8	1314.0	6.4

* Other sizes and focal lengths available in prototype and production quantities.



Spherical SF11 Plano-Convex Lenses



SPECIFICATIONS

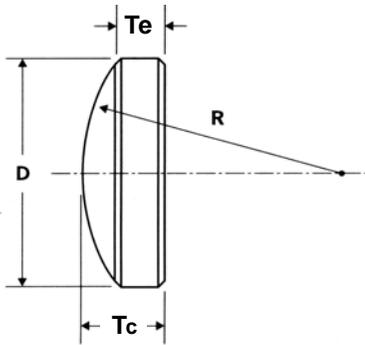
Substrate material :	SF11
Surface Flatness :	$\lambda/10$ @ 633nm
Surface Quality :	20-10 laser quality
Centration Error :	≤ 3 arcmin.
Focal Length Tolerance :	± 0.5 %
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)			Tc(mm)
				780nm	1300nm	1550nm	
PX-5.0-4.1-SF11	5.0	5.0	4.1	5.3	5.5	5.5	2.0
PX-10.0-7.7-SF11	10.0	10.0	7.7	9.9	10.3	10.3	3.8
PX-10.0-11.5-SF11	15.0	10.0	11.5	14.8	15.4	15.4	3.8
PX-15.0-15.3-SF11	20.0	15.0	15.3	19.8	20.4	20.5	3.8
PX-15.0-19.1-SF11	25.0	15.0	19.1	24.7	25.5	25.6	3.8
PX-19.1-27.2-SF11	35.0	19.1	27.2	35.1	36.3	36.5	3.8
PX-25.4-38.1-SF11	50.0	25.4	38.1	49.2	50.9	51.2	3.8
PX-25.4-45.7-SF11	60.0	25.4	45.7	59.0	61.0	61.4	3.8
PX-25.4-58.2-SF11	76.0	25.4	58.2	75.1	77.7	78.1	3.8
PX-25.4-76.3-SF11	100.0	25.4	76.3	98.5	101.9	102.5	3.8
PX-25.4-96.0-SF11	125.0	25.4	96.0	123.9	128.2	128.9	3.8
PX-25.4-114.6-SF11	150.0	25.4	114.6	148.0	153.0	153.9	3.8
PX-25.4-134.1-SF11	175.0	25.4	134.1	173.1	179.0	180.1	3.8
PX-25.4-153.4-SF11	200.0	25.4	153.4	198.0	204.8	206.0	3.8
PX-25.4-189.9-SF11	250.0	25.4	189.9	245.2	253.5	255.5	3.8

* Other sizes and focal lengths available in prototype and production quantities.



Spherical IR CaF₂ Plano-Convex Lenses



SPECIFICATIONS

Substrate material :	IR grade CaF ₂
Surface Flatness :	$\lambda/4$ @ 633nm
Surface Quality :	40-20 laser quality
Centration Error :	≤ 3 arcmin.
Focal Length Tolerance :	± 0.5 %
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)			Tc(mm)
				800nm	1064nm	2940nm	
PX-12.7-10.8-CFIR	25.0	12.7	10.8	25.1	25.2	25.8	4.1
PX-25.4-20.6-CFIR	50.0	25.4	20.6	47.8	48.1	49.3	7.4
PX-25.4-31.4-CFIR	75.0	25.4	31.4	72.9	73.2	75.0	5.7
PX-25.4-41.9-CFIR	100.0	25.4	41.9	97.3	97.8	100.1	5.0
PX-38.1-41.9-CFIR	100.0	38.1	41.9	97.3	97.8	100.1	8.6
PX-25.4-62.7-CFIR	150.0	25.4	62.7	145.7	146.4	150.0	4.3
PX-50.8-62.7-CFIR	150.0	50.8	62.7	145.7	146.4	150.0	10.4
PX-25.4-83.8-CFIR	200.0	25.4	83.8	194.7	195.7	200.5	4.0
PX-50.8-83.8-CFIR	200.0	50.8	83.8	194.7	195.7	200.5	8.9
PX-25.4-104.0-CFIR	250.0	25.4	104.0	241.6	242.7	248.7	3.8
PX-50.8-104.0-CFIR	250.0	50.8	104.0	241.6	242.7	248.7	8.1
PX-25.4-210.0-CFIR	500.0	25.4	210.0	487.8	490.1	502.1	3.4
PX-50.8-210.0-CFIR	500.0	50.8	210.0	487.8	490.1	502.1	6.5
PX-25.4-417.7-CFIR	1000.0	25.4	417.7	970.1	974.7	998.5	3.2
PX-50.8-417.7-CFIR	1000.0	50.8	417.7	970.1	974.7	998.5	5.0

* Other sizes and focal lengths available in prototype and production quantities.



Spherical BK7 Plano-Concave Lenses

Tutorials

Lenses

Windows

Mirrors

Prisms

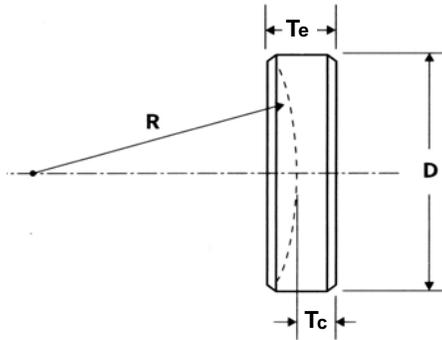
Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS



Substrate material :	BK7
Surface Flatness :	$\lambda/10$ @ 633nm
Surface Quality :	10-5 laser quality
Centration Error :	≤ 3 arcmin.
Focal Length Tolerance :	± 0.5 %
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)			Tc(mm)
				532nm	633nm	1064nm	
PV-10.0-10.3-C	-20.0	10.0	10.3	-19.8	-20.0	-20.3	2.0
PV-10.0-12.9-C	-25.0	10.0	12.9	-24.8	-25.0	-25.5	2.0
PV-15.0-12.9-C	-25.0	15.0	12.9	-24.8	-25.0	-25.5	2.0
PV-12.7-15.5-C	-30.0	12.7	15.5	-29.8	-30.1	-30.6	2.0
PV-15.0-15.5-C	-30.0	15.0	15.5	-29.8	-30.1	-30.6	2.0
PV-25.4-15.5-C	-30.0	25.4	15.5	-29.8	-30.1	-30.6	2.0
PV-25.4-19.6-C	-38.0	25.4	19.6	-37.7	-38.1	-38.7	2.0
PV-10.0-25.8-C	-50.0	10.0	25.8	-49.7	-50.1	-50.9	2.0
PV-12.7-25.8-C	-50.0	12.7	25.8	-49.7	-50.1	-50.9	2.0
PV-15.0-25.8-C	-50.0	15.0	25.8	-49.7	-50.1	-50.9	2.0
PV-19.1-25.8-C	-50.0	19.1	25.8	-49.7	-50.1	-50.9	2.0
PV-25.4-25.8-C	-50.0	25.4	25.8	-49.7	-50.1	-50.9	3.0
PV-30.0-26.2-C	-51.0	30.0	26.2	-50.4	-50.9	-51.7	1.9
PV-12.7-30.9-C	-60.0	12.7	30.9	-59.5	-60.0	-61.0	2.0
PV-15.0-38.6-C	-75.0	15.0	38.6	-74.3	-74.9	-76.2	2.0
PV-25.0-38.6-C	-75.0	25.0	38.6	-74.3	-74.9	-76.2	3.0
PV-25.4-38.6-C	-75.0	25.4	38.6	-74.3	-74.9	-76.2	3.0
PV-38.1-38.6-C	-75.0	38.1	38.6	-74.3	-74.9	-76.2	2.0
PV-50.0-38.6-C	-75.0	50.0	38.6	-74.3	-74.9	-76.2	2.0
PV-8.0-51.5-C	-100.0	8.0	51.5	-99.1	-100.0	-101.7	2.0
PV-10.0-51.5-C	-100.0	10.0	51.5	-99.1	-100.0	-101.7	2.0
PV-15.0-51.5-C	-100.0	15.0	51.5	-99.1	-100.0	-101.7	2.0
PV-19.1-51.5-C	-100.0	19.1	51.5	-99.1	-100.0	-101.7	2.0
PV-25.4-51.5-C	-100.0	25.4	51.5	-99.1	-100.0	-101.7	2.6
PV-38.1-51.5-C	-100.0	38.1	51.5	-99.1	-100.0	-101.7	3.0
PV-50.8-51.5-C	-100.0	50.8	51.5	-99.1	-100.0	-101.7	2.0
PV-10.0-51.5-C	-125.0	10.0	64.4	-124.0	125.0	127.1	2.0
PV-15.0-51.5-C	-125.0	15.0	64.4	-124.0	125.0	127.1	2.0
PV-25.4-64.4-C	-125.0	25.4	64.4	-124.0	125.0	127.1	2.9

continued



Spherical BK7 Plano-Concave Lenses

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)			Tc(mm)
				532nm	633nm	1064nm	
PV-50.8-64.4-C	-125.0	50.8	64.4	-124.0	125.0	127.1	3.2
PV-10.0-77.3-C	-150.0	10.0	77.3	-148.8	-150.1	-152.6	2.3
PV-25.4-77.3-C	-150.0	25.4	77.3	-148.8	-150.1	-152.6	3.1
PV-38.1-77.3-C	-150.0	38.1	77.3	-148.8	-150.1	-152.6	3.9
PV-25.4-90.8-C	-176.0	25.4	90.8	-174.8	-176.3	-179.2	3.3
PV-8.0-103.0-C	-200.0	8.0	103.0	-198.3	-200.0	-203.3	2.3
PV-10.0-103.0-C	-200.0	10.0	103.0	-198.3	-200.0	-203.3	2.3
PV-15.0-103.0-C	-200.0	15.0	103.0	-198.3	-200.0	-203.3	2.3
PV-25.4-103.0-C	-200.0	25.4	103.0	-198.3	-200.0	-203.3	3.4
PV-50.8-103.0-C	-200.0	38.1	103.0	-198.3	-200.0	-203.3	4.5
PV-50.8-103.0-C	-200.0	50.8	103.0	-198.3	-200.0	-203.3	4.8
PV-25.4-103.4-C	-201.0	25.4	103.4	-199.0	200.7	204.1	3.4
PV-25.4-128.8-C	-250.0	25.4	128.8	-247.9	-250.1	-254.2	4.0
PV-50.8-128.8-C	-250.0	50.8	128.8	-247.9	-250.1	-254.2	6.0
PV-50.0-130.8-C	-254.0	50.0	130.8	-251.8	-253.9	-258.2	5.8
PV-15.0-207.7-C	-403.0	15.0	207.7	-399.8	-403.2	-410.0	4.0
PV-25.4-257.5-C	-500.0	25.4	257.5	-495.7	-499.9	-508.3	3.9
PV-50.8-257.5-C	-500.0	50.8	257.5	-495.7	-499.9	-508.3	7.0
PV-25.4-309.1-C	-600.0	25.4	309.1	-595.0	-600.1	-610.1	3.9
PV-50.8-309.1-C	-600.0	50.8	309.1	-595.0	-600.1	-610.1	8.5

* Other sizes and focal lengths available in prototype and production quantities.

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index



Spherical Fused Silica Plano-Concave Lenses

Tutorials

Lenses

Windows

Mirrors

Prisms

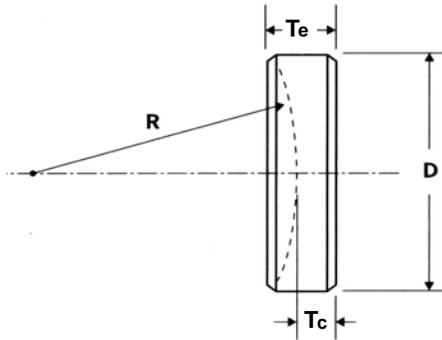
Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS



Substrate material :	UV grade fused silica
Surface Flatness :	$\lambda/10$ @ 633nm
Surface Quality :	10-5 laser quality
Centration Error :	≤ 3 arc min.
Focal Length Tolerance :	± 0.5 %
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)				Tc(mm)
				248nm	266nm	532nm	1064nm	
PV-10.0-10.3-UV	-20.0	10.0	10.3	-20.3	-20.6	-22.4	-22.9	2.0
PV-12.7-11.2-UV	-22.0	12.7	11.2	-22.0	-22.4	-24.3	-24.9	2.1
PV-10.0-12.9-UV	-25.0	10.0	12.9	-25.4	-25.8	-28.0	-28.7	2.0
PV-15.0-12.9-UV	-25.0	15.0	12.9	-25.4	-25.8	-28.0	-28.7	2.0
PV-25.4-13.1-UV	-25.0	25.4	13.1	-25.8	-26.2	-28.4	-29.1	2.0
PV-19.1-15.5-UV	-30.0	19.1	15.5	-30.5	-31.0	-33.6	-34.5	5.7
PV-25.4-19.6-UV	-40.0	25.4	19.6	-38.5	-39.2	-42.5	-43.6	2.0
PV-19.1-20.6-UV	-40.0	19.1	20.6	-40.5	-41.2	-44.7	-45.8	2.0
PV-8.0-25.8-UV	-50.0	8.0	25.8	-50.7	-51.6	-56.0	-57.4	2.0
PV-10.0-25.8-UV	-50.0	10.0	25.8	-50.7	-51.6	-56.0	-57.4	2.0
PV-15.0-25.8-UV	-50.0	15.0	25.8	-50.7	-51.6	-56.0	-57.4	2.0
PV-19.1-25.8-UV	-50.0	19.1	25.8	-50.7	-51.6	-56.0	-57.4	2.0
PV-25.0-25.8-UV	-50.0	25.0	25.8	-50.7	-51.6	-56.0	-57.4	2.0
PV-25.4-25.8-UV	-50.0	25.4	25.8	-50.7	-51.6	-56.0	-57.4	3.0
PV-25.4-38.6-UV	-75.0	25.4	38.6	-75.9	-77.2	-83.8	-85.8	2.0
PV-38.1-38.6-UV	-75.0	38.1	38.6	-75.9	-77.2	-83.8	-85.8	2.0
PV-25.4-39.2-UV	-76.0	25.4	39.2	-77.1	-78.5	-83.8	-87.2	2.8
PV-50.8-39.2-UV	-76.0	50.8	39.2	-77.1	-78.5	-83.8	-87.2	2.8
PV-10.0-51.5-UV	-100.0	10.0	51.5	-101.3	-103.1	-111.8	-114.5	2.0
PV-15.0-51.5-UV	-100.0	15.0	51.5	-101.3	-103.1	-111.8	-114.5	2.0
PV-25.4-51.5-UV	-100.0	25.4	51.5	-101.3	-103.1	-111.8	-114.5	2.0
PV-38.1-51.5-UV	-100.0	38.1	51.5	-101.3	-103.1	-111.8	-114.5	2.0
PV-50.8-51.5-UV	-100.0	50.8	51.5	-101.3	-103.1	-111.8	-114.5	2.0
PV-15.0-64.4-UV	-125.0	15.0	64.4	-126.6	-128.9	-139.8	-143.2	2.0
PV-25.4-64.4-UV	-125.0	25.4	64.4	-126.6	-128.9	-139.8	-143.2	2.0
PV-38.1-64.4-UV	-125.0	38.1	64.4	-126.6	-128.9	-139.8	-143.2	2.0
PV-50.8-64.4-UV	-125.0	50.8	64.4	-126.6	-128.9	-139.8	-143.2	2.0

continued



Spherical Fused Silica Plano-Concave Lenses

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)				Tc(mm)
				248nm	266nm	532nm	1064nm	
PV-15.0-77.3-UV	-150.0	15.0	77.3	-152.0	-154.7	-167.8	-171.9	2.3
PV-25.4-77.3-UV	-150.0	25.4	77.3	-152.0	-154.7	-167.8	-171.9	3.1
PV-38.1-77.3-UV	-150.0	38.1	77.3	-152.0	-154.7	-167.8	-171.9	4.5
PV-50.8-77.3-UV	-150.0	50.8	77.3	-152.0	-154.7	-167.8	-171.9	4.5
PV-25.4-103.0-UV	-200.0	25.4	103.0	-202.5	-206.1	-223.6	-229.1	3.4
PV-38.1-103.0-UV	-200.0	38.1	103.0	-202.5	-206.1	-223.6	-229.1	4.2
PV-50.8-103.0-UV	-200.0	50.8	103.0	-202.5	-206.1	-223.6	-229.1	4.8
PV-25.4-128.8-UV	-250.0	25.4	128.8	-253.3	-257.8	-279.6	-286.5	3.6
PV-50.8-128.8-UV	-250.0	50.8	128.8	-253.3	-257.8	-279.6	-286.5	5.5
PV-25.4-154.5-UV	-300.0	25.4	154.5	-303.8	-309.2	-335.4	-343.6	2.0
PV-50.8-154.5-UV	-300.0	50.8	154.5	-303.8	-309.2	-335.4	-343.6	2.8
PV-25.4-180.3-UV	-350.0	25.4	180.3	-354.5	-360.8	-391.3	-401.0	2.0
PV-50.8-180.3-UV	-350.0	50.8	180.3	-354.5	-360.8	-391.3	-401.0	6.2
PV-25.4-206.6-UV	-400.0	25.4	206.6	-406.3	-413.5	-448.4	-459.5	2.0
PV-50.8-206.6-UV	-400.0	50.8	206.6	-406.3	-413.5	-448.4	-459.5	6.4
PV-25.4-257.5-UV	-500.0	25.4	257.5	-506.3	-515.3	-558.9	-572.7	4.3
PV-50.8-257.5-UV	-500.0	50.8	257.5	-506.3	-515.3	-558.9	-572.7	7.0
PV-25.4-309.1-UV	-600.0	25.4	309.1	-607.8	-618.6	-670.9	-687.5	3.9
PV-50.8-309.1-UV	-600.0	50.8	309.1	-607.8	-618.6	-670.9	-687.5	5.5
PV-12.7-412.1-UV	-800.0	12.7	412.1	-810.3	-824.7	-894.5	-916.5	2.6
PV-50.8-493.0-UV	-970.0	50.8	493.0	-969.4	-986.6	-1070.1	-1096.5	7.5
PV-12.7-515.1-UV	-1000.0	12.7	515.1	-1012.9	-1030.9	-1118.1	-1145.6	2.5
PV-25.4-515.1-UV	-1000.0	25.4	515.1	-1012.9	-1030.9	-1118.1	-1145.6	2.0
PV-50.8-515.1-UV	-1000.0	50.8	515.1	-1012.9	-1030.9	-1118.1	-1145.6	2.8
PV-12.7-772.6-UV	-1500.0	12.7	772.6	-1519.2	-1546.2	-1677.0	-1718.3	2.5
PV-25.4-772.6-UV	-1500.0	25.4	772.6	-1519.2	-1546.2	-1677.0	-1718.3	2.0
PV-50.8-772.6-UV	-1500.0	50.8	772.6	-1519.2	-1546.2	-1677.0	-1718.3	2.8

* Other sizes and focal lengths available in prototype and production quantities.

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index



Spherical SF11 Plano-Concave Lenses

Tutorials

Lenses

Windows

Mirrors

Prisms

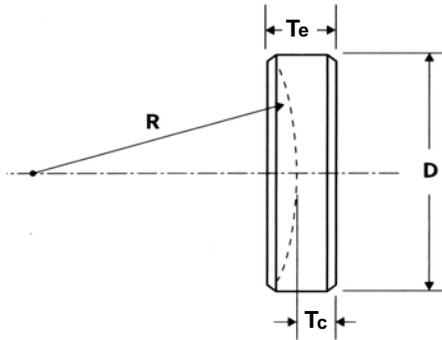
Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS



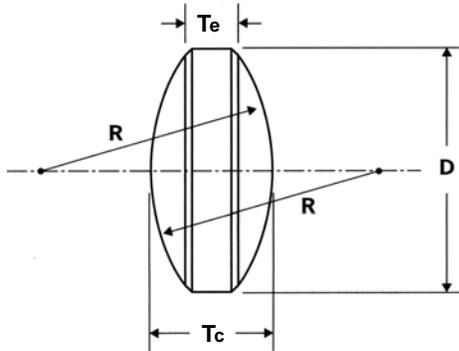
Substrate material :	SF11 glass
Surface Flatness :	$\lambda/10$ @ 633nm
Surface Quality :	20-10 laser quality
Centration Error :	≤ 3 arc min.
Focal Length Tolerance :	± 0.5 %
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)			Tc(mm)
				780nm	1300nm	1550nm	
PV-5.0-4.1-SF11	-5.0	5.0	4.1	-5.3	-5.5	-5.5	1.1
PV-10.0-7.7-SF11	-10.0	10.0	7.7	-9.9	-10.3	-10.3	2.0
PV-10.0-11.5-SF11	-15.0	10.0	11.5	-14.8	-15.4	-15.4	2.0
PV-15.0-15.3-SF11	-20.0	15.0	15.3	-19.8	-20.4	-20.5	1.8
PV-15.0-19.1-SF11	-25.0	15.0	19.1	-24.7	-25.5	-25.6	2.0
PV-19.1-27.2-SF11	-35.0	19.1	27.2	-35.1	-36.3	-36.5	1.8
PV-25.4-38.1-SF11	-50.0	25.4	38.1	-49.2	-50.9	-51.2	1.6
PV-25.4-45.7-SF11	-60.0	25.4	45.7	-59.0	-61.0	-61.4	2.0
PV-25.4-58.2-SF11	-76.0	25.4	58.2	-75.1	-77.7	-78.1	2.0
PV-25.4-76.3-SF11	-100.0	25.4	76.3	-98.5	-101.9	-102.5	2.0
PV-25.4-96.0-SF11	-125.0	25.4	96.0	-123.9	-128.2	-128.9	2.0
PV-25.4-114.6-SF11	-150.0	25.4	114.6	-148.0	-153.0	-153.9	2.0
PV-25.4-134.1-SF11	-175.0	25.4	134.1	-173.1	-179.0	-180.1	2.0
PV-25.4-153.4-SF11	-200.0	25.4	153.4	-198.0	-204.8	-206.0	2.0
PV-25.4-189.9-SF11	-250.0	25.4	189.9	-245.2	-253.5	-255.5	2.0

* Other sizes and focal lengths available in prototype and production quantities.



Spherical BK7 Bi-Convex Lenses



SPECIFICATIONS

Substrate material :	BK7
Surface Flatness :	$\lambda/10$ @ 633nm
Surface Quality :	10-5 laser quality
Centration Error :	≤ 3 arcmin.
Focal Length Tolerance :	± 0.5 %
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)			Tc(mm)
				532nm	633nm	1064nm	
BX-6.0-7.7-C	8.0	6.0	7.7	8.0	8.0	8.2	3.2
BX-5.0-9.8-C	10.0	5.0	9.8	9.9	10.0	10.1	2.6
BX-10.0-9.8-C	10.0	10.0	9.8	9.9	10.0	10.1	4.8
BX-12.7-12.5-C	13.0	12.7	12.5	12.9	13.0	13.2	5.0
BX-7.5-14.9-C	15.0	7.5	14.9	14.8	15.0	15.2	2.9
BX-12.7-14.4-C	15.0	12.7	14.4	14.9	15.0	15.3	5.9
BX-15.0-17.4-C	18.0	15.0	17.4	17.8	18.0	18.2	6.1
BX-15.0-19.7-C	20.0	15.0	19.7	19.8	20.0	20.3	4.9
BX-19.1-21.4-C	22.0	19.1	21.4	21.8	22.0	22.3	6.9
BX-8.0-25.2-C	25.0	8.0	25.2	24.8	25.0	25.4	2.6
BX-12.7-25.2-C	25.0	12.7	25.2	24.8	25.0	25.4	3.3
BX-19.1-25.2-C	25.0	19.1	25.2	24.8	25.0	25.4	6.1
BX-25.4-25.2-C	25.0	25.4	25.2	24.8	25.0	25.4	8.5
BX-19.1-29.8-C	30.0	19.1	29.8	29.8	30.0	30.5	6.3
BX-8.0-35.6-C	35.0	8.0	35.6	34.7	35.0	35.5	2.4
BX-25.4-34.9-C	35.0	25.4	34.9	34.7	35.0	35.6	6.7
BX-25.4-38.1-C	38.0	25.4	38.1	37.7	38.1	38.7	6.3
BX-38.1-37.0-C	38.0	38.1	37.0	37.8	38.1	38.7	12.4
BX-25.4-40.2-C	40.0	25.4	40.2	39.7	40.0	40.7	5.9
BX-10.0-51.0-C	50.0	10.0	51.0	49.5	49.9	50.7	2.4
BX-15.0-51.0-C	50.0	15.0	51.0	49.6	50.0	50.8	2.9
BX-25.4-50.6-C	50.0	25.4	50.6	49.6	50.0	50.8	5.1
BX-38.1-49.3-C	50.0	38.1	49.3	49.6	50.0	50.9	12.7
BX-50.8-48.9-C	50.0	50.8	48.9	49.6	50.0	50.8	14.6
BX-15.0-61.3-C	60.0	15.0	61.3	59.4	60.0	60.9	2.7
BX-25.4-61.0-C	60.0	25.4	61.0	59.5	50.0	61.0	4.5
BX-38.1-60.4-C	60.0	38.1	60.4	59.5	60.0	61.0	8.0

continued



Spherical BK7 Bi-Convex Lenses

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

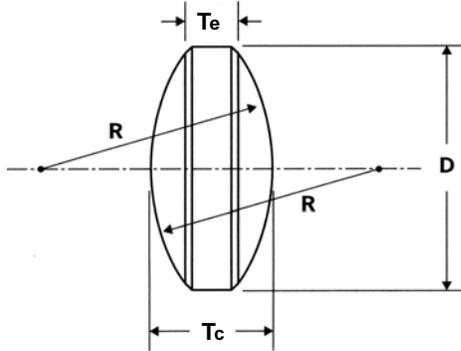
Index

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)			Tc(mm)
				532nm	633nm	1064nm	
BX-50.8-63.4-C	64.0	50.8	63.4	63.0	63.5	64.5	11.5
BX-15.0-76.8-C	75.0	15.0	76.8	74.4	75.0	76.2	2.7
BX-25.4-76.6-C	75.0	25.4	76.6	74.4	75.0	76.3	4.1
BX-38.1-76.1-C	75.0	38.1	76.1	74.4	75.0	76.2	6.7
BX-50.8-75.4-C	75.0	50.8	75.4	74.4	75.0	76.2	10.8
BX-10.0-76.9-C	80.0	10.0	76.9	79.8	80.4	81.7	4.0
BX-25.4-81.8-C	80.0	25.4	81.8	79.3	80.0	81.3	3.5
BX-50.8-80.8-C	80.0	50.8	80.8	79.3	80.0	81.3	9.1
BX-90.0-25.4-C	90.0	25.4	92.0	89.3	90.0	91.5	4.4
BX-10.0-102.7-C	100.0	10.0	102.7	99.2	100.0	101.7	2.0
BX-15.0-102.6-C	100.0	15.0	102.6	99.2	100.0	101.7	2.7
BX-25.4-102.4-C	100.0	25.4	102.4	99.3	100.1	101.8	4.2
BX-38.1-102.1-C	100.0	38.1	102.1	99.2	100.0	101.7	6.6
BX-50.8-101.6-C	100.0	50.8	101.6	99.2	100.0	101.6	8.2
BX-15.0-128.8-C	125.0	15.0	128.8	124.4	125.4	127.5	2.4
BX-25.4-128.2-C	125.0	25.4	128.2	124.1	125.1	127.2	4.2
BX-38.1-128.0-C	125.0	38.1	128.0	124.0	125.0	127.1	6.3
BX-50.8-127.5-C	125.0	50.8	127.5	123.9	125.0	127.0	8.4
BX-25.4-154.0-C	150.0	25.4	154.0	148.9	150.2	152.7	4.2
BX-38.1-153.7-C	150.0	38.1	153.7	149.0	150.2	152.7	6.3
BX-50.8-153.4-C	150.0	50.8	153.4	148.8	150.0	152.5	8.3
BX-10.0-205.7-C	200.0	10.0	205.7	198.3	200.0	203.3	2.0
BX-15.0-205.7-C	200.0	15.0	205.7	198.4	200.0	203.4	2.2
BX-25.4-205.6-C	200.0	25.4	205.6	198.5	200.2	203.5	4.2
BX-38.1-205.4-C	200.0	38.1	205.4	198.4	200.1	203.4	6.3
BX-50.8-205.2-C	200.0	50.8	205.2	198.3	200.0	203.3	8.3
BX-25.4-257.1-C	250.0	25.4	257.1	247.9	250.0	254.2	4.2
BX-50.8-256.8-C	250.0	50.8	256.8	247.9	250.0	254.2	8.3
BX-25.4-308.5-C	300.0	25.4	308.5	297.5	299.8	304.8	4.0
BX-50.8-308.5-C	300.0	50.8	308.5	297.6	300.2	305.2	8.3
BX-25.4-360.0-C	350.0	25.4	360.0	347.0	350.0	355.8	4.2
BX-50.8-360.0-C	350.0	50.8	360.0	347.1	350.1	355.9	3.8
BX-25.4-411.5-C	400.0	25.4	411.5	396.5	399.8	406.5	2.4
BX-50.8-411.5-C	400.0	50.8	411.5	396.7	400.0	406.7	7.0
BX-25.4-514.6-C	500.0	25.4	514.6	495.7	499.9	508.2	4.2
BX-50.8-514.6-C	500.0	50.8	514.6	495.9	500.1	508.4	7.0
BX-25.4-1029.8-C	1000.0	25.4	1029.8	991.6	1000.0	1016.7	2.2
BX-50.8-1029.8-C	1000.0	50.8	1029.8	991.6	1000.1	1016.7	2.6
BX-25.4-2060.0-C	2000.0	25.4	2060.0	1983.1	2000.0	2033.4	2.1
BX-50.8-2060.0-C	2000.0	50.8	2060.0	1983.1	2000.0	2033.2	4.0

* Other sizes and focal lengths available in prototype and production quantities.



Spherical Fused Silica Bi-Convex Lenses



SPECIFICATIONS

Substrate material :	UV grade fused silica
Surface Flatness :	$\lambda/10$ @ 633nm
Surface Quality :	10-5 laser quality
Centration Error :	≤ 3 arcmin.
Focal Length Tolerance :	± 0.5 %
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)				Tc(mm)
				248nm	266nm	532nm	1064nm	
BX-12.7-14.4-UV	15.0	12.7	14.4	15.2	15.5	16.7	14.4	5.9
BX-15.0-17.4-UV	18.0	15.0	17.4	18.2	18.5	20.0	20.5	6.1
BX-15.0-19.7-UV	20.0	15.0	19.7	20.2	20.6	22.3	22.8	4.9
BX-19.1-19.1-UV	20.0	19.1	19.1	20.2	20.6	22.3	22.8	8.2
BX-19.1-21.4-UV	22.0	19.1	21.4	22.2	22.6	24.5	25.0	6.9
BX-12.7-25.2-UV	25.0	12.7	25.2	25.3	25.8	27.9	28.6	3.3
BX-15.0-25.0-UV	25.0	15.0	25.0	25.3	25.8	27.9	28.6	4.5
BX-25.4-23.9-UV	25.0	25.4	23.9	25.3	25.7	27.8	28.4	10.0
BX-12.7-25.5-UV	25.0	12.7	25.5	25.7	26.1	28.3	29.0	3.6
BX-19.1-29.8-UV	30.0	19.1	29.8	30.4	30.9	33.5	34.3	6.3
BX-10.0-35.6-UV	35.0	10.0	35.6	35.4	36.0	39.1	40.0	2.4
BX-15.0-35.4-UV	35.0	15.0	35.4	35.4	36.0	39.0	40.0	3.6
BX-19.1-35.2-UV	35.0	19.1	35.2	35.4	36.0	39.0	40.0	4.7
BX-25.4-38.1-UV	38.0	25.4	38.1	38.5	39.2	42.5	43.5	6.3
BX-10.0-51.1-UV	50.0	10.0	51.1	50.6	51.5	55.9	57.2	2.4
BX-15.0-51.0-UV	50.0	15.0	51.0	50.6	51.5	55.9	57.2	2.9
BX-25.4-50.6-UV	50.0	25.4	50.6	50.6	51.5	55.8	57.2	5.1
BX-38.1-49.3-UV	50.0	38.1	49.3	50.6	51.5	55.8	57.0	12.7
BX-50.8-48.9-UV	50.0	50.8	48.9	50.6	51.5	55.7	57.0	14.6
BX-10.0-61.4-UV	60.0	10.0	61.4	60.8	61.8	67.0	68.7	2.4
BX-25.4-61.0-UV	60.0	25.4	61.0	60.8	61.8	67.0	68.6	4.5
BX-25.4-64.4-UV	65.0	25.4	64.4	64.3	65.5	70.9	72.7	6.0
BX-10.0-76.9-UV	75.0	10.0	76.9	76.0	77.4	83.9	85.9	2.4
BX-15.0-76.8-UV	75.0	15.0	76.8	76.0	77.3	83.8	85.9	2.7
BX-25.4-76.6-UV	75.0	25.4	76.6	76.0	77.3	83.8	85.9	4.1
BX-38.1-76.1-UV	75.0	38.1	76.1	76.0	77.3	83.8	85.8	6.7
BX-50.8-75.4-UV	75.0	50.8	75.4	76.0	77.3	83.7	85.8	10.8

continued



Spherical Fused Silica Bi-Convex Lenses

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

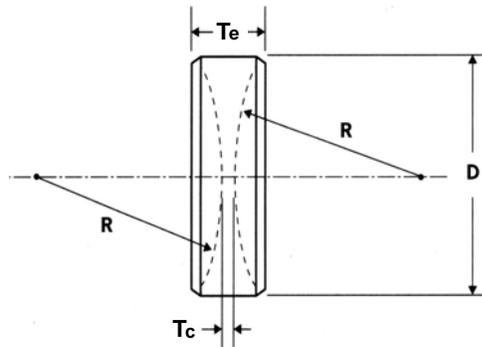
Index

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)				Tc(mm)
				248nm	266nm	532nm	1064nm	
BX-50.8-91.2-UV	90.0	50.8	91.2	91.1	92.7	100.5	102.9	8.6
BX-10.0-102.7-UV	100.0	10.0	102.7	101.3	103.1	111.8	114.6	2.0
BX-15.0-102.4-UV	100.0	15.0	102.4	101.3	102.9	111.6	114.3	2.7
BX-19.1-102.5-UV	100.0	19.1	102.5	101.3	103.1	111.8	114.5	3.2
BX-25.4-102.4-UV	100.0	25.4	102.4	101.3	103.2	111.9	114.5	4.2
BX-38.1-102.1-UV	100.0	38.1	102.1	101.3	103.1	111.8	114.5	5.5
BX-50.8-101.6-UV	100.0	50.8	101.6	101.3	103.1	111.7	114.4	8.2
BX-25.4-103.4-UV	102.0	25.4	103.4	102.4	103.8	112.6	115.3	4.2
BX-50.8-103.1-UV	102.0	50.8	103.1	102.0	104.7	113.5	116.3	9.3
BX-15.0-128.4-UV	125.0	15.0	128.4	126.6	128.9	139.8	143.2	2.4
BX-25.4-128.2-UV	125.0	25.4	128.2	126.6	129.0	139.9	143.1	4.2
BX-38.1-128.0-UV	125.0	38.1	128.0	126.6	129.0	139.9	143.2	5.5
BX-50.8-127.5-UV	125.0	50.8	127.5	126.6	128.8	139.6	143.0	7.2
BX-38.1-127.9-UV	127.0	38.1	127.9	126.6	128.8	139.7	143.1	5.1
BX-50.8-128.7-UV	127.0	50.8	128.7	127.7	130.0	140.9	144.3	7.0
BX-25.4-154.0-UV	150.0	25.4	154.0	152.1	154.8	167.9	171.7	4.2
BX-38.1-153.7-UV	150.0	38.1	153.7	152.2	154.9	167.9	171.7	6.3
BX-50.8-153.4-UV	150.0	50.8	153.4	152.0	154.6	167.7	171.8	6.8
BX-15.0-205.7-UV	200.0	15.0	205.7	202.6	206.2	223.6	229.1	2.2
BX-19.1-205.6-UV	200.0	19.1	205.6	202.8	206.4	223.8	229.1	3.7
BX-25.4-205.6-UV	200.0	25.4	205.6	202.8	206.4	223.9	229.1	4.2
BX-19.1-205.4-UV	200.0	38.1	205.4	203.0	206.6	224.0	229.0	6.3
BX-50.8-205.2-UV	200.0	50.8	205.2	203.2	206.7	224.1	229.1	8.4
BX-50.8-256.8-UV	250.0	50.8	256.8	253.9	258.4	280.1	286.3	8.3
BX-50.8-308.5-UV	300.0	50.8	308.5	304.7	310.1	336.2	343.8	8.3
BX-50.8-514.6-UV	500.0	50.8	514.6	506.9	515.9	559.5	572.7	6.0
BX-25.4-572.7-UV	550.0	25.4	572.7	563.5	573.5	622.0	637.3	2.4
BX-25.4-1029.8-UV	1000.0	25.4	1029.8	1012.9	1030.9	1118.0	1145.6	2.4
BX-38.1-1029.8-UV	1000.0	38.1	1029.8	1013.5	1030.9	1118.1	1145.6	6.0
BX-50.8-1029.8-UV	1000.0	50.8	1029.8	1013.5	1030.9	1118.1	1145.6	6.0
BX-25.4-2060.0-UV	2000.0	25.4	2060.0	2025.7	2061.7	2236.1	2291.1	2.2
BX-50.8-2060.0-UV	2000.0	50.8	2060.0	2026.4	2061.7	2236.1	2291.1	6.0

* Other sizes and focal lengths available in prototype and production quantities.



Spherical BK7 Bi-Concave Lenses



SPECIFICATIONS

Substrate material :	BK7
Surface Flatness :	$\lambda/10$ @ 633nm
Surface Quality :	10-5 laser quality
Centration Error :	≤ 3 arcmin.
Focal Length Tolerance :	± 0.5 %
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)			Tc(mm)
				532nm	633nm	1064nm	
BV-5.0-5.5-C	-5.0	5.0	5.5	-5.0	-5.0	-5.1	2.0
BV-6.0-8.6-C	-8.0	6.0	8.6	-8.0	-8.0	-8.2	2.0
BV-12.7-10.8-C	-10.0	12.7	10.8	-10.1	-10.2	-10.3	2.0
BV-12.0-12.7-C	-12.0	12.0	12.7	-11.9	-12.0	-12.2	2.0
BV-19.1-20.9-C	-20.0	19.1	20.9	-19.8	-20.0	-20.3	2.0
BV-10.0-23.4-C	-23.0	10.0	23.4	-22.3	-22.5	-22.9	1.1
BV-8.0-26.1-C	-25.0	8.0	26.1	-24.8	-25.0	-25.4	2.0
BV-15.0-26.1-C	-25.0	15.0	26.1	-24.8	-25.0	-25.4	2.0
BV-25.4-26.4-C	-25.0	25.4	26.4	-24.8	-25.0	-25.4	2.1
BV-38.1-51.8-C	-50.0	38.1	51.8	-49.5	-50.0	-50.8	2.0
BV-42.0-51.8-C	-50.0	42.0	51.8	-49.5	-50.0	-50.8	2.0
BV-25.4-77.6-C	-75.0	25.4	77.6	-74.4	-75.0	-76.3	2.0
BV-15.0-103.4-C	-100.0	15.0	103.4	-99.2	-100.0	-101.7	2.0
BV-25.4-103.4-C	-100.0	25.4	103.4	-99.1	-99.9	-101.6	2.6
BV-50.8-103.4-C	-100.0	50.8	103.4	-99.2	-100.0	-101.7	2.2
BV-25.4-129.1-C	-125.0	25.4	129.1	-123.9	-125.0	-127.1	2.9
BV-25.4-154.9-C	-150.0	25.4	154.9	-148.6	-149.8	-152.3	3.2
BV-25.4-206.4-C	-200.0	25.4	206.4	-198.3	-200.0	-203.3	3.4
BV-50.8-206.4-C	-200.0	50.8	206.4	-198.3	-200.0	-203.3	5.4
BV-25.4-309.4-C	-300.0	25.4	309.4	-297.8	-300.3	-305.3	2.0
BV-38.1-309.4-C	-300.0	38.1	309.4	-297.5	-300.0	-305.0	2.0
BV-50.8-309.4-C	-300.0	50.8	309.4	-297.8	-300.3	-305.3	6.3
BV-25.4-412.4-C	-400.0	25.4	412.4	-396.9	-400.3	-407.0	2.0
BV-38.1-412.4-C	-400.0	38.1	412.4	-396.6	-400.0	-406.7	6.0
BV-50.8-412.4-C	-400.0	50.8	412.4	-396.9	-400.3	-407.0	6.0
BV-25.4-515.8-C	-500.0	25.4	515.8	-496.5	-500.7	-509.0	2.0
BV-50.8-515.8-C	-500.0	50.8	515.8	-496.1	-500.4	-508.7	2.3
BV-25.4-618.4-C	-600.0	25.4	618.4	-595.2	-600.3	-610.3	2.0
BV-50.8-618.4-C	-600.0	50.8	618.4	-595.2	-600.3	-610.3	6.3

* Other sizes and focal lengths available in prototype and production quantities.



Spherical Fused Silica Bi-Concave Lenses

Tutorials

Lenses

Windows

Mirrors

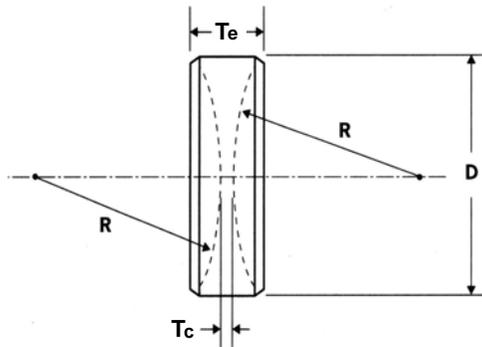
Prisms

Beamsplitters

Polarizers

Filters

Index



SPECIFICATIONS

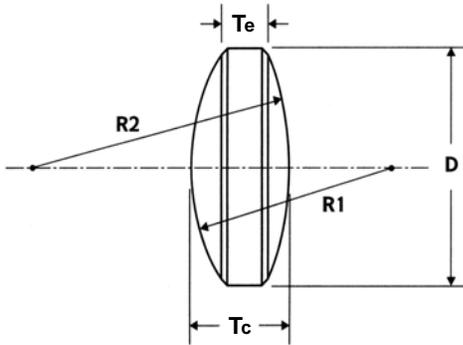
Substrate material :	UV grade fused silica
Surface Flatness :	$\lambda/10$ @ 633nm
Surface Quality :	10-5 laser quality
Centration Error :	≤ 3 arcmin.
Focal Length Tolerance :	± 0.5 %
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Nominal f (mm)	D(mm)	R(mm)	Focal Length(mm)				Tc(mm)
				248nm	266nm	532nm	1064nm	
BV-19.1-20.9-UV	-20.0	19.1	20.9	-20.9	-20.6	-22.3	-22.9	2.0
BV-25.4-26.1-UV	-25.0	25.4	26.1	-26.0	-25.8	-28.0	-28.7	2.0
BV-19.1-36.4-UV	-35.0	19.1	36.4	-36.1	-36.1	-39.2	-40.1	2.0
BV-25.4-51.8-UV	-50.0	25.4	51.8	-51.3	-51.5	-55.9	-57.3	2.0
BV-38.1-51.8-UV	-50.0	38.1	51.8	-51.3	-51.5	-55.9	-57.3	2.0
BV-50.8-51.8-UV	-50.0	50.8	51.8	-51.3	-51.5	-55.9	-57.3	2.0
BV-19.1-72.5-UV	-70.0	19.1	72.5	-71.6	-72.2	-78.3	-80.3	2.0
BV-25.4-77.6-UV	-75.0	25.4	77.6	-76.6	-76.7	-83.2	-85.9	2.0
BV-25.4-103.4-UV	-100.0	25.4	103.4	-102.1	-103.0	-111.8	-114.5	2.6
BV-50.8-103.4-UV	-100.0	50.8	103.4	-102.1	-103.0	-111.8	-114.6	2.2
BV-25.4-154.9-UV	-150.0	25.4	154.9	-152.8	-154.5	-167.6	-171.7	3.2
BV-50.8-154.9-UV	-150.0	50.8	154.9	-152.6	-154.5	-167.8	-172.3	2.0
BV-25.4-206.4-UV	-200.0	25.4	206.4	-203.5	-206.2	-223.6	-229.2	3.4
BV-50.8-206.4-UV	-200.0	50.8	206.4	-203.5	-206.2	-223.6	-229.5	3.4
BV-25.4-257.9-UV	-250.0	25.4	257.9	-253.9	-257.7	-279.6	-286.8	2.0
BV-38.1-257.9-UV	-250.0	38.1	257.9	-254.4	-257.7	279.6	-286.5	5.3
BV-50.8-257.9-UV	-250.0	50.8	257.9	-254.4	-257.7	-279.6	-286.8	5.3
BV-25.4-412.4-UV	-400.0	25.4	412.4	-406.1	-412.3	-447.2	-458.3	3.8
BV-38.1-412.4-UV	-400.0	38.1	412.4	-406.3	-412.3	-447.2	-458.3	5.3
BV-25.4-515.8-UV	-500.0	25.4	515.8	-507.7	-515.8	-559.4	-573.6	3.5
BV-50.8-515.8-UV	-500.0	50.8	515.8	-508.3	-515.8	-559.4	-573.2	7.1
BV-38.1-618.4-UV	-600.0	38.1	618.4	-609.0	-618.5	-670.8	-687.3	6.3
BV-25.4-1030.5-UV	-1000.0	25.4	1030.5	-1013.8	-1030.8	-1118.0	-1145.9	3.5
BV-50.8-1030.5-UV	-1000.0	50.8	1030.5	-1014.5	-1030.8	-1118.0	-1145.9	7.7

* Other sizes and focal lengths available in prototype and production quantities.



Spherical Positive Bestform Lenses



SPECIFICATIONS

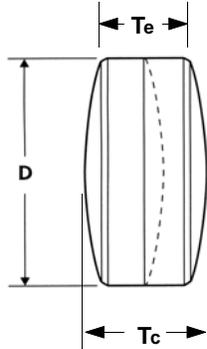
Substrate material :	BK7 or UVFS
Surface Flatness :	$\lambda/10$ @ 633nm
Surface Quality :	10-5 laser quality
Centration Error :	≤ 3 arcmin.
Focal Length Tolerance :	± 0.5 %
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Material	Nominal f (mm)	D(mm)	Focal Length(mm)			Input Di (mm)	Spot D _s D(mm)	Tc(mm)
				266nm	532nm	1064nm			
BFCX-12.7-25.0-C	BK7	25.0	12.7	24.4	25.0	4.0	6.8	4.0	
BFCX-12.7-38.1-C	BK7	38.1	12.7	38.3	39.2	6.0	9.4	4.0	
BFCX-25.4-50.0-C	BK7	50.0	25.4	50.2	51.5	7.0	8.5	4.0	
BFCX-25.4-75.0-C	BK7	75.0	25.4	74.1	76.0	10.0	11.5	4.0	
BFCX-25.4-100.0-C	BK7	100.0	25.4	100.8	103.3	12.0	10.8	4.0	
BFCX-25.4-125.0-C	BK7	125.0	25.4	123.6	126.8	14.5	12.6	4.0	
BFCX-25.4-150.0-C	BK7	150.0	25.4	147.2	151.0	16.5	13.1	4.0	
BFCX-25.4-200.0-C	BK7	200.0	25.4	198.3	203.4	20.5	13.8	4.0	
BFCX-12.7-25.0-UV	UVFS	25.0	12.7	25.4	27.5	3.0	2.9	4.0	
BFCX-12.7-38.1-UV	UVFS	38.1	12.7	38.9	43.1	4.5	3.9	4.0	
BFCX-25.4-50.0-UV	UVFS	50.0	25.4	52.2	56.6	5.5	4.2	4.0	
BFCX-25.4-75.0-UV	UVFS	75.0	25.4	77.0	83.5	7.5	4.9	4.0	
BFCX-25.4-100.0-UV	UVFS	100.0	25.4	104.8	113.6	9.5	5.3	4.0	
BFCX-25.4-125.0-UV	UVFS	125.0	25.4	128.5	139.4	11.5	6.3	4.0	
BFCX-25.4-150.0-UV	UVFS	150.0	25.4	153.0	166.0	13.0	6.4	4.0	
BFCX-25.4-200.0-UV	UVFS	200.0	25.4	206.2	223.6	16.0	6.6	4.0	

* Other sizes and focal lengths available in prototype and production quantities.



Achromatic Doublet Lenses



SPECIFICATIONS

Substrate material :	See table
Surface Flatness :	$\lambda/4$ @ 633nm
Surface Quality :	40-20
Centration Error :	< 3 arcmin.
Radius Tolerance :	± 1.0 %
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

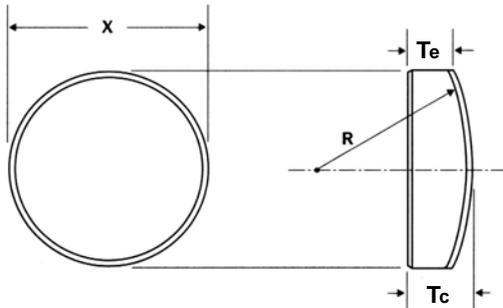
Part Number	Diameter(mm)	EFL(mm)	BFL(mm)	Tc(mm)	Te(mm)	Glass TYpe
ADL-6.35-19.0	6.35	19.0	17.4	3.2	2.6	BaK4-SF10
ADL-6.35-25.4	6.35	25.4	23.9	3.0	2.5	BK7-SF5
ADL-6.35-38.1	6.35	38.1	29.8	4.5	4.2	BaK4-SF10
ADL-12.7-19.0	12.7	19.0	15.1	6.85	4.9	BaF10-SF14
ADL-12.7-25.4	12.7	25.4	22.2	5.5	4.1	BaF10-SF10
ADL-12.7-38.1	12.7	38.1	36.0	4.5	3.3	BaK4-SF10
ADL-12.7-50.8	12.7	50.8	48.8	4.5	3.5	BK7-SF5
ADL-12.7-76.2	12.7	76.2	73.5	5.0	4.4	BaK4-SF10
ADL-25.4-50.8	25.4	50.8	45.2	9.8	7.0	BaF10-SF10
ADL-25.4-76.2	25.4	76.2	72.4	7.5	5.2	BaK4-SF10
ADL-25.4-88.9	25.4	88.9	85.3	7.47	5.3	BK7-SF5
ADL-25.4-100	25.4	100	96.5	7.17	5.2	BK7-SF5
ADL-25.4-125	25.4	125	121.9	6.47	4.9	BK7-SF5
ADL-25.4-150	25.4	150	147.1	6.17	4.9	BK7-SF5
ADL-25.4-38.1	25.4	200	197.1	6.3	5.3	BK7-SF5
ADL-25.4-250	25.4	250	247.1	6.3	5.5	BK7-SF5
ADL-38.1-76.2	38.1	76.2	68.2	14.0	9.9	BaF10-SF10
ADL-38.1-100	38.1	100	92.9	12.4	9.3	BaF10-SF10
ADL-38.1-150	38.1	150	145.4	9.0	6.1	BK7-SF5
ADL-38.1-200	38.1	200	194.3	11.0	8.8	BK7-SF5
ADL-38.1-250	38.1	250	244.6	11.5	9.8	BK7-SF5
ADL-38.1-300	38.1	300	294.9	11.0	9.6	BK7-SF5
ADL-50.8-150	50.8	150	143.5	12.5	7.3	BK7-SF5
ADL-50.8-200	50.8	200	194.3	12.0	8.1	BK7-SF5
ADL-50.8-250	50.8	250	243.9	12.38	9.7	BK7-SF5
ADL-50.8-300	50.8	300	292.9	14.0	11.4	BK7-SF5
ADL-50.8-400	50.8	400	392.1	13.0	11.1	BK7-SF5
ADL-50.8-500	50.8	500	494.6	11.66	4.33	BK7-SF5
ADL-50.8-750	50.8	750	741.8	17.5	16.5	BK7-SF5

* Other sizes and focal lengths available in prototype and production quantities.



Round Cylindrical Plano-Convex Lenses

SPECIFICATIONS



Substrate material :	VUV CaF2, UVFS or BK7
Surface Flatness :	$\lambda/2$ for Y-direction $\lambda/4$ for X-direction @633nm
Surface Quality :	20-10 laser quality
Wedge :	$i\lambda$ arc min.
Focal Length Tolerance :	$\pm 0.5\%$
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm a 45 typical

Part Number	Nominal f (mm)	Diameter X(mm)	Radius R(mm)	Thickness Tc(mm)	Material
CLPX-15.0-12.7-CF	25.0	15.0	12.7	6.5	VUV CaF2
CLPX-25.4-25.4-CF	50.0	25.4	25.4	7.4	VUV CaF2
CLPX-25.4-30.5-CF	60.0	25.4	30.5	7.0	VUV CaF2
CLPX-25.4-38.1-CF	75.0	25.4	38.1	6.2	VUV CaF2
CLPX-50.8-38.1-CF	75.0	50.8	38.1	12.7	VUV CaF2
CLPX-25.4-50.9-CF	100.0	25.4	50.9	5.6	VUV CaF2
CLPX-50.8-50.9-CF	100.0	50.8	50.9	10.	VUV CaF2
CLPX-25.4-76.3-CF	150.0	25.4	76.3	5.1	VUV CaF2
CLPX-50.8-76.3-CF	150.0	50.8	76.3	8.0	VUV CaF2
CLPX-15.0-10.2-UV	20.0	15.0	10.2	6.0	Fused Silica
CLPX-15.0-12.7-UV	25.0	15.0	12.7	6.5	Fused Silica
CLPX-20.0-12.7-UV	25.0	20.0	12.7	8.0	Fused Silica
CLPX-15.0-15.3-UV	30.0	15.0	15.3	5.0	Fused Silica
CLPX-25.4-15.3-UV	30.0	25.4	15.3	11.0	Fused Silica
CLPX-15.0-20.3-UV	40.0	15.0	20.3	5.0	Fused Silica
CLPX-25.4-20.3-UV	40.0	25.4	20.3	9.0	Fused Silica
CLPX-25.4-25.4-UV	50.0	25.4	25.4	7.4	Fused Silica
CLPX-30.0-25.4-UV	50.0	30.0	25.4	9.0	Fused Silica
CLPX-25.4-30.5-UV	60.0	25.4	30.5	7.0	Fused Silica
CLPX-30.0-30.5-UV	60.0	30.0	30.5	8.0	Fused Silica
CLPX-25.4-38.1-UV	75.0	25.4	38.1	6.2	Fused Silica
CLPX-50.8-38.1-UV	75.0	50.8	38.1	12.7	Fused Silica
CLPX-20.0-50.9-UV	100.0	20.0	50.9	5.0	Fused Silica
CLPX-25.4-50.9-UV	100.0	25.4	50.9	5.6	Fused Silica
CLPX-30.0-50.9-UV	100.0	30.0	50.9	6.0	Fused Silica
CLPX-50.8-50.9-UV	100.0	50.8	50.9	10.0	Fused Silica
CLPX-25.4-76.3-UV	150.0	25.4	76.3	5.1	Fused Silica

continued



Round Cylindrical Plano-Convex Lenses

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

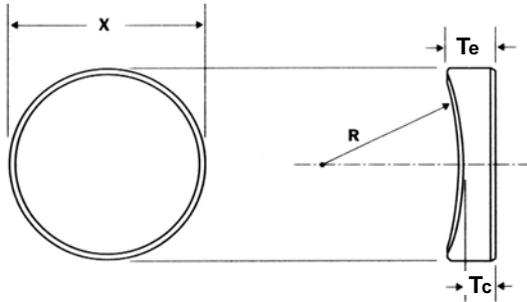
Index

Part Number	Nominal f (mm)	Diameter X(mm)	Radius R(mm)	Thickness Tc(mm)	Material
CLPX-30.0-76.3-UV	150.0	30.0	76.3	6.0	Fused Silica
CLPX-50.8-76.3-UV	150.0	50.8	76.3	8.0	Fused Silica
CLPX-15.0-10.2-C	20.0	15.0	10.2	6.0	BK7
CLPX-15.0-12.7-C	25.0	15.0	12.7	6.5	BK7
CLPX-20.0-12.7-C	25.0	20.0	12.7	8.0	BK7
CLPX-15.0-15.3-C	30.0	15.0	15.3	5.0	BK7
CLPX-25.4-15.3-C	30.0	25.4	15.3	11.0	BK7
CLPX-15.0-20.3-C	40.0	15.0	20.3	5.0	BK7
CLPX-25.4-20.3-C	40.0	25.4	20.3	9.0	BK7
CLPX-25.4-25.4-C	50.0	25.4	25.4	7.4	BK7
CLPX-30.0-25.4-C	50.0	30.0	25.4	9.0	BK7
CLPX-25.4-30.5-C	60.0	25.4	30.5	7.0	BK7
CLPX-30.0-30.5-C	60.0	30.0	30.5	8.0	BK7
CLPX-25.4-38.1-C	75.0	25.4	38.1	6.2	BK7
CLPX-50.8-38.1-C	75.0	50.8	38.1	12.7	BK7
CLPX-20.0-50.9-C	100.0	20.0	50.9	5.0	BK7
CLPX-25.4-50.9-C	100.0	25.4	50.9	5.6	BK7
CLPX-30.0-50.9-C	100.0	30.0	50.9	6.0	BK7
CLPX-50.8-50.9-C	100.0	50.8	50.9	10.0	BK7
CLPX-25.4-76.3-C	150.0	25.4	76.3	5.1	BK7
CLPX-30.0-76.3-C	150.0	30.0	76.3	6.0	BK7
CLPX-50.8-76.3-C	150.0	50.8	76.3	8.0	BK7

* Other sizes and focal lengths available in prototype and production quantities.



Round Cylindrical Plano-Concave Lenses



SPECIFICATIONS

Substrate material :	VUV CaF ₂ , UVFS or BK7
Surface Flatness :	$\lambda/2$ for Y-direction $\lambda/4$ for X-direction @633nm
Surface Quality :	20-10 laser quality
Wedge :	$i\lambda$ arc min.
Focal Length Tolerance :	$\pm 0.5\%$
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm a 45 typical

Part Number	Nominal f (mm)	Diameter X(mm)	Radius R(mm)	Thickness Tc(mm)	Material
CLPV-15.0-12.7-CF	-25.0	15.0	12.7	5.0	VUV CaF ₂
CLPV-25.4-25.4-CF	-50.0	25.4	25.4	5.0	VUV CaF ₂
CLPV-25.4-30.5-CF	-60.0	25.4	30.5	.3	VUV CaF ₂
CLPV-25.4-38.1-CF	-75.0	25.4	38.1	5.0	VUV CaF ₂
CLPV-50.8-38.1-CF	-75.0	50.8	38.1	8.0	VUV CaF ₂
CLPV-25.4-50.9-CF	-100.0	25.4	50.9	5.0	VUV CaF ₂
CLPV-50.8-50.9-CF	-100.0	50.8	50.9	8.0	VUV CaF ₂
CLPV-25.4-76.3-CF	-150.0	25.4	76.3	5.0	VUV CaF ₂
CLPV-50.8-76.3-CF	-150.0	50.8	76.3	6.0	VUV CaF ₂
CLPV-15.0-10.2-UV	-20.0	15.0	10.2	2.8	Fused Silica
CLPV-15.0-12.7-UV	-25.0	15.0	12.7	5.0	Fused Silica
CLPV-20.0-12.7-UV	-25.0	20.0	12.7	4.2	Fused Silica
CLPV-15.0-15.3-UV	-30.0	15.0	15.3	3.1	Fused Silica
CLPV-25.4-15.3-UV	-30.0	25.4	15.3	4.3	Fused Silica
CLPV-15.0-20.3-UV	-40.0	15.0	20.3	2.7	Fused Silica
CLPV-25.4-20.3-UV	-40.0	25.4	20.3	4.6	Fused Silica
CLPV-25.4-25.4-UV	-50.0	25.4	25.4	5.0	Fused Silica
CLPV-30.0-25.4-UV	-50.0	30.0	25.4	4.2	Fused Silica
CLPV-25.4-30.5-UV	-60.0	25.4	30.5	4.3	Fused Silica
CLPV-30.0-30.5-UV	-60.0	30.0	30.5	4.2	Fused Silica
CLPV-25.4-38.1-UV	-75.0	25.4	38.1	5.0	Fused Silica
CLPV-50.8-38.1-UV	-75.0	50.8	38.1	4.0	Fused Silica
CLPV-20.0-50.9-UV	-100.0	20.0	50.9	3.1	Fused Silica
CLPV-25.4-50.9-UV	-100.0	25.4	50.9	5.0	Fused Silica
CLPV-30.0-50.9-UV	-100.0	30.0	50.9	4.8	Fused Silica
CLPV-50.8-50.9-UV	-100.0	50.8	50.9	3.4	Fused Silica
CLPV-25.4-76.3-UV	-150.0	25.4	76.3	5.0	Fused Silica

continued



Round Cylindrical Plano-Concave Lenses

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

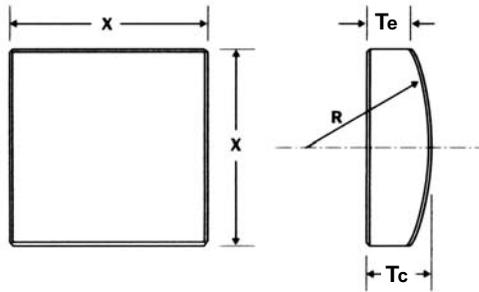
Index

Part Number	Nominal f (mm)	Diameter X(mm)	Radius R(mm)	Thickness Tc(mm)	Material
CLPV-30.0-76.3-UV	-150.0	30.0	76.3	3.6	Fused Silica
CLPV-50.8-76.3-UV	-150.0	50.8	76.3	6.0	Fused Silica
CLPV-15.0-10.2-C	-20.0	15.0	10.2	2.8	BK7
CLPV-15.0-12.7-C	-25.0	15.0	12.7	5.0	BK7
CLPV-20.0-12.7-C	-25.0	20.0	12.7	4.2	BK7
CLPV-15.0-15.3-C	-30.0	15.0	15.3	3.1	BK7
CLPV-25.4-15.3-C	-30.0	25.4	15.3	4.3	BK7
CLPV-15.0-20.3-C	-40.0	15.0	20.3	2.7	BK7
CLPV-25.4-20.3-C	-40.0	25.4	20.3	4.6	BK7
CLPV-25.4-25.4-C	-50.0	25.4	25.4	5.0	BK7
CLPV-30.0-25.4-C	-50.0	30.0	25.4	4.2	BK7
CLPV-25.4-30.5-C	-60.0	25.4	30.5	4.3	BK7
CLPV-30.0-30.5-C	-60.0	30.0	30.5	4.2	BK7
CLPV-25.4-38.1-C	-75.0	25.4	38.1	5.0	BK7
CLPV-50.8-38.1-C	-75.0	50.8	38.1	4.0	BK7
CLPV-20.0-50.9-C	-100.0	20.0	50.9	3.1	BK7
CLPV-25.4-50.9-C	-100.0	25.4	50.9	5.0	BK7
CLPV-30.0-50.9-C	-100.0	30.0	50.9	4.8	BK7
CLPV-50.8-50.9-C	-100.0	50.8	50.9	3.4	BK7
CLPV-25.4-76.3-C	-150.0	25.4	76.3	5.0	BK7
CLPV-30.0-76.3-C	-150.0	30.0	76.3	3.6	BK7
CLPV-50.8-76.3-C	-150.0	50.8	76.3	6.0	BK7

* Other sizes and focal lengths available in prototype and production quantities.



Square Cylindrical Plano-Convex Lenses



SPECIFICATIONS

Substrate material :	VUV CaF2, UVFS or BK7
Surface Flatness :	$\lambda/2$ for Y-direction $\lambda/4$ for X-direction @633nm
Surface Quality :	20-10 laser quality
Wedge :	$i\lambda$ arc min.
Focal Length Tolerance :	$\pm 0.5\%$
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm a 45 typical

Part Number	Nominal f (mm)	Length X(mm)	Radius R(mm)	Thickness Tc(mm)	Material
CSPX-25.4-20.3-CF	40.0	25.4	20.3	9.0	VUV CaF2
CSPX-25.4-25.4-CF	50.0	25.4	25.4	7.4	VUV CaF2
CSPX-25.4-38.1-CF	75.0	25.4	38.1	5.0	VUV CaF2
CSPX-25.4-50.9-CF	100.0	25.4	50.9	5.0	VUV CaF2
CSPX-25.4-76.3-CF	150.0	25.4	76.3	5.0	VUV CaF2
CSPX-30.0-101.7-CF	200.0	30.0	101.7	5.0	VUV CaF2
CSPX-30.0-127.1-CF	250.0	30.0	127.1	5.0	VUV CaF2
CSPX-30.0-152.6-CF	300.0	30.0	152.6	5.0	VUV CaF2
CSPX-30.0-203.4-CF	400.0	30.0	203.4	5.0	VUV CaF2
CSPX-50.8-254.3-CF	500.0	50.8	254.3	5.0	VUV CaF2
CSPX-50.8-381.4-CF	750.0	50.8	381.4	5.0	VUV CaF2
CSPX-50.8-508.6-CF	1000.0	50.8	508.6	5.0	VUV CaF2
CRPX-15.0-10.2-UV	20.0	15.0	10.2	6.0	Fused Silica
CRPX-20.0-12.7-UV	25.0	20.0	12.7	6.0	Fused Silica
CRPX-25.4-15.3-UV	30.0	25.4	15.3	11.0	Fused Silica
CRPX-15.0-20.3-UV	40.0	15.0	20.3	5.0	Fused Silica
CRPX-25.4-20.3-UV	40.0	25.4	20.3	9.0	Fused Silica
CRPX-25.4-25.4-UV	50.0	25.4	25.4	9.0	Fused Silica
CRPX-30.0-25.4-UV	50.0	30.0	25.4	9.0	Fused Silica
CRPX-25.4-30.5-UV	60.0	25.4	30.5	7.0	Fused Silica
CRPX-30.0-30.5-UV	60.0	30.0	30.5	8.0	Fused Silica
CRPX-25.4-38.1-UV	75.0	25.4	38.1	5.0	Fused Silica
CRPX-50.8-38.1-UV	75.0	50.8	38.1	7.0	Fused Silica
CRPX-25.4-50.9-UV	100.0	25.4	50.9	5.0	Fused Silica
CRPX-50.8-50.9-UV	100.0	50.8	50.9	10.0	Fused Silica
CRPX-25.4-63.6-UV	125.0	25.4	63.6	5.0	Fused Silica
CRPX-50.8-63.6-UV	125.0	50.8	63.6	8.5	Fused Silica
CRPX-25.4-76.3-UV	150.0	25.4	76.3	5.0	Fused Silica
CRPX-50.8-76.3-UV	150.0	50.8	76.3	8.0	Fused Silica

continued



Square Cylindrical Plano-Convex Lenses

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index

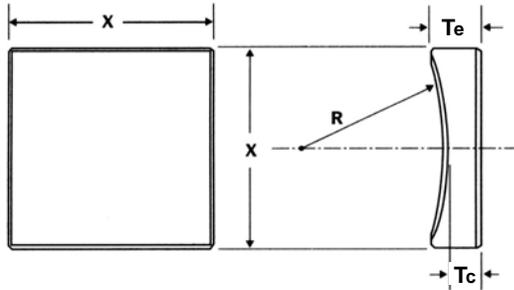
Part Number	Nominal f (mm)	Length X(mm)	Radius R(mm)	Thickness Tc(mm)	Material
CRPX-25.4-101.7-UV	200.0	25.4	101.7	5.0	Fused Silica
CRPX-50.8-101.7-UV	200.0	50.8	101.7	6.4	Fused Silica
CRPX-25.4-152.6-UV	300.0	25.4	152.6	5.0	Fused Silica
CRPX-50.8-152.6-UV	300.0	50.8	152.6	6.4	Fused Silica
CRPX-25.4-203.4-UV	400.0	25.4	203.4	5.0	Fused Silica
CRPX-50.8-203.4-UV	400.0	50.8	203.4	6.4	Fused Silica
CRPX-25.4-254.3-UV	500.0	25.4	254.3	5.0	Fused Silica
CRPX-50.8-254.3-UV	500.0	50.8	254.3	6.4	Fused Silica
CRPX-25.4-381.4-UV	750.0	25.4	381.4	5.0	Fused Silica
CRPX-50.8-381.4-UV	750.0	50.8	381.4	6.4	Fused Silica
CRPX-25.4-508.6-UV	1000.0	25.4	508.6	5.0	Fused Silica
CRPX-50.8-508.6-UV	1000.0	50.8	508.6	6.4	Fused Silica
CRPX-15.0-10.2-C	20.0	15.0	10.2	6.0	BK7
CRPX-20.0-12.7-C	25.0	20.0	12.7	6.0	BK7
CRPX-25.4-15.3-C	30.0	25.4	15.3	11.0	BK7
CRPX-15.0-20.3-C	40.0	15.0	20.3	5.0	BK7
CRPX-25.4-20.3-C	40.0	25.4	20.3	9.0	BK7
CRPX-25.4-25.4-C	50.0	25.4	25.4	9.0	BK7
CRPX-30.0-25.4-C	50.0	30.0	25.4	9.0	BK7
CRPX-25.4-30.5-C	60.0	25.4	30.5	7.0	BK7
CRPX-30.0-30.5-C	60.0	30.0	30.5	8.0	BK7
CRPX-25.4-38.1-C	75.0	25.4	38.1	5.0	BK7
CRPX-50.8-38.1-C	75.0	50.8	38.1	7.0	BK7
CRPX-25.4-50.9-C	100.0	25.4	50.9	5.0	BK7
CRPX-50.8-50.9-C	100.0	50.8	50.9	10.0	BK7
CRPX-25.4-63.6-C	125.0	25.4	63.6	5.0	BK7
CRPX-50.8-63.6-C	125.0	50.8	63.6	8.5	BK7
CRPX-25.4-76.3-C	150.0	25.4	76.3	5.0	BK7
CRPX-50.8-76.3-C	150.0	50.8	76.3	8.0	BK7
CRPX-25.4-101.7-C	200.0	25.4	101.7	5.0	BK7
CRPX-50.8-101.7-C	200.0	50.8	101.7	6.4	BK7
CRPX-25.4-152.6-C	300.0	25.4	152.6	5.0	BK7
CRPX-50.8-152.6-C	300.0	50.8	152.6	6.4	BK7
CRPX-25.4-203.4-C	400.0	25.4	203.4	5.0	BK7
CRPX-50.8-203.4-C	400.0	50.8	203.4	6.4	BK7
CRPX-25.4-254.3-C	500.0	25.4	254.3	5.0	BK7
CRPX-50.8-254.3-C	500.0	50.8	254.3	6.4	BK7
CRPX-25.4-381.4-C	750.0	25.4	381.4	5.0	BK7
CRPX-50.8-381.4-C	750.0	50.8	381.4	6.4	BK7
CRPX-25.4-508.6-C	1000.0	25.4	508.6	5.0	BK7
CRPX-50.8-508.6-C	1000.0	50.8	508.6	6.4	BK7

* Other sizes and focal lengths available in prototype and production quantities.



Square Cylindrical Plano-Concave Lenses

SPECIFICATIONS



Substrate material :	VUV CaF2, UVFS or BK7
Surface Flatness :	$\lambda/2$ for Y-direction $\lambda/4$ for X-direction @633nm
Surface Quality :	20-10 laser quality
Wedge :	$i\lambda$ arc min.
Focal Length Tolerance :	$\pm 0.5\%$
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm a 45 typical

Part Number	Nominal f (mm)	Length X(mm)	Radius R(mm)	Thickness Tc(mm)	Material
CSPV-25.4-20.3-CF	-40.0	25.4	20.3	4.6	VUV CaF2
CSPV-25.4-25.4-CF	-50.0	25.4	25.4	5.0	VUV CaF2
CSPV-25.4-38.1-CF	-75.0	25.4	38.1	5.0	VUV CaF2
CSPV-25.4-50.9-CF	-100.0	25.4	50.9	5.0	VUV CaF2
CSPV-25.4-76.3-CF	-150.0	25.4	76.3	5.0	VUV CaF2
CSPV-30.0-101.7-CF	-200.0	30.0	101.7	4.0	VUV CaF2
CSPV-30.0-127.1-CF	-250.0	30.0	127.1	4.2	VUV CaF2
CSPV-30.0-152.6-CF	-300.0	30.0	152.6	4.4	VUV CaF2
CSPV-30.0-203.4-CF	-400.0	30.0	203.4	4.5	VUV CaF2
CSPV-50.8-254.3-CF	-500.0	50.8	254.3	6.0	VUV CaF2
CSPV-50.8-381.4-CF	-750.0	50.8	381.4	6.0	VUV CaF2
CSPV-50.8-508.6-CF	-1000.0	50.8	508.6	6.0	VUV CaF2
CRPV-15.0-10.2-UV	-20.0	15.0	10.2	2.8	Fused Silica
CRPV-20.0-12.7-UV	-25.0	20.0	12.7	4.2	Fused Silica
CRPV-25.4-15.3-UV	-30.0	25.4	15.3	4.3	Fused Silica
CRPV-15.0-20.3-UV	-40.0	15.0	20.3	3.7	Fused Silica
CRPV-25.4-20.3-UV	-40.0	25.4	20.3	4.6	Fused Silica
CRPV-25.4-25.4-UV	-50.0	25.4	25.4	5.0	Fused Silica
CRPV-30.0-25.4-UV	-50.0	30.0	25.4	4.2	Fused Silica
CRPV-25.4-30.5-UV	-60.0	25.4	30.5	4.3	Fused Silica
CRPV-30.0-30.5-UV	-60.0	30.0	30.5	4.2	Fused Silica
CRPV-25.4-38.1-UV	-75.0	25.4	38.1	5.0	Fused Silica
CRPV-50.8-38.1-UV	-75.0	50.8	38.1	8.0	Fused Silica
CRPV-25.4-50.9-UV	-100.0	25.4	50.9	5.0	Fused Silica
CRPV-50.8-50.9-UV	-100.0	50.8	50.9	8.0	Fused Silica
CRPV-25.4-63.6-UV	-125.0	25.4	63.6	5.0	Fused Silica
CRPV-50.8-63.6-UV	-125.0	50.8	63.6	6.0	Fused Silica
CRPV-25.4-76.3-UV	-150.0	25.4	76.3	5.0	Fused Silica
CRPV-50.8-76.3-UV	-150.0	50.8	76.3	6.0	Fused Silica

continued



Square Cylindrical Plano-Concave Lenses

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index

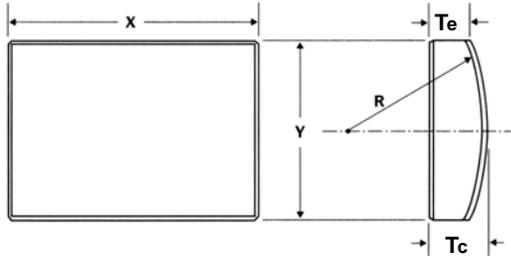
Part Number	Nominal f (mm)	Length X(mm)	Radius R(mm)	Thickness Tc(mm)	Material
CRPV-25.4-101.7-UV	-200.0	25.4	101.7	5.0	Fused Silica
CRPV-50.8-101.7-UV	-200.0	50.8	101.7	6.0	Fused Silica
CRPV-25.4-152.6-UV	-300.0	25.4	152.6	5.0	Fused Silica
CRPV-50.8-152.6-UV	-300.0	50.8	152.6	6.0	Fused Silica
CRPV-25.4-203.4-UV	-400.0	25.4	203.4	5.0	Fused Silica
CRPV-50.8-203.4-UV	-400.0	50.8	203.4	6.0	Fused Silica
CRPV-25.4-254.3-UV	-500.0	25.4	254.3	5.0	Fused Silica
CRPV-50.8-254.3-UV	-500.0	50.8	254.3	6.0	Fused Silica
CRPV-25.4-381.4-UV	-750.0	25.4	381.4	5.0	Fused Silica
CRPV-50.8-381.4-UV	-750.0	50.8	381.4	6.0	Fused Silica
CRPV-25.4-508.6-UV	-1000.0	25.4	508.6	5.0	Fused Silica
CRPV-50.8-508.6-UV	-1000.0	50.8	508.6	6.0	Fused Silica
CRPV-15.0-10.2-C	-20.0	15.0	10.2	2.8	BK7
CRPV-20.0-12.7-C	-25.0	20.0	12.7	4.2	BK7
CRPV-25.4-15.3-C	-30.0	25.4	15.3	4.3	BK7
CRPV-15.0-20.3-C	-40.0	15.0	20.3	3.7	BK7
CRPV-25.4-20.3-C	-40.0	25.4	20.3	4.6	BK7
CRPV-25.4-25.4-C	-50.0	25.4	25.4	5.0	BK7
CRPV-30.0-25.4-C	-50.0	30.0	25.4	4.2	BK7
CRPV-25.4-30.5-C	-60.0	25.4	30.5	4.3	BK7
CRPV-30.0-30.5-C	-60.0	30.0	30.5	4.2	BK7
CRPV-25.4-38.1-C	-75.0	25.4	38.1	5.0	BK7
CRPV-50.8-38.1-C	-75.0	50.8	38.1	8.0	BK7
CRPV-25.4-50.9-C	-100.0	25.4	50.9	5.0	BK7
CRPV-50.8-50.9-C	-100.0	50.8	50.9	8.0	BK7
CRPV-25.4-63.6-C	-125.0	25.4	63.6	5.0	BK7
CRPV-50.8-63.6-C	-125.0	50.8	63.6	6.0	BK7
CRPV-25.4-76.3-C	-150.0	25.4	76.3	5.0	BK7
CRPV-50.8-76.3-C	-150.0	50.8	76.3	6.0	BK7
CRPV-25.4-101.7-C	-200.0	25.4	101.7	5.0	BK7
CRPV-50.8-101.7-C	-200.0	50.8	101.7	6.0	BK7
CRPV-25.4-152.6-C	-300.0	25.4	152.6	5.0	BK7
CRPV-50.8-152.6-C	-300.0	50.8	152.6	6.0	BK7
CRPV-25.4-203.4-C	-400.0	25.4	203.4	5.0	BK7
CRPV-50.8-203.4-C	-400.0	50.8	203.4	6.0	BK7
CRPV-25.4-254.3-C	-500.0	25.4	254.3	5.0	BK7
CRPV-50.8-254.3-C	-500.0	50.8	254.3	6.0	BK7
CRPV-25.4-381.4-C	-750.0	25.4	381.4	5.0	BK7
CRPV-50.8-381.4-C	-750.0	50.8	381.4	6.0	BK7
CRPV-25.4-508.6-C	-1000.0	25.4	508.6	5.0	BK7
CRPV-50.8-508.6-C	-1000.0	50.8	508.6	6.0	BK7

* Other sizes and focal lengths available in prototype and production quantities.



Rectangular Cylindrical Plano-Convex Lenses

SPECIFICATIONS



Substrate material :	VUV CaF ₂ , UVFS or BK7
Surface Flatness :	$\lambda/2$ for Y-direction $\lambda/4$ for X-direction @633nm
Surface Quality :	20-10 laser quality
Wedge :	$i\lambda$ arc min.
Focal Length Tolerance :	$\pm 0.5\%$
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm a 45 typical

Part Number	Nominal f (mm)	Length X(mm)	Width Y(mm)	Radius R(mm)	Thickness Tc(mm)	Material
CRPX-25.4-12.7-12.7-CF	25.0	25.4	12.7	12.7	5.0	VUV CaF ₂
CRPX-30.0-20.0-15.3-CF	30.0	30.0	20.0	15.3	7.0	VUV CaF ₂
CRPX-30.0-25.4-20.3-CF	40.0	30.0	25.4	20.3	9.0	VUV CaF ₂
CRPX-25.4-38.1-25.0-CF	50.0	30.0	25.0	25.4	6.0	VUV CaF ₂
CRPX-50.8-38.1-30.5-CF	60.0	40.0	25.4	30.5	7.0	VUV CaF ₂
CRPX-25.4-50.9-38.1-CF	75.0	40.0	25.4	38.1	5.0	VUV CaF ₂
CRPX-50.8-50.9-50.9-CF	100.0	40.0	30.0	50.9	6.0	VUV CaF ₂
CRPX-25.4-76.3-76.3-CF	150.0	40.0	30.0	76.3	6.0	VUV CaF ₂
CRPX-50.8-76.3-101.7-CF	200.0	40.0	30.0	101.7	5.0	VUV CaF ₂
CRPX-15.0-10.2-127.1-CF	250.0	40.0	30.0	127.1	5.0	VUV CaF ₂
CRPX-15.0-12.7-254.3-CF	500.0	40.0	30.0	254.3	5.0	VUV CaF ₂
CRPX-20.0-12.7-508.6-CF	1000.0	40.0	30.0	508.6	5.0	VUV CaF ₂
CRPX-12.7-6.4-6.5-UV	12.7	12.7	6.4	6.5	3.0	Fused Silica
CRPX-12.7-6.4-10.2-UV	20.0	12.7	6.4	10.2	3.0	Fused Silica
CRPX-25.0-15.0-12.7-UV	25.0	25.0	15.0	12.7	6.0	Fused Silica
CRPX-30.0-20.0-15.3-UV	30.0	30.0	20.0	15.3	7.0	Fused Silica
CRPX-40.0-25.4-19.1-UV	37.5	40.0	25.4	19.1	10.0	Fused Silica
CRPX-30.0-20.0-20.3-UV	40.0	30.0	20.0	20.3	6.0	Fused Silica
CRPX-40.0-25.4-20.3-UV	40.0	40.0	25.4	20.3	9.0	Fused Silica
CRPX-30.0-20.0-25.4-UV	50.0	30.0	20.0	25.4	6.0	Fused Silica
CRPX-40.0-25.4-25.4-UV	50.0	40.0	25.4	25.4	9.0	Fused Silica
CRPX-30.0-20.0-30.5-UV	60.0	30.0	20.0	30.5	5.0	Fused Silica
CRPX-40.0-25.4-30.5-UV	60.0	40.0	25.4	30.5	7.0	Fused Silica
CRPX-30.0-20.0-38.1-UV	75.0	30.0	20.0	38.1	5.0	Fused Silica
CRPX-40.0-25.4-38.1-UV	75.0	40.0	25.4	38.1	5.0	Fused Silica
CRPX-30.0-20.0-50.9-UV	100.0	30.0	20.0	50.9	5.0	Fused Silica
CRPX-40.0-25.4-50.9-UV	100.0	40.0	25.4	50.9	5.0	Fused Silica
CRPX-30.0-20.0-63.6-UV	125.0	30.0	20.0	63.6	5.0	Fused Silica
CRPX-40.0-25.4-63.6-UV	125.0	40.0	25.4	63.6	5.0	Fused Silica

continued



Rectangular Cylindrical Plano-Convex Lenses

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

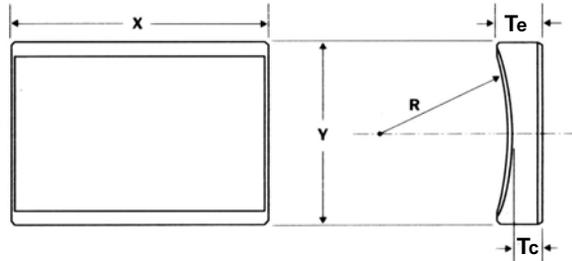
Index

Part Number	Nominal f (mm)	Length X(mm)	Width Y(mm)	Radius R(mm)	Thickness Tc(mm)	Material
CRPX-30.0-20.2-76.3-UV	150.0	30.0	20.0	76.3	5.0	Fused Silica
CRPX-40.0-25.4-76.3-UV	150.0	40.0	25.4	76.3	5.0	Fused Silica
CRPX-30.0-20.0-101.7-UV	200.0	30.0	20.0	101.7	5.0	Fused Silica
CRPX-40.0-25.4-101.7-UV	200.0	40.0	25.4	101.7	5.0	Fused Silica
CRPX-30.0-20.0-127.1-UV	300.0	30.0	20.0	127.1	5.0	Fused Silica
CRPX-40.0-25.4-127.1-UV	300.0	40.0	25.4	127.1	5.0	Fused Silica
CRPX-30.0-20.0-254.3-UV	500.0	30.0	20.0	254.3	5.0	Fused Silica
CRPX-40.0-25.4-254.3-UV	500.0	40.0	25.4	254.3	5.0	Fused Silica
CRPX-30.0-20.0-381.4-UV	750.0	30.0	20.0	381.4	5.0	Fused Silica
CRPX-40.0-25.4-381.4-UV	750.0	40.0	25.4	381.4	5.0	Fused Silica
CRPX-30.0-20.0-508.6-UV	1000.0	30.0	20.0	508.6	5.0	Fused Silica
CRPX-40.0-25.4-508.6-UV	1000.0	40.0	25.4	508.6	5.0	Fused Silica
CRPX-12.7-6.4-6.5-C	12.7	12.7	6.4	6.5	3.0	BK7
CRPX-12.7-6.4-10.2-C	20.0	12.7	6.4	10.2	3.0	BK7
CRPX-25.0-15.0-12.7-C	25.0	25.0	15.0	12.7	6.0	BK7
CRPX-30.0-20.0-15.3-C	30.0	30.0	20.0	15.3	7.0	BK7
CRPX-40.0-25.4-19.1-C	37.5	40.0	25.4	19.1	10.0	BK7
CRPX-30.0-20.0-20.3-C	40.0	30.0	20.0	20.3	6.0	BK7
CRPX-40.0-25.4-20.3-C	40.0	40.0	25.4	20.3	9.0	BK7
CRPX-30.0-20.0-25.4-C	50.0	30.0	20.0	25.4	6.0	BK7
CRPX-40.0-25.4-25.4-C	50.0	40.0	25.4	25.4	9.0	BK7
CRPX-30.0-20.0-30.5-C	60.0	30.0	20.0	30.5	5.0	BK7
CRPX-40.0-25.4-30.5-C	60.0	40.0	25.4	30.5	7.0	BK7
CRPX-30.0-20.0-38.1-C	75.0	30.0	20.0	38.1	5.0	BK7
CRPX-40.0-25.4-38.1-C	75.0	40.0	25.4	38.1	5.0	BK7
CRPX-30.0-20.0-50.9-C	100.0	30.0	20.0	50.9	5.0	BK7
CRPX-40.0-25.4-50.9-C	100.0	40.0	25.4	50.9	5.0	BK7
CRPX-30.0-20.0-63.6-C	125.0	30.0	20.0	63.6	5.0	BK7
CRPX-40.0-25.4-63.6-C	125.0	40.0	25.4	63.6	5.0	BK7
CRPX-30.0-20.2-76.3-C	150.0	30.0	20.0	76.3	5.0	BK7
CRPX-40.0-25.4-76.3-C	150.0	40.0	25.4	76.3	5.0	BK7
CRPX-30.0-20.0-101.7-C	200.0	30.0	20.0	101.7	5.0	BK7
CRPX-40.0-25.4-101.7-C	200.0	40.0	25.4	101.7	5.0	BK7
CRPX-30.0-20.0-127.1-C	300.0	30.0	20.0	127.1	5.0	BK7
CRPX-40.0-25.4-127.1-C	300.0	40.0	25.4	127.1	5.0	BK7
CRPX-30.0-20.0-254.3-C	500.0	30.0	20.0	254.3	5.0	BK7
CRPX-40.0-25.4-254.3-C	500.0	40.0	25.4	254.3	5.0	BK7
CRPX-30.0-20.0-381.4-C	750.0	30.0	20.0	381.4	5.0	BK7
CRPX-40.0-25.4-381.4-C	750.0	40.0	25.4	381.4	5.0	BK7
CRPX-30.0-20.0-508.6-C	1000.0	30.0	20.0	508.6	5.0	BK7
CRPX-40.0-25.4-508.6-C	1000.0	40.0	25.4	508.6	5.0	BK7

* Other sizes and focal lengths available in prototype and production quantities.



Rectangular Cylindrical Plano-Concave Lenses



SPECIFICATIONS

Substrate material :	VUV CaF ₂ , UVFS or BK7
Surface Flatness :	$\lambda/2$ for Y-direction $\lambda/4$ for X-direction @633nm
Surface Quality :	20-10 laser quality
Wedge :	$i\lambda$ arc min.
Focal Length Tolerance :	$\pm 0.5\%$
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm a 45 typical

Part Number	Nominal f (mm)	Length X(mm)	Width Y(mm)	Radius R(mm)	Thickness Tc(mm)	Material
CRPV-25.4-12.7-12.7-CF	-25.0	25.4	12.7	12.7	5.0	VUV CaF ₂
CRPV-30.0-20.0-15.3-CF	-30.0	30.0	20.0	15.3	4.3	VUV CaF ₂
CRPV-30.0-25.4-20.3-CF	-40.0	30.0	25.4	20.3	4.6	VUV CaF ₂
CRPV-25.4-38.1-25.0-CF	-50.0	30.0	25.0	25.4	3.0	VUV CaF ₂
CRPV-50.8-38.1-30.5-CF	-60.0	40.0	25.4	30.5	4.3	VUV CaF ₂
CRPV-25.4-50.9-38.1-CF	-75.0	40.0	25.4	38.1	5.0	VUV CaF ₂
CRPV-50.8-50.9-50.9-CF	-100.0	40.0	30.0	50.9	4.8	VUV CaF ₂
CRPV-25.4-76.3-76.3-CF	-150.0	40.0	30.0	76.3	3.6	VUV CaF ₂
CRPV-50.8-76.3-101.7-CF	-200.0	40.0	30.0	101.7	4.0	VUV CaF ₂
CRPV-15.0-10.2-127.1-CF	-250.0	40.0	30.0	127.1	4.2	VUV CaF ₂
CRPV-15.0-12.7-254.3-CF	-500.0	40.0	30.0	254.3	4.7	VUV CaF ₂
CRPV-20.0-12.7-508.6-CF	-1000.0	40.0	30.0	508.6	4.9	VUV CaF ₂
CRPV-12.7-6.4-6.5-UV	-12.7	12.7	6.4	6.5	4.0	Fused Silica
CRPV-12.7-6.4-10.2-UV	-20.0	12.7	6.4	10.2	4.0	Fused Silica
CRPV-25.0-15.0-12.7-UV	-25.0	25.0	15.0	12.7	3.7	Fused Silica
CRPV-30.0-20.0-15.3-UV	-30.0	30.0	20.0	15.3	4.3	Fused Silica
CRPV-40.0-25.4-19.1-UV	-37.5	40.0	25.4	19.1	5.0	Fused Silica
CRPV-30.0-20.0-20.3-UV	-40.0	30.0	20.0	20.3	3.5	Fused Silica
CRPV-40.0-25.4-20.3-UV	-40.0	40.0	25.4	20.3	4.6	Fused Silica
CRPV-30.0-20.0-25.4-UV	-50.0	30.0	20.0	25.4	3.0	Fused Silica
CRPV-40.0-25.4-25.4-UV	-50.0	40.0	25.4	25.4	5.0	Fused Silica
CRPV-30.0-20.0-30.5-UV	-60.0	30.0	20.0	30.5	3.4	Fused Silica
CRPV-40.0-25.4-30.5-UV	-60.0	40.0	25.4	30.5	4.3	Fused Silica
CRPV-30.0-20.0-38.1-UV	-75.0	30.0	20.0	38.1	3.8	Fused Silica
CRPV-40.0-25.4-38.1-UV	-75.0	40.0	25.4	38.1	5.0	Fused Silica
CRPV-30.0-20.0-50.9-UV	-100.0	30.0	20.0	50.9	3.1	Fused Silica
CRPV-40.0-25.4-50.9-UV	-100.0	40.0	25.4	50.9	5.0	Fused Silica
CRPV-30.0-20.0-63.6-UV	-125.0	30.0	20.0	63.6	3.3	Fused Silica
CRPV-40.0-25.4-63.6-UV	-125.0	40.0	25.4	63.6	5.0	Fused Silica

continued



Rectangular Cylindrical Plano-Concave Lenses

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index

Part Number	Nominal f (mm)	Length X(mm)	Width Y(mm)	Radius R(mm)	Thickness Tc(mm)	Material
CRPV-30.0-20.2-76.3-UV	-150.0	30.0	20.0	76.3	3.4	Fused Silica
CRPV-40.0-25.4-76.3-UV	-150.0	40.0	25.4	76.3	5.0	Fused Silica
CRPV-30.0-20.0-101.7-UV	-200.0	30.0	20.0	101.7	3.6	Fused Silica
CRPV-40.0-25.4-101.7-UV	-200.0	40.0	25.4	101.7	3.6	Fused Silica
CRPV-30.0-20.0-127.1-UV	-300.0	30.0	20.0	152.6	3.7	Fused Silica
CRPV-40.0-25.4-127.1-UV	-300.0	40.0	25.4	152.6	5.0	Fused Silica
CRPV-30.0-20.0-254.3-UV	-500.0	30.0	20.0	254.3	3.9	Fused Silica
CRPV-40.0-25.4-254.3-UV	-500.0	40.0	25.4	254.3	5.0	Fused Silica
CRPV-30.0-20.0-381.4-UV	-750.0	30.0	20.0	381.4	3.9	Fused Silica
CRPV-40.0-25.4-381.4-UV	-750.0	40.0	25.4	381.4	5.0	Fused Silica
CRPV-30.0-20.0-508.6-UV	-1000.0	30.0	20.0	508.6	3.9	Fused Silica
CRPV-40.0-25.4-508.6-UV	-1000.0	40.0	25.4	508.6	5.0	Fused Silica
CRPV-12.7-6.4-6.5-C	-12.7	12.7	6.4	6.5	4.0	BK7
CRPV-12.7-6.4-10.2-C	-20.0	12.7	6.4	10.2	4.0	BK7
CRPV-25.0-15.0-12.7-C	-25.0	25.0	15.0	12.7	3.7	BK7
CRPV-30.0-20.0-15.3-C	-30.0	30.0	20.0	15.3	4.3	BK7
CRPV-40.0-25.4-19.1-C	-37.5	40.0	25.4	19.1	5.0	BK7
CRPV-30.0-20.0-20.3-C	-40.0	30.0	20.0	20.3	3.5	BK7
CRPV-40.0-25.4-20.3-C	-40.0	40.0	25.4	20.3	4.6	BK7
CRPV-30.0-20.0-25.4-C	-50.0	30.0	20.0	25.4	3.0	BK7
CRPV-40.0-25.4-25.4-C	-50.0	40.0	25.4	25.4	5.0	BK7
CRPV-30.0-20.0-30.5-C	-60.0	30.0	20.0	30.5	3.4	BK7
CRPV-40.0-25.4-30.5-C	-60.0	40.0	25.4	30.5	4.3	BK7
CRPV-30.0-20.0-38.1-C	-75.0	30.0	20.0	38.1	3.8	BK7
CRPV-40.0-25.4-38.1-C	-75.0	40.0	25.4	38.1	5.0	BK7
CRPV-30.0-20.0-50.9-C	-100.0	30.0	20.0	50.9	3.1	BK7
CRPV-40.0-25.4-50.9-C	-100.0	40.0	25.4	50.9	5.0	BK7
CRPV-30.0-20.0-63.6-C	-125.0	30.0	20.0	63.6	3.3	BK7
CRPV-40.0-25.4-63.6-C	-125.0	40.0	25.4	63.6	5.0	BK7
CRPV-30.0-20.2-76.3-C	-150.0	30.0	20.0	76.3	3.4	BK7
CRPV-40.0-25.4-76.3-C	-150.0	40.0	25.4	76.3	5.0	BK7
CRPV-30.0-20.0-101.7-C	-200.0	30.0	20.0	101.7	3.6	BK7
CRPV-40.0-25.4-101.7-C	-200.0	40.0	25.4	101.7	3.6	BK7
CRPV-30.0-20.0-127.1-C	-300.0	30.0	20.0	127.1	3.7	BK7
CRPV-40.0-25.4-127.1-C	-300.0	40.0	25.4	127.1	5.0	BK7
CRPV-30.0-20.0-254.3-C	-500.0	30.0	20.0	254.3	3.9	BK7
CRPV-40.0-25.4-254.3-C	-500.0	40.0	25.4	254.3	5.0	BK7
CRPV-30.0-20.0-381.4-C	-750.0	30.0	20.0	381.4	3.9	BK7
CRPV-40.0-25.4-381.4-C	-750.0	40.0	25.4	381.4	5.0	BK7
CRPV-30.0-20.0-508.6-C	-1000.0	30.0	20.0	508.6	3.9	BK7
CRPV-40.0-25.4-508.6-C	-1000.0	40.0	25.4	508.6	5.0	BK7

* Other sizes and focal lengths available in prototype and production quantities.



Table of Contents

Plane Windows, Wedge ≤ 3 min.	52
Parallel Windows, Wedge ≤ 10 sec.	56
Interferometer Flats, Wedge $30^\circ \pm 5$ min	59
Large Wedge windows, Wedge $1^\circ, 2^\circ, 3^\circ$	60
Square Windows	61
Rectangular Windows	62
Elliptical Windows	63
Brewster Windows	64



Plain Windows, Wedge ≤ 3 min

Tutorials

Lenses

Windows

Mirrors

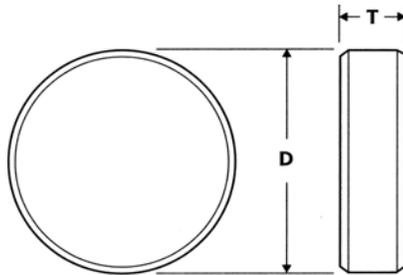
Prisms

Beamsplitters

Polarizers

Filters

Index



SPECIFICATIONS

Substrate material :	VUV MgF ₂ , VUV CaF ₂ , Suprasil 1, UVFS, BK7, Infrasil 301, Sapphire, IR CaF ₂ , Silicon, Germanium, Zinc Selenide, or Zinc Sulfide
Transmitted Wavefront :	measure at 633nm
Wedge :	≤ 3 arcmin.
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	D(mm)	T(mm)	Transmitted wavefront	Surface Quality	Material
WI-0525-MF	0.500"	0.250"	$\lambda/10$	20-10	VUV MgF ₂
WI-1025-MF	1.000"	0.250"	$\lambda/10$	20-10	VUV MgF ₂
WI-1419-MF	36.0mm	5.0mm	$\lambda/10$	20-10	VUV MgF ₂
WI-1519-MF	1.500"	5.0mm	$\lambda/10$	20-10	VUV MgF ₂
WI-2019-MF	2.000"	5.0mm	$\lambda/10$	20-10	VUV MgF ₂
WI-2037-MF	2.000"	0.375"	$\lambda/10$	20-10	VUV MgF ₂
WI-0525-CF	0.500"	0.250"	$\lambda/10$	20-10	VUV CaF ₂
WI-1025-CF	1.000"	0.250"	$\lambda/10$	20-10	VUV CaF ₂
WI-1419-CF	36.0mm	5.0mm	$\lambda/10$	20-10	VUV CaF ₂
WI-1519-CF	1.500"	5.0mm	$\lambda/10$	20-10	VUV CaF ₂
WI-2019-CF	2.000"	5.0mm	$\lambda/10$	20-10	VUV CaF ₂
WI-2037-CF	2.000"	0.375"	$\lambda/10$	20-10	VUV CaF ₂
WI-0525-SS	0.500"	0.250"	$\lambda/10$	10-5	Suprasil 1
WI-1025-SS	1.000"	0.250"	$\lambda/10$	10-5	Suprasil 1
WI-1037-SS	1.000"	0.375"	$\lambda/10$	10-5	Suprasil 1
WI-1419-SS	36.0mm	5.0mm	$\lambda/10$	10-5	Suprasil 1
WI-1537-SS	1.500"	0.375"	$\lambda/10$	10-5	Suprasil 1
WI-2025-SS	2.000"	0.250"	$\lambda/10$	10-5	Suprasil 1
WI-2037-SS	2.000"	0.375"	$\lambda/10$	10-5	Suprasil 1
WI-0316-UV	7.75mm	4.0mm	$\lambda/10$	10-5	Fused Silica
WI-0508-UV	0.500"	2.0mm	$\lambda/10$	10-5	Fused Silica
WI-0512-UV	0.500"	0.125"	$\lambda/10$	10-5	Fused Silica
WI-0525-UV	0.500"	0.250"	$\lambda/10$	10-5	Fused Silica
WI-0537-UV	0.500"	0.375"	$\lambda/10$	10-5	Fused Silica
WI-0604-UV	15.0mm	1.0mm	$\lambda/4$	10-5	Fused Silica
WI-0643-UV	15.0mm	11.0mm	$\lambda/10$	10-5	Fused Silica
WI-0705-UV	0.750"	0.059"	$\lambda/4$	10-5	Fused Silica

continued



Plain Windows, Wedge ≤ 3 min

Part Number	D(mm)	T(mm)	Transmitted wavefront	Surface Quality	Material
WI-0712-UV	0.750"	0.125"	$\lambda/10$	10-5	Fused Silica
WI-0716-UV	0.750"	0.165"	$\lambda/10$	10-5	Fused Silica
WI-0725-UV	0.750"	0.250"	$\lambda/10$	10-5	Fused Silica
WI-0737-UV	0.750"	0.375"	$\lambda/10$	10-5	Fused Silica
WI-0908-UV	25.0mm	2.0mm	$\lambda/4$	10-5	Fused Silica
WI-0925-UV	25.0mm	0.250"	$\lambda/10$	10-5	Fused Silica
WI-1004-UV	1.000"	1.0mm	$\lambda/2$	10-5	Fused Silica
WI-1006-UV	1.000"	0.063"	$\lambda/2$	10-5	Fused Silica
WI-1012-UV	1.000"	0.125"	$\lambda/10$	10-5	Fused Silica
WI-1025-UV	1.000"	0.250"	$\lambda/10$	10-5	Fused Silica
WI-1032-UV	1.000"	8.0mm	$\lambda/10$	10-5	Fused Silica
WI-1037-UV	1.000"	0.375"	$\lambda/10$	10-5	Fused Silica
WI-1419-UV	36.0mm	5.0mm	$\lambda/10$	10-5	Fused Silica
WI-1508-UV	1.500"	2.0mm	$\lambda/4$	10-5	Fused Silica
WI-1512-UV	1.500"	0.125"	$\lambda/4$	10-5	Fused Silica
WI-1525-UV	1.500"	0.250"	$\lambda/10$	10-5	Fused Silica
WI-1537-UV	1.500"	0.375"	$\lambda/10$	10-5	Fused Silica
WI-1550-UV	1.500"	0.500"	$\lambda/10$	10-5	Fused Silica
WI-1725-UV	1.750"	0.250"	$\lambda/10$	10-5	Fused Silica
WI-2008-UV	2.000"	2.0mm	$\lambda/2$	10-5	Fused Silica
WI-2012-UV	2.000"	0.125"	$\lambda/4$	10-5	Fused Silica
WI-2025-UV	2.000"	0.250"	$\lambda/10$	10-5	Fused Silica
WI-2037-UV	2.000"	0.375"	$\lambda/10$	10-5	Fused Silica
WI-2050-UV	2.000"	0.500"	$\lambda/10$	10-5	Fused Silica
WI-3037-UV	3.000"	0.375"	$\lambda/10$	10-5	Fused Silica
WI-3050-UV	3.000"	0.500"	$\lambda/10$	10-5	Fused Silica
WI-4037-UV	4.000"	0.375"	$\lambda/10$	10-5	Fused Silica
WI-4050-UV	4.000"	0.500"	$\lambda/10$	10-5	Fused Silica
WI-5075-UV	5.000"	0.750"	$\lambda/10$	10-5	Fused Silica
WI-6010-UV	6.000"	1.000"	$\lambda/10$	10-5	Fused Silica
WI-0316-C	7.75mm	4.0mm	$\lambda/10$	10-5	BK7
WI-0504-C	0.500"	1.0mm	$\lambda/4$	10-5	BK7
WI-0508-C	0.500"	2.0mm	$\lambda/10$	10-5	BK7
WI-0512-C	0.500"	0.125"	$\lambda/10$	10-5	BK7
WI-0525-C	0.500"	0.250"	$\lambda/10$	10-5	BK7
WI-0537-C	0.500"	0.375"	$\lambda/10$	10-5	BK7
WI-0643-C	15.0mm	11.0mm	$\lambda/10$	10-5	BK7
WI-0704-C	0.750"	1.0mm	$\lambda/2$	10-5	BK7
WI-0712-C	0.750"	0.125"	$\lambda/10$	10-5	BK7
WI-0725-C	0.750"	0.250"	$\lambda/10$	10-5	BK7

continued



Plain Windows, Wedge ≤ 3 min

Part Number	D(mm)	T(mm)	Transmitted wavefront	Surface Quality	Material
WI-0737-C	0.750"	0.375"	$\lambda/10$	10-5	BK7
WI-0904-C	25.0mm	1.0mm	$\lambda/2$	10-5	BK7
WI-0908-C	25.0mm	2.0mm	$\lambda/2$	10-5	BK7
WI-1006-C	1.000"	0.063"	$\lambda/2$	10-5	BK7
WI-1007-C	1.000"	0.070"	$\lambda/2$	10-5	BK7
WI-1008-C	1.000"	2.0mm	$\lambda/2$	10-5	BK7
WI-1012-C	1.000"	0.125"	$\lambda/4$	10-5	BK7
WI-1025-C	1.000"	0.250"	$\lambda/10$	10-5	BK7
WI-1032-C	1.000"	8.0mm	$\lambda/10$	10-5	BK7
WI-1037-C	1.000"	0.375"	$\lambda/10$	10-5	BK7
WI-1512-C	1.500"	0.125"	$\lambda/4$	10-5	BK7
WI-1525-C	1.500"	0.250"	$\lambda/10$	10-5	BK7
WI-1537-C	1.500"	0.375"	$\lambda/10$	10-5	BK7
WI-2012-C	2.000"	0.125"	$\lambda/2$	10-5	BK7
WI-2025-C	2.000"	0.250"	$\lambda/4$	10-5	BK7
WI-2037-C	2.000"	0.375"	$\lambda/10$	10-5	BK7
WI-2050-C	2.000"	0.500"	$\lambda/10$	10-5	BK7
WI-3037-C	3.000"	0.375"	$\lambda/10$	10-5	BK7
WI-3050-C	3.000"	0.500"	$\lambda/10$	10-5	BK7
WI-4037-C	4.000"	0.375"	$\lambda/10$	10-5	BK7
WI-4050-C	4.000"	0.500"	$\lambda/10$	10-5	BK7
WI-6010-C	6.000"	1.000"	$\lambda/10$	10-5	BK7
WI-0525-INF	0.500"	0.250"	$\lambda/10$	10-5	Infrasil
WI-0725-INF	0.750"	0.250"	$\lambda/10$	10-5	Infrasil
WI-1025-INF	1.000"	0.250"	$\lambda/10$	10-5	Infrasil
WI-2025-INF	2.000"	0.250"	$\lambda/10$	10-5	Infrasil
WI-0512-SPR	0.500"	0.125"	$\lambda/4$	40-20	Sapphire
WI-0712-SPR	0.750"	0.125"	$\lambda/4$	40-20	Sapphire
WI-1012-SPR	1.000"	0.125"	$\lambda/4$	40-20	Sapphire
WI-1512-SPR	1.000"	0.125"	$\lambda/4$	40-20	Sapphire
WI-2012-SPR	2.000"	0.125"	$\lambda/4$	40-20	Sapphire
WI-0525-CFIR	0.500"	0.250"	$\lambda/10$	20-10	IR CaF ₂
WI-1025-CFIR	1.000"	0.250"	$\lambda/10$	20-10	IR CaF ₂
WI-1419-CFIR	36.0mm	5.0mm	$\lambda/10$	20-10	IR CaF ₂
WI-1519-CFIR	1.500"	5.0mm	$\lambda/10$	20-10	IR CaF ₂
WI-2019-CFIR	2.000"	5.0mm	$\lambda/10$	20-10	IR CaF ₂
WI-2037-CFIR	2.000"	0.375"	$\lambda/10$	20-10	IR CaF ₂
WI-0208-SI	0.250"	0.080"	$\lambda/20$ @ 10.6um	40-20	Silicon
WI-0308-SI	0.375"	0.080"	$\lambda/20$ @ 10.6um	40-20	Silicon
WI-0508-SI	0.500"	0.080"	$\lambda/20$ @ 10.6um	40-20	Silicon

continued



Plain Windows, Wedge ≤ 3 min

Part Number	D(mm)	T(mm)	Transmitted wavefront	Surface Quality	Material
WI-0708-SI	0.750"	0.080"	$\lambda/20$ @ 10.6 μ m	40-20	Silicon
WI-1012-SI	1.000"	0.120"	$\lambda/20$ @ 10.6 μ m	40-20	Silicon
WI-1516-SI	1.500"	0.160"	$\lambda/20$ @ 10.6 μ m	40-20	Silicon
WI-2002-SI	2.000"	0.200"	$\lambda/20$ @ 10.6 μ m	40-20	Silicon
WI-2502-SI	2.500"	0.250"	$\lambda/20$ @ 10.6 μ m	40-20	Silicon
WI-3003-SI	3.000"	0.300"	$\lambda/20$ @ 10.6 μ m	40-20	Silicon
WI-0208-GE	0.250"	0.080"	$\lambda/20$ @ 10.6 μ m	40-20	Germanium
WI-0308-GE	0.375"	0.080"	$\lambda/20$ @ 10.6 μ m	40-20	Germanium
WI-0508-GE	0.500"	0.080"	$\lambda/20$ @ 10.6 μ m	40-20	Germanium
WI-0708-GE	0.750"	0.080"	$\lambda/20$ @ 10.6 μ m	40-20	Germanium
WI-1012-GE	1.000"	0.120"	$\lambda/20$ @ 10.6 μ m	40-20	Germanium
WI-1516-GE	1.500"	0.160"	$\lambda/20$ @ 10.6 μ m	40-20	Germanium
WI-2002-GE	2.000"	0.200"	$\lambda/20$ @ 10.6 μ m	40-20	Germanium
WI-0208-ZE	0.250"	0.080"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Selenide
WI-0308-ZE	0.375"	0.080"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Selenide
WI-0508-ZE	0.500"	0.080"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Selenide
WI-0708-ZE	0.750"	0.080"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Selenide
WI-1012-ZE	1.000"	0.120"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Selenide
WI-1516-ZE	1.500"	0.160"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Selenide
WI-2002-ZE	2.000"	0.200"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Selenide
WI-2502-ZE	2.500"	0.250"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Selenide
WI-3003-ZE	3.000"	0.300"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Selenide
WI-0208-ZS	0.250"	0.080"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Sulfide
WI-0308-ZS	0.375"	0.080"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Sulfide
WI-0508-ZS	0.500"	0.080"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Sulfide
WI-0708-ZS	0.750"	0.080"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Sulfide
WI-1012-ZS	1.000"	0.120"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Sulfide
WI-1516-ZS	1.500"	0.160"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Sulfide
WI-2002-ZS	2.000"	0.200"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Sulfide
WI-2502-ZS	2.500"	0.250"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Sulfide
WI-3003-ZS	3.000"	0.300"	$\lambda/20$ @ 10.6 μ m	40-20	Zinc Sulfide

* Other dimensions available in prototype and production quantities.

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index



Parallel Windows, Wedge < 10 sec.

Tutorials

Lenses

Windows

Mirrors

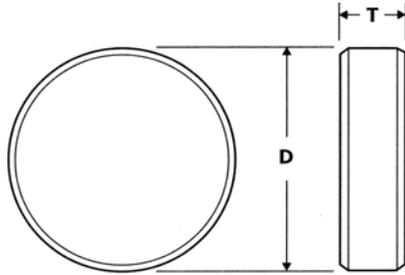
Prisms

Beamsplitters

Polarizers

Filters

Index



SPECIFICATIONS

Substrate material :	VUV MgF ₂ , VUV CaF ₂ , Suprasil 1, UVFS, BK7, Infrasil 301, Sapphire, IR CaF ₂ , Silicon, Germanium, Zinc Selenide, or Zinc Sulfide
Transmitted Wavefront :	measure at 633nm
Wedge :	≤ 10 arcsec.
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	D(mm)	T(mm)	Transmitted wavefront	Surface Quality	Material
PW-0525-MF	0.500"	0.250"	λ/10	20-10	VUV MgF ₂
PW-1025-MF	1.000"	0.250"	λ/10	20-10	VUV MgF ₂
PW-1419-MF	36.0mm	5.0mm	λ/10	20-10	VUV MgF ₂
PW-1519-MF	1.500"	5.0mm	λ/10	20-10	VUV MgF ₂
PW-2019-MF	2.000"	5.0mm	λ/10	20-10	VUV MgF ₂
PW-2037-MF	2.000"	0.375"	λ/10	20-10	VUV MgF ₂
PW-0525-CF	0.500"	0.250"	λ/10	20-10	VUV CaF ₂
PW-1025-CF	1.000"	0.250"	λ/10	20-10	VUV CaF ₂
PW-1419-CF	36.0mm	5.0mm	λ/10	20-10	VUV CaF ₂
PW-1519-CF	1.500"	5.0mm	λ/10	20-10	VUV CaF ₂
PW-2019-CF	2.000"	5.0mm	λ/10	20-10	VUV CaF ₂
PW-2037-CF	2.000"	0.375"	λ/10	20-10	VUV CaF ₂
PW-0525-SS	0.500"	0.250"	λ/10	10-5	Suprasil 1
PW-1025-SS	1.000"	0.250"	λ/10	10-5	Suprasil 1
PW-1037-SS	1.000"	0.375"	λ/10	10-5	Suprasil 1
PW-1419-SS	36.0mm	5.0mm	λ/10	10-5	Suprasil 1
PW-1537-SS	1.500"	0.375"	λ/10	10-5	Suprasil 1
PW-2025-SS	2.000"	0.250"	λ/10	10-5	Suprasil 1
PW-2037-SS	2.000"	0.375"	λ/10	10-5	Suprasil 1
PW-0316-UV	7.75mm	4.0mm	λ/10	10-5	Fused Silica
PW-0508-UV	0.500"	2.0mm	λ/10	10-5	Fused Silica
PW-0512-UV	0.500"	0.125"	λ/10	10-5	Fused Silica
PW-0525-UV	0.500"	0.250"	λ/10	10-5	Fused Silica
PW-0537-UV	0.500"	0.375"	λ/10	10-5	Fused Silica
PW-0604-UV	15.0mm	1.0mm	λ/4	10-5	Fused Silica
PW-0643-UV	15.0mm	11.0mm	λ/10	10-5	Fused Silica
PW-0705-UV	0.750"	0.059"	λ/4	10-5	Fused Silica

continued



Parallel Windows, Wedge < 10 sec.

Part Number	D(mm)	T(mm)	Transmitted wavefront	Surface Quality	Material
PW-0712-UV	0.750"	0.125"	$\lambda/10$	10-5	Fused Silica
PW-0716-UV	0.750"	0.165"	$\lambda/10$	10-5	Fused Silica
PW-0725-UV	0.750"	0.250"	$\lambda/10$	10-5	Fused Silica
PW-0737-UV	0.750"	0.375"	$\lambda/10$	10-5	Fused Silica
PW-0908-UV	25.0mm	2.0mm	$\lambda/4$	10-5	Fused Silica
PW-0925-UV	25.0mm	0.250"	$\lambda/10$	10-5	Fused Silica
PW-1004-UV	1.000"	1.0mm	$\lambda/2$	10-5	Fused Silica
PW-1006-UV	1.000"	0.063"	$\lambda/2$	10-5	Fused Silica
PW-1012-UV	1.000"	0.125"	$\lambda/10$	10-5	Fused Silica
PW-1025-UV	1.000"	0.250"	$\lambda/10$	10-5	Fused Silica
PW-1032-UV	1.000"	8.0mm	$\lambda/10$	10-5	Fused Silica
PW-1037-UV	1.000"	0.375"	$\lambda/10$	10-5	Fused Silica
PW-1419-UV	36.0mm	5.0mm	$\lambda/10$	10-5	Fused Silica
PW-1508-UV	1.500"	2.0mm	$\lambda/4$	10-5	Fused Silica
PW-1512-UV	1.500"	0.125"	$\lambda/4$	10-5	Fused Silica
PW-1525-UV	1.500"	0.250"	$\lambda/10$	10-5	Fused Silica
PW-1537-UV	1.500"	0.375"	$\lambda/10$	10-5	Fused Silica
PW-1550-UV	1.500"	0.500"	$\lambda/10$	10-5	Fused Silica
PW-1725-UV	1.750"	0.250"	$\lambda/10$	10-5	Fused Silica
PW-2008-UV	2.000"	2.0mm	$\lambda/2$	10-5	Fused Silica
PW-2012-UV	2.000"	0.125"	$\lambda/4$	10-5	Fused Silica
PW-2025-UV	2.000"	0.250"	$\lambda/10$	10-5	Fused Silica
PW-2037-UV	2.000"	0.375"	$\lambda/10$	10-5	Fused Silica
PW-2050-UV	2.000"	0.500"	$\lambda/10$	10-5	Fused Silica
PW-3037-UV	3.000"	0.375"	$\lambda/10$	10-5	Fused Silica
PW-3050-UV	3.000"	0.500"	$\lambda/10$	10-5	Fused Silica
PW-4037-UV	4.000"	0.375"	$\lambda/10$	10-5	Fused Silica
PW-4050-UV	4.000"	0.500"	$\lambda/10$	10-5	Fused Silica
PW-5075-UV	5.000"	0.750"	$\lambda/10$	10-5	Fused Silica
PW-6010-UV	6.000"	1.000"	$\lambda/10$	10-5	Fused Silica
PW-0316-C	7.75mm	4.0mm	$\lambda/10$	10-5	BK7
PW-0504-C	0.500"	1.0mm	$\lambda/4$	10-5	BK7
PW-0508-C	0.500"	2.0mm	$\lambda/10$	10-5	BK7
PW-0512-C	0.500"	0.125"	$\lambda/10$	10-5	BK7
PW-0525-C	0.500"	0.250"	$\lambda/10$	10-5	BK7
PW-0537-C	0.500"	0.375"	$\lambda/10$	10-5	BK7
PW-0643-C	15.0mm	11.0mm	$\lambda/10$	10-5	BK7
PW-0704-C	0.750"	1.0mm	$\lambda/2$	10-5	BK7
PW-0712-C	0.750"	0.125"	$\lambda/10$	10-5	BK7
PW-0725-C	0.750"	0.250"	$\lambda/10$	10-5	BK7

continued



Parallel Windows, Wedge < 10 sec.

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

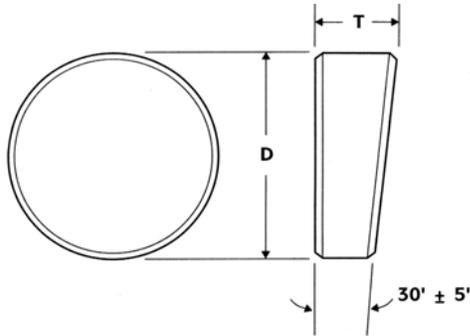
Index

Part Number	D(mm)	T(mm)	Transmitted wavefront	Surface Quality	Material
PW-0737-C	0.750"	0.375"	$\lambda/10$	10-5	BK7
PW-0904-C	25.0mm	1.0mm	$\lambda/2$	10-5	BK7
PW-0908-C	25.0mm	2.0mm	$\lambda/2$	10-5	BK7
PW-1006-C	1.000"	0.063"	$\lambda/2$	10-5	BK7
PW-1007-C	1.000"	0.070"	$\lambda/2$	10-5	BK7
PW-1008-C	1.000"	2.0mm	$\lambda/2$	10-5	BK7
PW-1012-C	1.000"	0.125"	$\lambda/4$	10-5	BK7
PW-1025-C	1.000"	0.250"	$\lambda/10$	10-5	BK7
PW-1032-C	1.000"	8.0mm	$\lambda/10$	10-5	BK7
PW-1037-C	1.000"	0.375"	$\lambda/10$	10-5	BK7
PW-1512-C	1.500"	0.125"	$\lambda/4$	10-5	BK7
PW-1525-C	1.500"	0.250"	$\lambda/10$	10-5	BK7
PW-1537-C	1.500"	0.375"	$\lambda/10$	10-5	BK7
PW-2012-C	2.000"	0.125"	$\lambda/2$	10-5	BK7
PW-2025-C	2.000"	0.250"	$\lambda/4$	10-5	BK7
PW-2037-C	2.000"	0.375"	$\lambda/10$	10-5	BK7
PW-2050-C	2.000"	0.500"	$\lambda/10$	10-5	BK7
PW-3037-C	3.000"	0.375"	$\lambda/10$	10-5	BK7
PW-3050-C	3.000"	0.500"	$\lambda/10$	10-5	BK7
PW-4037-C	4.000"	0.375"	$\lambda/10$	10-5	BK7
PW-4050-C	4.000"	0.500"	$\lambda/10$	10-5	BK7
PW-6010-C	6.000"	1.000"	$\lambda/10$	10-5	BK7
PW-0525-INF	0.500"	0.250"	$\lambda/10$	10-5	Infrasil
PW-0725-INF	0.750"	0.250"	$\lambda/10$	10-5	Infrasil
PW-1025-INF	1.000"	0.250"	$\lambda/10$	10-5	Infrasil
PW-2025-INF	2.000"	0.250"	$\lambda/10$	10-5	Infrasil
PW-0525-CFIR	0.500"	0.250"	$\lambda/10$	20-10	IR CaF ₂
PW-1025-CFIR	1.000"	0.250"	$\lambda/10$	20-10	IR CaF ₂
PW-1419-CFIR	36.0mm	5.0mm	$\lambda/10$	20-10	IR CaF ₂
PW-1519-CFIR	1.500"	5.0mm	$\lambda/10$	20-10	IR CaF ₂
PW-2019-CFIR	2.000"	5.0mm	$\lambda/10$	20-10	IR CaF ₂
PW-2037-CFIR	2.000"	0.375"	$\lambda/10$	20-10	IR CaF ₂

* Other dimensions available in prototype and production quantities.



Interferometer Flats, Wedge 30 ± 5 min.



SPECIFICATIONS

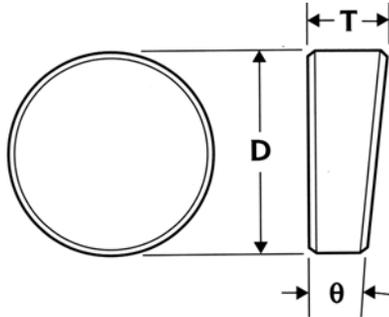
Substrate material :	Suprasil 1, UV fused silica, or BK7
Surface Flatness :	$\lambda/10$ @ 633nm
Surface Quality :	10-5 laser quality
Wedge	30 ± 5 arcmin.
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	D(mm)	T(mm)	Material
IF-1037-SS	1.000"	0.375"	Suprasil 1
IF-1537-SS	1.500"	0.375"	Suprasil 1
IF-2037-SS	2.000"	0.375"	Suprasil 1
IF-0525-UV	0.500"	0.250"	Fused Silica
IF-0725-UV	0.750"	0.250"	Fused Silica
IF-0735-UV	0.750"	0.375"	Fused Silica
IF-1025-UV	1.000"	0.250"	Fused Silica
IF-1037-UV	1.000"	0.375"	Fused Silica
IF-1050-UV	1.000"	0.500"	Fused Silica
IF-1525-UV	1.500"	0.250"	Fused Silica
IF-1537-UV	1.500"	0.375"	Fused Silica
IF-1505-UV	1.500"	0.500"	Fused Silica
IF-2025-UV	2.000"	0.250"	Fused Silica
IF-2037-UV	2.000"	0.375"	Fused Silica
IF-2050-UV	2.000"	0.500"	Fused Silica
IF-2075-UV	2.000"	0.750"	Fused Silica
IF-3050-UV	3.000"	0.500"	Fused Silica
IF-4050-UV	4.000"	0.500"	Fused Silica
IF-0525-C	0.500"	0.250"	BK7
IF-0725-C	0.750"	0.250"	BK7
IF-0735-C	0.750"	0.375"	BK7
IF-1037-C	1.000"	0.375"	BK7
IF-1050-C	1.000"	0.500"	BK7
IF-1537-C	1.500"	0.375"	BK7
IF-1550-C	1.500"	0.500"	BK7
IF-2037-C	2.000"	0.375"	BK7
IF-2050-C	2.000"	0.500"	BK7
IF-3050-C	3.000"	0.500"	BK7
IF-4050-C	4.000"	0.500"	BK7

* Other dimensions available in prototype and production quantities.



Large Wedge Windows, Wedge 1°, 2°, 3°



SPECIFICATIONS

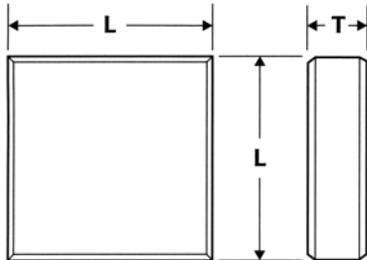
Substrate material :	UV fused silica or BK7
Surface Flatness :	$\lambda/10$ @ 633nm
Surface Quality :	10-5 laser quality
Wedge	± 6 arcmin.
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Wedge	Diameter (D)	Thickness (T)	Deviation(633nm)	Material
WW1-1037-UV	1°	1.000"	0.375"	0.457°	Fused Silica
WW1-1050-UV	1°	1.000"	0.500"	0.457°	Fused Silica
WW1-1550-UV	1°	1.500"	0.500"	0.457°	Fused Silica
WW1-2050-UV	1°	2.000"	0.500"	0.457°	Fused Silica
WW1-3050-UV	1°	3.000"	0.500"	0.457°	Fused Silica
WW2-1037-UV	2°	1.000"	0.375"	0.914°	Fused Silica
WW2-1050-UV	2°	1.000"	0.500"	0.914°	Fused Silica
WW2-1550-UV	2°	1.500"	0.500"	0.914°	Fused Silica
WW2-2050-UV	2°	2.000"	0.500"	0.914°	Fused Silica
WW2-3050-UV	2°	3.000"	0.500"	0.914°	Fused Silica
WW3-1037-UV	3°	1.000"	0.375"	1.371°	Fused Silica
WW3-1050-UV	3°	1.000"	0.500"	1.371°	Fused Silica
WW3-1550-UV	3°	1.500"	0.500"	1.371°	Fused Silica
WW3-2050-UV	3°	2.000"	0.500"	1.371°	Fused Silica
WW3-3050-UV	3°	3.000"	0.500"	1.371°	Fused Silica
WW1-1037-C	1°	1.000"	0.375"	0.515°	BK7
WW1-1050-C	1°	1.000"	0.500"	0.515°	BK7
WW1-1550-C	1°	1.500"	0.500"	0.515°	BK7
WW1-2050-C	1°	2.000"	0.500"	0.515°	BK7
WW2-1037-C	1°	1.000"	0.375"	0.515°	BK7
WW2-1050-C	2°	1.000"	0.500"	1.030°	BK7
WW2-1550-C	2°	1.500"	0.500"	1.030°	BK7
WW2-2050-C	2°	2.000"	0.500"	1.030°	BK7
WW3-1037-C	2°	1.000"	0.375"	1.030°	BK7
WW3-1050-C	2°	1.000"	0.500"	1.030°	BK7
WW3-1550-C	3°	1.500"	0.500"	1.545°	BK7
WW3-2037-C	3°	2.000"	0.375"	1.545°	BK7
WW3-2050-C	3°	2.000"	0.500"	1.545°	BK7

* Other dimensions available in prototype and production quantities.



SPECIFICATIONS



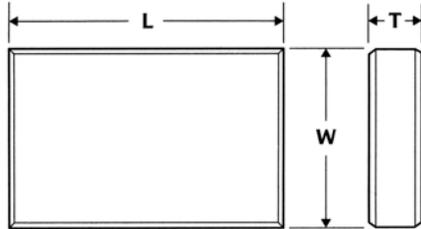
Substrate material :	UV fused silica or BK7
Surface Flatness :	measure at 633nm
Surface Quality :	10-5 laser quality
Wedge	< 3 arc min.
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Length (L)	Thickness (T)	Transmitted Wavefront	Material
SW-0525-UV	0.500"	0.250"	$\lambda/10$	Fused Silica
SW-1008-UV	1.000"	2.0mm	$\lambda/2$	Fused Silica
SW-1025-UV	1.000"	0.250"	$\lambda/10$	Fused Silica
SW-2006-UV	2.000"	0.063"	1λ	Fused Silica
SW-2008-UV	2.000"	2.0mm	1λ	Fused Silica
SW-2020-UV	2.000"	0.200"	$\lambda/2$	Fused Silica
SW-2025-UV	2.000"	0.250"	$\lambda/4$	Fused Silica
SW-2037-UV	2.000"	0.375"	$\lambda/10$	Fused Silica
SW-0525-C	0.500"	0.250"	$\lambda/10$	BK7
SW-1008-C	1.000"	2.0mm	$\lambda/2$	BK7
SW-1025-C	1.000"	0.250"	$\lambda/10$	BK7
SW-1037-C	1.000"	0.375"	$\lambda/10$	BK7
SW-1537-C	1.500"	0.375"	$\lambda/10$	BK7
SW-2008-C	2.000"	2.0mm	1λ	BK7
SW-2019-C	2.000"	5.0mm	$\lambda/2$	BK7
SW-2025-C	2.000"	0.250"	$\lambda/4$	BK7
SW-2037-C	2.000"	0.375"	$\lambda/4$	BK7
SW-3037-C	3.000"	0.375"	$\lambda/4$	BK7
SW-3050-C	3.000"	0.500"	$\lambda/4$	BK7

* Other dimensions available in prototype and production quantities.



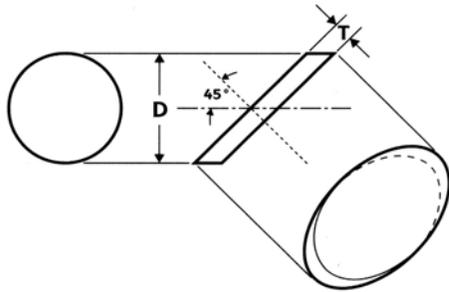
SPECIFICATIONS



Substrate material :	UV fused silica or BK7
Surface Flatness :	$\lambda/10$ @ 633nm
Surface Quality :	10-5 laser quality
Wedge	< 3 arc min.
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	L(mm)	W(mm)	T(mm)	Material
RW-20.0-10.0-6.35-UV	20.0	10.0	6.35	Fused Silica
RW-28.6-14.3-3.18-UV	28.6	14.3	3.18	Fused Silica
RW-35.0-20.0-9.53-UV	35.0	20.0	9.53	Fused Silica
RW-40.0-25.0-9.53-UV	40.0	25.0	9.53	Fused Silica
RW-40.0-30.0-5.00-UV	40.0	30.0	5.00	Fused Silica
RW-50.0-30.0-12.7-UV	50.0	30.0	12.7	Fused Silica
RW-20.0-10.0-6.35-C	20.0	10.0	6.35	BK7
RW-28.6-14.3-3.18-C	28.6	14.3	3.18	BK7
RW-35.0-20.0-9.53-C	35.0	20.0	9.53	BK7
RW-40.0-25.0-9.53-C	40.0	25.0	9.53	BK7
RW-40.0-30.0-5.00-C	40.0	30.0	5.00	BK7
RW-50.0-30.0-12.7-C	50.0	30.0	12.7	BK7

* Other dimensions available in prototype and production quantities.



SPECIFICATIONS

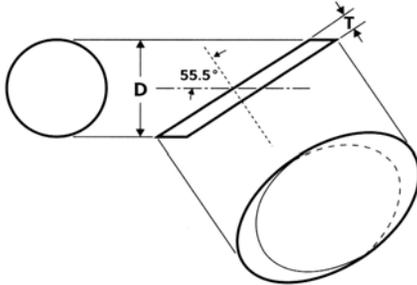
Substrate material :	UV fused silica or BK7
Surface Flatness :	$\lambda/10$ @ 633nm
Surface Quality :	10-5 laser quality
Wedge	≤ 3 arcmin.
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Minor Diameter (L)	Thickness (T)	Material
EW-12.7-6.35-UV	12.7mm	6.35mm	Fused Silica
EW-15.0-6.35-UV	15.0mm	6.35mm	Fused Silica
EW-19.1-6.35-UV	19.1mm	6.35mm	Fused Silica
EW-25.4-6.35-UV	25.4mm	6.35mm	Fused Silica
EW-12.7-6.35-C	12.7mm	6.35mm	BK7
EW-15.0-6.35-C	15.0mm	6.35mm	BK7
EW-19.1-6.35-C	19.1mm	6.35mm	BK7
EW-25.4-6.35-C	25.4mm	6.35mm	BK7

* Other dimensions available in prototype and production quantities.



SPECIFICATIONS



Substrate material :	Suprasil 1, UV fused silica
Surface Flatness :	$\lambda/10$ @ 633nm
Surface Quality :	10-5 laser quality
Wedge	≤ 10 arcsec.
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

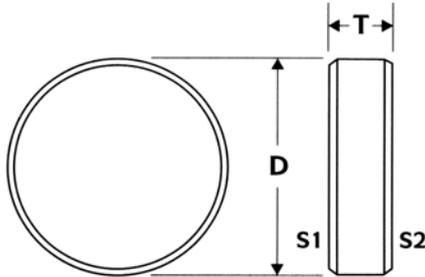
Part Number	Minor Diameter (L)	Thickness (T)	Material
BW-8.0-2.0-SS	8.0mm	2.0mm	Suprasil
BW-9.0-2.0-SS	9.0mm	2.0mm	Suprasil
BW-10.0-2.0-SS	10.0mm	2.0mm	Suprasil
BW-13.0-2.0-SS	13.0mm	2.0mm	Suprasil
BW-16.0-2.0-SS	16.0mm	2.0mm	Suprasil
BW-25.0-2.0-SS	25.0mm	2.0mm	Suprasil
BW-8.0-2.0-UV	8.0mm	2.0mm	Fused Silica
BW-9.0-2.0-UV	9.0mm	2.0mm	Fused Silica
BW-10.0-2.0-UV	10.0mm	2.0mm	Fused Silica
BW-13.0-2.0-UV	13.0mm	2.0mm	Fused Silica
BW-16.0-2.0-UV	16.0mm	2.0mm	Fused Silica
BW-25.0-2.0-UV	25.0mm	2.0mm	Fused Silica

* Other dimensions available in prototype and production quantities.



Table of Contents

Mirror Substrates	
Plane Mirror Blanks	66
Convex Spherical Mirrors Blanks	68
Concave Spherical Mirror Blanks	70
Square Mirror Blanks	74
Rectangular Mirror Blanks	75
Elliptical Mirror Blanks	76
Laser Mirrors	
Partially Reflective Laser Mirrors	77
High Energy Excimer Laser Cavity Mirrors	78
Excimer Laser Mirrors, ArF(193nm)	79
Excimer Laser Mirrors, KrF(248nm)	79
Excimer Laser Mirrors, XeCl(308nm)	80
Excimer Laser Mirrors, XeF(351-353nm)	80
High Energy Excimer / He-Ne Laser Mirrors	81
Nitrogen Laser Mirrors (337nm)	82
He-Cd Laser Mirrors (325, 442nm)	83
Ar-Ion Laser Mirrors	84
Copper Vapor Laser Mirrors (51/578nm)	86
He-Ne laser Mirrors (632.8nm)	87
Ruby Laser Mirrors (694.3nm)	88
Alexandrite Laser Mirrors (720-780nm)	89
Nd:YAG Laser Mirrors	90
Nd:YLF laser Mirrors	93
Dual Reflective Nd:YAG/YLF Laser Mirrors	96
Diode Laser Mirrors(670-1550nm)	98
Forsterite(1235nm), Iodine(1315nm)	99
Er:Glass Laser Mirrors (1540nm)	100
Tm:YAG(2010nm), Ho:YAG(2100nm) Laser Mirrors	101
Er:YAG Laser Mirrors (2940nm)	102
0-45 Degrees Visible Laser Mirrors (488-694nm)	103
0-45 Degrees Diode Laser Mirrors	104
Aluminium Mirrors	105
Protected Silver And Gold Mirrors	106



SPECIFICATIONS

Substrate material :	UV fused silica, BK7 or Zerodur
S1 Surface Quality	10-5 laser quality
S2 Surface Quality :	Commercial Polish
Centration Error :	≤ 3 arcmin.
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Diameter (D)	Thickness (T)	S1 Surface Figure	Material
MP-0412-UV	10.0mm	0.125"	$\lambda/10$	Fused Silica
MP-0525-UV	0.500"	0.250"	$\lambda/10$	Fused Silica
MP-0537-UV	0.500"	0.375"	$\lambda/10$	Fused Silica
MP-0712-UV	0.750"	0.125"	$\lambda/10$	Fused Silica
MP-0725-UV	0.750"	0.250"	$\lambda/10$	Fused Silica
MP-0737-UV	0.750"	0.375"	$\lambda/10$	Fused Silica
MP-0825-UV	20.0mm	0.250"	$\lambda/10$	Fused Silica
MP-0908-UV	25.0mm	2.0mm	$\lambda/4$	Fused Silica
MP-1012-UV	1.000"	0.125"	$\lambda/4$	Fused Silica
MP-1025-UV	1.000"	0.250"	$\lambda/10$	Fused Silica
MP-1032-UV	1.000"	8.0mm	$\lambda/10$	Fused Silica
MP-1037-UV	1.000"	0.375"	$\lambda/10$	Fused Silica
MP-1050-UV	1.000"	0.500"	$\lambda/10$	Fused Silica
MP-1225-UV	30.0mm	0.250"	$\lambda/10$	Fused Silica
MP-1512-UV	1.500"	0.125"	$\lambda/4$	Fused Silica
MP-1525-UV	1.500"	0.250"	$\lambda/10$	Fused Silica
MP-1537-UV	1.500"	0.375"	$\lambda/10$	Fused Silica
MP-1550-UV	1.500"	0.500"	$\lambda/10$	Fused Silica
MP-1625-UV	40.0mm	0.250"	$\lambda/10$	Fused Silica
MP-1925-UV	50.0mm	0.250"	$\lambda/10$	Fused Silica
MP-2012-UV	2.000"	0.125"	$\lambda/4$	Fused Silica
MP-2025-UV	2.000"	0.250"	$\lambda/10$	Fused Silica
MP-2037-UV	2.000"	0.375"	$\lambda/10$	Fused Silica
MP-2050-UV	2.000"	0.500"	$\lambda/10$	Fused Silica
MP-3037-UV	3.000"	0.375"	$\lambda/10$	Fused Silica
MP-3050-UV	3.000"	0.500"	$\lambda/10$	Fused Silica
MP-4037-UV	4.000"	0.375"	$\lambda/10$	Fused Silica
MP-4050-UV	4.000"	0.500"	$\lambda/10$	Fused Silica
MP-5075-UV	5.000"	0.750"	$\lambda/10$	Fused Silica

continued



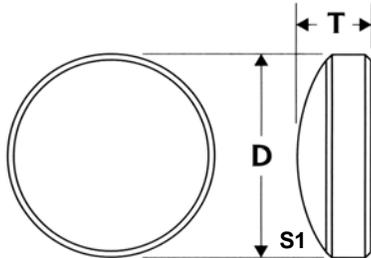
Plane Mirror Blanks

Part Number	Diameter (D)	Thickness (T)	S1 Surface Figure	Material
MP-0316-C	7.75mm	4.0mm	$\lambda/10$	BK7
MP-0412-C	10.0mm	0.125"	$\lambda/10$	BK7
MP-0525-C	0.500"	0.250"	$\lambda/10$	BK7
MP-0537-C	0.500"	0.375"	$\lambda/10$	BK7
MP-0643-C	15.0mm	11.0mm	$\lambda/10$	BK7
MP-0712-C	0.750"	0.125"	$\lambda/10$	BK7
MP-0725-C	0.750"	0.250"	$\lambda/10$	BK7
MP-0737-C	0.750"	0.375"	$\lambda/10$	BK7
MP-0825-C	20.0mm	0.250"	$\lambda/10$	BK7
MP-0904-C	25.0mm	1.0mm	$\lambda/4$	BK7
MP-0908-C	25.0mm	2.0mm	$\lambda/4$	BK7
MP-0911-C	25.0mm	3.0mm	$\lambda/4$	BK7
MP-1012-C	1.000"	0.125"	$\lambda/4$	BK7
MP-1025-C	1.000"	0.250"	$\lambda/10$	BK7
MP-1032-C	1.000"	8.0mm	$\lambda/10$	BK7
MP-1037-C	1.000"	0.375"	$\lambda/10$	BK7
MP-1050-C	1.000"	0.500"	$\lambda/10$	BK7
MP-1225-C	30.0mm	0.250"	$\lambda/10$	BK7
MP-1512-C	1.500"	0.125"	$\lambda/4$	BK7
MP-1525-C	1.500"	0.250"	$\lambda/4$	BK7
MP-1537-C	1.500"	0.375"	$\lambda/10$	BK7
MP-1550-C	1.500"	0.500"	$\lambda/10$	BK7
MP-1625-C	40.0mm	0.250"	$\lambda/10$	BK7
MP-1925-C	50.0mm	0.250"	$\lambda/10$	BK7
MP-2012-C	2.000"	0.125"	$\lambda/10$	BK7
MP-2025-C	2.000"	0.250"	$\lambda/10$	BK7
MP-2037-C	2.000"	0.375"	$\lambda/10$	BK7
MP-2050-C	2.000"	0.500"	$\lambda/10$	BK7
MP-3037-C	3.000"	0.375"	$\lambda/10$	BK7
MP-3050-C	3.000"	0.500"	$\lambda/10$	BK7
MP-4037-C	4.000"	0.375"	$\lambda/10$	BK7
MP-4050-C	4.000"	0.500"	$\lambda/10$	BK7
MP-5075-C	5.000"	0.750"	$\lambda/10$	BK7
MP-0525-ZD	0.500"	0.250"	$\lambda/10$	Zerodur
MP-1025-ZD	1.000"	0.250"	$\lambda/10$	Zerodur
MP-1037-ZD	1.000"	0.375"	$\lambda/10$	Zerodur
MP-1537-ZD	1.500"	0.375"	$\lambda/10$	Zerodur
MP-2037-ZD	2.000"	0.375"	$\lambda/10$	Zerodur
MP-3050-ZD	3.000"	0.500"	$\lambda/10$	Zerodur
MP-4050-ZD	4.000"	0.500"	$\lambda/10$	Zerodur

* Other dimensions available in prototype and production quantities.



Convex Spherical Mirror Blanks



SPECIFICATIONS

Substrate material :	BK7 or UV fused silica
S1 Surface Flatness :	$\lambda/10$ @ 633nm
S1 Surface Quality :	10-5 laser quality
Centration Error :	≤ 3 arcmin.
Focal Length Tolerance :	± 0.5 %
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number		Diameter (D)	Thickness (T)	Convex Radius
BK7	Fused Silica			
MX-0537-0.10-C	MX-0537-0.10-UV	0.500"	0.375"	0.10m
MX-0537-0.15-C	MX-0537-0.15-UV	0.500"	0.375"	0.15m
MX-0537-0.20-C	MX-0537-0.20-UV	0.500"	0.375"	0.20m
MX-0537-0.50-C	MX-0537-0.50-UV	0.500"	0.375"	0.50m
MX-0537-1.00-C	MX-0537-1.00-UV	0.500"	0.375"	1.00m
MX-0643-0.10-C	MX-0643-0.10-UV	15mm	11.0mm	0.10m
MX-0643-0.30-C	MX-0643-0.30-UV	15mm	11.0mm	0.30m
MX-0643-0.75-C	MX-0643-0.75UV	15mm	11.0mm	0.75m
MX-0643-1.00-C	MX-0643-1.00-UV	15mm	11.0mm	1.00m
MX-0643-2.00-C	MX-0643-2.00-UV	15mm	11.0mm	2.00m
MX-0737-0.10-C	MX-0737-0.10-UV	0.750"	0.375"	0.10m
MX-0737-0.30-C	MX-0737-0.30-UV	0.750"	0.375"	0.30m
MX-0737-0.50-C	MX-0737-0.50-UV	0.750"	0.375"	0.50m
MX-0737-1.00-C	MX-0737-1.00-UV	0.750"	0.375"	1.00m
MX-0737-2.00-C	MX-0737-2.00-UV	0.750"	0.375"	2.00m
MX-0737-3.00-C	MX-0737-3.00-UV	0.750"	0.375"	3.00m
MX-0737-4.00-C	MX-0737-4.00-UV	0.750"	0.375"	4.00m
MX-0737-5.00-C	MX-0737-5.00-UV	0.750"	0.375"	5.00m
MX-0737-9.00-C	MX-0737-9.00-UV	0.750"	0.375"	9.00m
MX-1025-0.05-C	MX-1025-0.05-UV	1.000"	0.250"	0.05m
MX-1025-0.10-C	MX-1025-0.10-UV	1.000"	0.250"	0.10m
MX-1025-0.30-C	MX-1025-0.30-UV	1.000"	0.250"	0.30m
MX-1025-0.40-C	MX-1025-0.40-UV	1.000"	0.250"	0.40m
MX-1025-0.50-C	MX-1025-0.50-UV	1.000"	0.250"	0.50m
MX-1025-0.60-C	MX-1025-0.60-UV	1.000"	0.250"	0.60m
MX-1025-1.00-C	MX-1025-1.00-UV	1.000"	0.250"	1.00m
MX-1025-1.50-C	MX-1025-1.50-UV	1.000"	0.250"	1.50m

continued



Convex Spherical Mirror Blanks

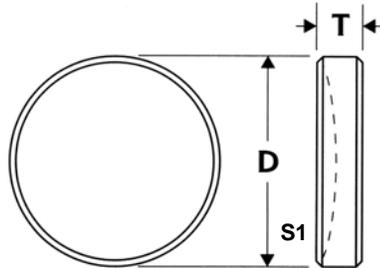
Part Number		Diameter (D)	Thickness (T)	Convex Radius
BK7	Fused Silica			
MX-1025-2.00-C	MX-1025-2.00-UV	1.000"	0.250"	2.00m
MX-1025-2.50-C	MX-1025-2.50-UV	1.000"	0.250"	2.50m
MX-1025-3.00-C	MX-1025-3.00-UV	1.000"	0.250"	3.00m
MX-1025-4.00-C	MX-1025-4.00-UV	1.000"	0.250"	4.00m
MX-1037-5.00-C	MX-1037-5.00-UV	1.000"	0.375"	5.00m
MX-1037-6.00-C	MX-1037-6.00-UV	1.000"	0.375"	6.00m
MX-1037-7.00-C	MX-1037-7.00-UV	1.000"	0.375"	7.00m
MX-1037-8.00-C	MX-1037-8.00-UV	1.000"	0.375"	8.00m
MX-1037-9.00-C	MX-1037-9.00-UV	1.000"	0.375"	9.00m
MX-1037-10.0-C	MX-1037-10.0-UV	1.000"	0.375"	10.0m
MX-1037-15.0-C	MX-1037-15.0-UV	1.000"	0.375"	15.0m
MX-1037-20.0-C	MX-1037-20.0-UV	1.000"	0.375"	20.0m
MX-1537-0.10-C	MX-1537-0.10-UV	1.500"	0.375"	0.10m
MX-1537-0.30-C	MX-1537-0.30-UV	1.500"	0.375"	0.30m
MX-1537-0.50-C	MX-1537-0.50-UV	1.500"	0.375"	0.50m
MX-1537-1.00-C	MX-1537-1.00-UV	1.500"	0.375"	1.00m
MX-1537-4.00-C	MX-1537-4.00-UV	1.500"	0.375"	4.00m
MX-1537-5.00-C	MX-1537-5.00-UV	1.500"	0.375"	5.00m
MX-1537-8.00-C	MX-1537-8.00-UV	1.500"	0.375"	8.00m
MX-1537-20.0-C	MX-1537-20.0-UV	1.500"	0.375"	20.0m
MX-2037-0.30-C	MX-2037-0.30-UV	2.000"	0.375"	0.30m
MX-2037-0.50-C	MX-2037-0.50-UV	2.000"	0.375"	0.50m
MX-2037-0.75-C	MX-2037-0.75-UV	2.000"	0.375"	0.75m
MX-2037-1.00-C	MX-2037-1.00-UV	2.000"	0.375"	1.00m
MX-2037-1.50-C	MX-2037-1.50-UV	2.000"	0.375"	1.50m
MX-2037-2.00-C	MX-2037-2.00-UV	2.000"	0.375"	2.00m
MX-2037-3.00-C	MX-2037-3.00-UV	2.000"	0.375"	3.00m
MX-2037-4.00-C	MX-2037-4.00-UV	2.000"	0.375"	4.00m
MX-2037-5.00-C	MX-2037-5.00-UV	2.000"	0.375"	5.00m
MX-2037-6.00-C	MX-2037-6.00-UV	2.000"	0.375"	6.00m
MX-2037-7.00-C	MX-2037-7.00-UV	2.000"	0.375"	7.00m
MX-2037-8.00-C	MX-2037-8.00-UV	2.000"	0.375"	8.00m
MX-2037-9.00-C	MX-2037-9.00-UV	2.000"	0.375"	9.00m
MX-2037-10.0-C	MX-2037-10.0-UV	2.000"	0.375"	10.0m
MX-2037-15.0-C	MX-2037-15.0-UV	2.000"	0.375"	15.0m
MX-2037-20.0-C	MX-2037-20.0-UV	2.000"	0.375"	20.0m

* Other sizes and focal lengths available in prototype and production quantities.

- Tutorials
- Lenses
- Windows
- Mirrors**
- Prisms
- Beamsplitters
- Polarizers
- Filters
- Index



Concave Spherical Mirror Blanks



SPECIFICATIONS

Substrate material :	BK7 or UV fused silica
S1 Surface Flatness :	$\lambda/10$ @ 633nm
S1 Surface Quality :	10-5 laser quality
Centration Error :	≤ 3 arcmin.
Focal Length Tolerance :	± 0.5 %
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number		Diameter (D)	Thickness (T)	Concave Radius
BK7	Fused Silica			
MC-0537-0.010-C	MC-0537-0.010-UV	0.500"	0.375"	0.010m
MC-0537-0.025-C	MC-0537-0.025-UV	0.500"	0.375"	0.025m
MC-0537-0.050-C	MC-0537-0.050-UV	0.500"	0.375"	0.050m
MC-0537-0.075-C	MC-0537-0.075-UV	0.500"	0.375"	0.075m
MC-0537-0.10-C	MC-0537-0.10-UV	0.500"	0.375"	0.10m
MC-0537-0.15-C	MC-0537-0.15-UV	0.500"	0.375"	0.15m
MC-0537-0.20-C	MC-0537-0.20-UV	0.500"	0.375"	0.20m
MC-0537-0.25-C	MC-0537-0.25-UV	0.500"	0.375"	0.25m
MC-0537-0.30-C	MC-0537-0.30-UV	0.500"	0.375"	0.30m
MC-0537-0.50-C	MC-0537-0.50-UV	0.500"	0.375"	0.50m
MC-0537-0.75-C	MC-0537-0.75-UV	0.500"	0.375"	0.75m
MC-0537-1.00-C	MC-0537-1.00-UV	0.500"	0.375"	1.00m
MC-0537-1.50-C	MC-0537-1.50-UV	0.500"	0.375"	1.50m
MC-0537-2.00-C	MC-0537-2.00-UV	0.500"	0.375"	2.00m
MC-0537-3.00-C	MC-0537-3.00-UV	0.500"	0.375"	3.00m
MC-0537-4.00-C	MC-0537-4.00-UV	0.500"	0.375"	4.00m
MC-0537-5.00-C	MC-0537-5.00-UV	0.500"	0.375"	5.00m
MC-0537-6.00-C	MC-0537-6.00-UV	0.500"	0.375"	6.00m
MC-0537-7.00-C	MC-0537-7.00-UV	0.500"	0.375"	7.00m
MC-0537-8.00-C	MC-0537-8.00-UV	0.500"	0.375"	8.00m
MC-0537-9.00-C	MC-0537-9.00-UV	0.500"	0.375"	9.00m
MC-0537-10.0-C	MC-0537-10.0-UV	0.500"	0.375"	10.0m
MC-0537-15.0-C	MC-0537-15.0-UV	0.500"	0.375"	15.0m
MC-0537-20.0-C	MC-0537-20.0-UV	0.500"	0.375"	20.0m
MC-0643-0.10-C	MC-0643-0.10-UV	15mm	11.0mm	0.10m
MC-0643-0.25-C	MC-0643-0.25-UV	15mm	11.0mm	0.25m
MC-0643-0.30-C	MC-0643-0.30-UV	15mm	11.0mm	0.30m

continued



Concave Spherical Mirror Blanks

Part Number		Diameter (D)	Thickness (T)	Concave Radius
BK7	Fused Silica			
MC-0643-0.50-C	MC-0643-0.50-UV	15mm	11.0mm	0.50m
MC-0643-0.60-C	MC-0643-0.60-UV	15mm	11.0mm	0.60m
MC-0643-1.00-C	MC-0643-1.00-UV	15mm	11.0mm	1.00m
MC-0643-1.20-C	MC-0643-1.20-UV	15mm	11.0mm	1.20m
MC-0643-2.00-C	MC-0643-2.00-UV	15mm	11.0mm	2.00m
MC-0643-3.00-C	MC-0643-3.00-UV	15mm	11.0mm	3.00m
MC-0643-4.00-C	MC-0643-4.00-UV	15mm	11.0mm	4.00m
MC-0643-5.00-C	MC-0643-5.00-UV	15mm	11.0mm	5.00m
MC-0643-6.00-C	MC-0643-6.00-UV	15mm	11.0mm	6.00m
MC-0643-8.00-C	MC-0643-8.00-UV	15mm	11.0mm	8.00m
MC-0643-10.0-C	MC-0643-10.0-UV	15mm	11.0mm	10.0m
MC-0643-20.0-C	MC-0643-20.0-UV	15mm	11.0mm	20.0m
MC-0737-0.025-C	MC-0737-0.025-UV	0.750"	0.375"	0.025m
MC-0737-0.050-C	MC-0737-0.050-UV	0.750"	0.375"	0.050m
MC-0737-0.10-C	MC-0737-0.10-UV	0.750"	0.375"	0.10m
MC-0737-0.20-C	MC-0737-0.20-UV	0.750"	0.375"	0.20m
MC-0737-0.25-C	MC-0737-0.25-UV	0.750"	0.375"	0.25m
MC-0737-0.30-C	MC-0737-0.30-UV	0.750"	0.375"	0.30m
MC-0737-0.50-C	MC-0737-0.50-UV	0.750"	0.375"	0.50m
MC-0737-0.75-C	MC-0737-0.75-UV	0.750"	0.375"	0.75m
MC-0737-1.00-C	MC-0737-1.00-UV	0.750"	0.375"	1.00m
MC-0737-2.00-C	MC-0737-2.00-UV	0.750"	0.375"	1.50m
MC-0737-3.00-C	MC-0737-3.00-UV	0.750"	0.375"	2.00m
MC-0737-4.00-C	MC-0737-4.00-UV	0.750"	0.375"	3.00m
MC-0737-5.00-C	MC-0737-5.00-UV	0.750"	0.375"	4.00m
MC-0737-6.00-C	MC-0737-6.00-UV	0.750"	0.375"	5.00m
MC-0737-7.00-C	MC-0737-7.00-UV	0.750"	0.375"	6.00m
MC-0737-8.00-C	MC-0737-8.00-UV	0.750"	0.375"	7.00m
MC-0737-9.00-C	MC-0737-9.00-UV	0.750"	0.375"	8.00m
MC-0737-10.0-C	MC-0737-10.0-UV	0.750"	0.375"	9.00m
MC-0737-15.0-C	MC-0737-15.0-UV	0.750"	0.375"	10.0m
MC-0737-20.0-C	MC-0737-20.0-UV	0.750"	0.375"	15.0m
MC-0737-20.0-C	MC-0737-20.0-UV	0.750"	0.375"	20.0m
MC-1025-0.025-C	MC-1025-0.025-UV	1.000"	0.250"	0.025m
MC-1025-0.050-C	MC-1025-0.050-UV	1.000"	0.250"	0.050m
MC-1025-0.075-C	MC-1025-0.075-UV	1.000"	0.250"	0.075m
MC-1025-0.10-C	MC-1025-0.10-UV	1.000"	0.250"	0.10m
MC-1025-0.25-C	MC-1025-0.25-UV	1.000"	0.250"	0.25m
MC-1025-0.30-C	MC-1025-0.30-UV	1.000"	0.250"	0.30m
MC-1025-0.50-C	MC-1025-0.50-UV	1.000"	0.250"	0.50m

continued



Concave Spherical Mirror Blanks

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index

Part Number		Diameter (D)	Thickness (T)	Concave Radius
BK7	Fused Silica			
MC-1025-1.00-C	MC-1025-1.00-UV	1.000"	0.250"	1.00m
MC-1025-1.50-C	MC-1025-1.50-UV	1.000"	0.250"	1.50m
MC-1025-2.00-C	MC-1025-2.00-UV	1.000"	0.250"	2.00m
MC-1025-5.00-C	MC-1025-5.00-UV	1.000"	0.250"	5.00m
MC-1025-6.00-C	MC-1025-6.00-UV	1.000"	0.250"	6.00m
MC-1025-10.0-C	MC-1025-10.0-UV	1.000"	0.250"	10.0m
MC-1037-0.010-C	MC-1037-0.010-UV	1.000"	0.375"	0.010m
MC-1037-0.025-C	MC-1037-0.025-UV	1.000"	0.375"	0.025m
MC-1037-0.050-C	MC-1037-0.050-UV	1.000"	0.375"	0.050m
MC-1037-0.060-C	MC-1037-0.060-UV	1.000"	0.375"	0.060m
MC-1037-0.075-C	MC-1037-0.075-UV	1.000"	0.375"	0.075m
MC-1037-0.10-C	MC-1037-0.10-UV	1.000"	0.375"	0.10m
MC-1037-0.15-C	MC-1037-0.15-UV	1.000"	0.375"	0.15m
MC-1037-0.20-C	MC-1037-0.20-UV	1.000"	0.375"	0.20m
MC-1037-0.25-C	MC-1037-0.25-UV	1.000"	0.375"	0.25m
MC-1037-0.30-C	MC-1037-0.30-UV	1.000"	0.375"	0.30m
MC-1037-0.35-C	MC-1037-0.35-UV	1.000"	0.375"	0.35m
MC-1037-0.40-C	MC-1037-0.40-UV	1.000"	0.375"	0.40m
MC-1037-0.45-C	MC-1037-0.45-UV	1.000"	0.375"	0.45m
MC-1037-0.50-C	MC-1037-0.50-UV	1.000"	0.375"	0.50m
MC-1037-0.60-C	MC-1037-0.60-UV	1.000"	0.375"	0.60m
MC-1037-0.75-C	MC-1037-0.75-UV	1.000"	0.375"	0.75m
MC-1037-0.90-C	MC-1037-0.90-UV	1.000"	0.375"	0.90m
MC-1035-1.00-C	MC-1035-1.00-UV	1.000"	0.375"	1.00m
MC-1037-1.20-C	MC-1037-1.20-UV	1.000"	0.375"	1.20m
MC-1037-1.50-C	MC-1037-1.50-UV	1.000"	0.375"	1.50m
MC-1037-2.00-C	MC-1037-2.00-UV	1.000"	0.375"	2.00m
MC-1037-3.00-C	MC-1037-3.00-UV	1.000"	0.375"	3.00m
MC-1037-4.00-C	MC-1037-4.00-UV	1.000"	0.375"	4.00m
MC-1037-5.00-C	MC-1037-5.00-UV	1.000"	0.375"	5.00m
MC-1037-6.00-C	MC-1037-6.00-UV	1.000"	0.375"	6.00m
MC-1037-7.00-C	MC-1037-7.00-UV	1.000"	0.375"	7.00m
MC-1037-8.00-C	MC-1037-8.00-UV	1.000"	0.375"	8.00m
MC-1037-9.00-C	MC-1037-9.00-UV	1.000"	0.375"	9.00m
MC-1037-10.0-C	MC-1037-10.0-UV	1.000"	0.375"	10.0m
MC-1037-15.0-C	MC-1037-15.0-UV	1.000"	0.375"	15.0m
MC-1037-20.0-C	MC-1037-20.0-UV	1.000"	0.375"	20.0m
MC-1037-30.0-C	MC-1037-30.0-UV	1.000"	0.375"	30.0m
MC-1537-0.25-C	MC-1537-0.25-UV	1.500"	0.375"	0.25m
MC-1537-0.50-C	MC-1537-0.50-UV	1.500"	0.375"	0.50m

continued



Concave Spherical Mirror Blanks

Part Number		Diameter (D)	Thickness (T)	Concave Radius
BK7	Fused Silica			
MC-1537-1.00-C	MC-1537-1.00-UV	1.500"	0.375"	1.00m
MC-1537-2.00-C	MC-1537-2.00-UV	1.500"	0.375"	2.00m
MC-1537-3.00-C	MC-1537-3.00-UV	1.500"	0.375"	3.00m
MC-1537-4.00-C	MC-1537-4.00-UV	1.500"	0.375"	4.00m
MC-1537-5.00-C	MC-1537-5.00-UV	1.500"	0.375"	5.00m
MC-1537-6.00-C	MC-1537-6.00-UV	1.500"	0.375"	6.00m
MC-1537-8.00-C	MC-1537-8.00-UV	1.500"	0.375"	8.00m
MC-1537-9.00-C	MC-1537-9.00-UV	1.500"	0.375"	9.00m
MC-1537-10.0-C	MC-1537-10.0-UV	1.500"	0.375"	10.0m
MC-1537-15.0-C	MC-1537-15.0-UV	1.500"	0.375"	15.0m
MC-1537-20.0-C	MC-1537-20.0-UV	1.500"	0.375"	20.0m
MC-2037-0.20-C	MC-2037-0.20-UV	2.000"	0.375"	0.20m
MC-2037-0.25-C	MC-2037-0.25-UV	2.000"	0.375"	0.25m
MC-2037-0.30-C	MC-2037-0.30-UV	2.000"	0.375"	0.30m
MC-2037-0.40-C	MC-2037-0.40-UV	2.000"	0.375"	0.40m
MC-2037-0.50-C	MC-2037-0.50-UV	2.000"	0.375"	0.50m
MC-2037-0.60-C	MC-2037-0.60-UV	2.000"	0.375"	0.60m
MC-2037-0.75-C	MC-2037-0.75-UV	2.000"	0.375"	0.75m
MC-2037-1.00-C	MC-2037-1.00-UV	2.000"	0.375"	1.00m
MC-2037-1.50-C	MC-2037-1.50-UV	2.000"	0.375"	1.50m
MC-2037-2.00-C	MC-2037-2.00-UV	2.000"	0.375"	2.00m
MC-2037-3.00-C	MC-2037-3.00-UV	2.000"	0.375"	3.00m
MC-2037-4.00-C	MC-2037-4.00-UV	2.000"	0.375"	4.00m
MC-2037-5.00-C	MC-2037-5.00-UV	2.000"	0.375"	5.00m
MC-2037-6.00-C	MC-2037-6.00-UV	2.000"	0.375"	6.00m
MC-2037-7.00-C	MC-2037-7.00-UV	2.000"	0.375"	7.00m
MC-2037-8.00-C	MC-2037-8.00-UV	2.000"	0.375"	8.00m
MC-2037-9.00-C	MC-2037-9.00-UV	2.000"	0.375"	9.00m
MC-2037-10.0-C	MC-2037-10.0-UV	2.000"	0.375"	10.0m
MC-2037-15.0-C	MC-2037-15.0-UV	2.000"	0.375"	15.0m
MC-2037-20.0-C	MC-2037-20.0-UV	2.000"	0.375"	20.0m

* Other sizes and focal lengths available in prototype and production quantities.

Tutorials

Lenses

Windows

Mirrors

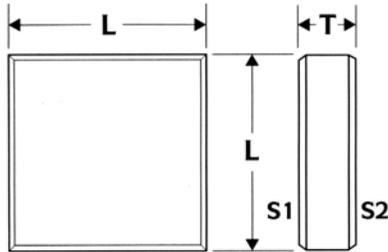
Prisms

Beamsplitters

Polarizers

Filters

Index



SPECIFICATIONS

Substrate material :	UV fused silica or BK7
S1 Surface Quality	10-5 laser quality
S2 Surface Quality :	Commercial Polish
Centration Error :	≤ 3 arcmin.
Diameter Tolerance :	$+0.0/-0.20$ mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	$> 85\%$ of diameter
Chamfer :	0.3mm at 45 typical

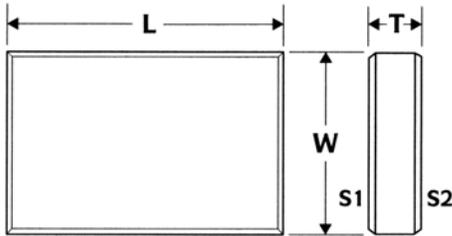
Part Number	Length (L)	Thickness (T)	S1 Surface Figure	Material
SM-0537-UV	0.500"	0.375"	$\lambda/10$	Fused Silica
SM-1025-UV	1.000"	0.250"	$\lambda/10$	Fused Silica
SM-2008-UV	2.000"	2.0mm	1λ	Fused Silica
SM-2020-UV	2.000"	0.200"	$\lambda/2$	Fused Silica
SM-2025-UV	2.000"	0.250"	$\lambda/4$	Fused Silica
SM-2037-UV	2.000"	0.375"	$\lambda/10$	Fused Silica
SM-3050-UV	3.000"	0.500"	$\lambda/10$	Fused Silica
SM-4075-UV	4.000"	0.750"	$\lambda/10$	Fused Silica
SM-0437-C	10.0mm	0.375"	$\lambda/10$	BK7
SM-0525-C	0.500"	0.250"	$\lambda/10$	BK7
SM-0537-C	0.500"	0.375"	$\lambda/10$	BK7
SM-1008-C	1.000"	2.0mm	1λ	BK7
SM-1025-C	1.000"	0.250"	$\lambda/4$	BK7
SM-1037-C	1.000"	0.375"	$\lambda/10$	BK7
SM-2008-C	2.000"	2.0mm	1λ	BK7
SM-2019-C	2.000"	5.0mm	$\lambda/2$	BK7
SM-2025-C	2.000"	0.250"	$\lambda/4$	BK7
SM-2037-C	2.000"	0.375"	$\lambda/4$	BK7
SM-3037-C	3.000"	0.375"	$\lambda/4$	BK7
SM-3050-C	3.000"	0.500"	$\lambda/10$	BK7
SM-4075-C	4.000"	0.750"	$\lambda/10$	BK7

* Other dimensions available in prototype and production quantities.



Rectangular Mirror Blanks

SPECIFICATIONS



Substrate material :	UV fused silica or BK7
S1 Surface Quality	10-5 laser quality
S2 Surface Quality :	Commercial Polish
Centration Error :	≤ 3 arcmin.
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Length (L)	Width (W)	Thickness (T)	S1 Surface Figure	Material
RM-20.0-10.0-6.35-UV	20.0mm	10.0mm	6.35mm	$\lambda/10$	Fused Silica
RM-28.6-14.3-3.18-UV	28.6mm	14.3mm	3.18mm	$\lambda/4$	Fused Silica
RM-35.0-20.0-9.53-UV	35.0mm	20.0mm	9.53mm	$\lambda/10$	Fused Silica
RM-40.0-25.0-9.53-UV	40.0mm	25.0mm	9.53mm	$\lambda/10$	Fused Silica
RM-40.0-30.0-5.00-UV	40.0mm	30.0mm	5.00mm	$\lambda/10$	Fused Silica
RM-50.0-30.0-12.7-UV	50.0mm	30.0mm	12.7mm	$\lambda/10$	Fused Silica
RM-20.0-10.0-6.35-C	20.0mm	10.0mm	6.35mm	$\lambda/10$	BK7
RM-28.6-14.3-3.18-C	28.6mm	14.3mm	3.18mm	$\lambda/4$	BK7
RM-35.0-20.0-9.53-C	35.0mm	20.0mm	9.53mm	$\lambda/4$	BK7
RM-40.0-25.0-9.53-C	40.0mm	25.0mm	9.53mm	$\lambda/10$	BK7
RM-40.0-30.0-5.00-C	40.0mm	30.0mm	5.00mm	$\lambda/10$	BK7
RM-50.0-30.0-12.7-C	50.0mm	30.0mm	12.7mm	$\lambda/10$	BK7

* Other dimensions available in prototype and production quantities.



Elliptical Mirror Blanks

Tutorials

Lenses

Windows

Mirrors

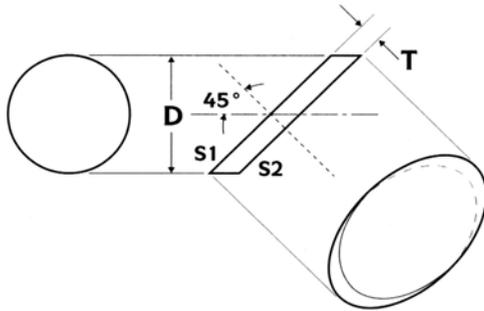
Prisms

Beamsplitters

Polarizers

Filters

Index



SPECIFICATIONS

Substrate material :	UV fused silica, BK7 or Zerodur
S1 Surface Quality	10-5 laser quality
S2 Surface Quality :	Commercial Polish
Centration Error :	≤ 3 arcmin.
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical

Part Number	Minor Diameter(D)	Thickness (T)	S1 Surface Figure	Material
EM-0525-UV	0.500"	0.250"	λ/10	Fused Silica
EM-0725-UV	0.750"	0.250"	λ/10	Fused Silica
EM-1037-UV	1.000"	0.375"	λ/10	Fused Silica
EM-1537-UV	1.500"	0.375"	λ/4	Fused Silica
EM-2037-UV	2.000"	0.375"	λ/4	Fused Silica
EM-0525-C	0.500"	0.250"	λ/10	BK7
EM-0725-C	0.750"	0.250"	λ/10	BK7
EM-1037-C	1.000"	0.375"	λ/10	BK7
EM-1537-C	1.500"	0.375"	λ/4	BK7
EM-2037-C	2.000"	0.375"	λ/4	BK7
EM-0525-ZD	0.500"	0.250"	λ/10	Zerodur
EM-0725-ZD	0.750"	0.250"	λ/10	Zerodur
EM-1037-ZD	1.000"	0.375"	λ/10	Zerodur
EM-1537-ZD	1.500"	0.375"	λ/10	Zerodur
EM-2037-ZD	2.000"	0.375"	λ/10	Zerodur

* Other dimensions available in prototype and production quantities.



Partially Reflecting Laser Mirrors

Tutorials

Lenses

Windows

Mirrors

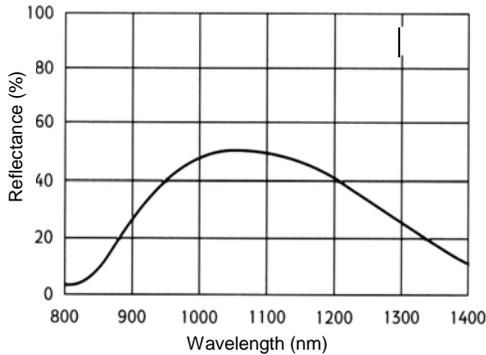
Prisms

Beamsplitters

Polarizers

Filters

Index



SPECIFICATIONS

Substrate material :	UV fused silica, CaF ₂ or BK7
Surface Figure :	$\lambda/10$ @ 633nm
Surface Quality	10-5 laser quality
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Wedge :	< 3 arc min.
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical
Damage Threshold :	>10J/cm ² · 10ns
Adhesion and Durability :	Per MIL-C-675A

How to order



Code	Size	
	Diameter D	Thickness T
0512	0.500"	0.125"
0525	0.500"	0.250"
0537	0.500"	0.375"
0712	0.750"	0.125"
0725	0.750"	0.250"
0737	0.750"	0.375"
1012	1.000"	0.125"
1025	1.000"	0.250"
1037	1.000"	0.375"
1525	1.500"	0.250"
1537	1.500"	0.375"
2025	2.000"	0.250"
2037	2.000"	0.375"
3037	3.000"	0.375"
3050	3.000"	0.500"
4050	4.000"	0.500"

Standard Wavelength(nm)	
193	694
213	755
244-257	780
248	800
266	830
308	850
337	940
355	1053
364	1047,1053
488-529	1064
488-515	1235
527	1319
532	1550
589	2010
633	2100
670	2940

Reflectance(%)
10 ± 2
20 ± 3
25 ± 3
30 ± 3
35 ± 3
40 ± 3
50 ± 5
60 ± 4
70 ± 4
75 ± 4
80 ± 4
85 ± 4
90 ± 3
95 ± 2
98 ± 1
99 ± 0.5

* Other percentage of reflection and dimensions available in prototype and production quantities.



High Energy Excimer Laser Cavity Mirrors

Tutorials

Lenses

Windows

Mirrors

Prisms

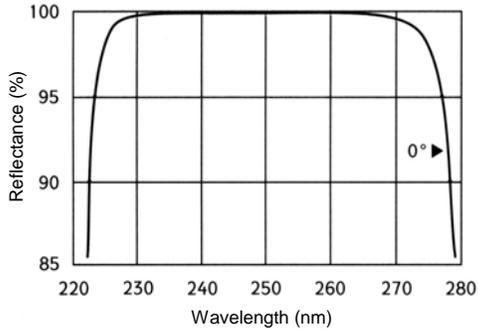
Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS



Substrate material :	VUV CaF ₂ or VUV MgF ₂
S1 Surface Figure :	$\lambda/10$ @ 633nm
S2 Surface Figure :	Commercial Polish
S1 Surface Quality	20-10
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Wedge :	≤ 3 arcmin.
Reflectance :	R > 97% at 193nm and R > 99.5% at 248nm~353nm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical
Damage Threshold :	1J/cm ² , 10nsec pulse
Adhesion and Durability :	Per MIL-C-675A

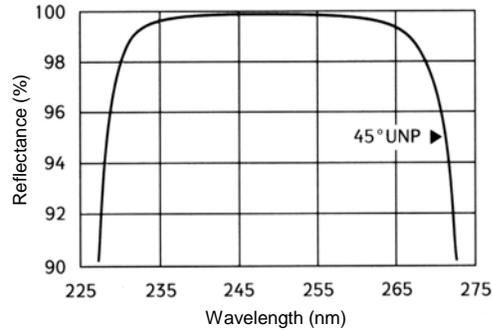
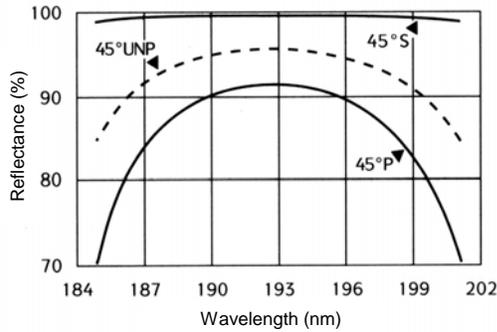
How to order

Product Code	Wavelength(nm)	Substrate	Size		Convex Radius (meter)
XCM1	193	CF	1420	1.00CX	
1 : Front surface	193	CF : CaF ₂	1420 D 36.0mm	T 5.0mm	F : Flat
2 : Second surface	248	MF : MgF ₂	1520 D 1.500"	5.0mm	1.00
	308		2040 D 2.000"	0.375"	2.00
	351-353				3.00
					4.00
					5.00
					10.00

* Other dimensions and spherical mirrors available in prototype and production quantities.



High Energy Excimer Laser Mirrors ArF(193nm) / KrF(248nm)



SPECIFICATIONS

Substrate material :	BK7	Min. Reflectance :	ArF \geq 97.0%
S1 Surface Figure :	$\lambda/10$ @ 633nm		KrF \geq 99.0%
S1 Surface Quality :	10-5 laser quality	Clear Aperture	> 85% of diameter
S2 Surface Quality :	Commercial Polish	Chamfer :	0.3mm at 45° typical
Diameter Tolerance :	+0.0/-0.20 mm	Damage Threshold :	1J/cm ² , 10ns pulse
Thickness Tolerance :	\pm 0.25 mm	Adhesion and Durability :	Per MIL-C-675A

Part Number		Diameter (D)	Thickness (T)	Angle of Incidence (Degree)
ArF (193nm)	KrF (248nm)			
ARF-0537-193-0	KRF-0537-248-0	0.500"	0.375"	0°
ARF-0737-193-0	KRF-3737-248-0	0.750"	0.375"	0°
ARF-1037-193-0	KRF-1037-248-0	1.000"	0.375"	0°
ARF-1537-193-0	KRF-1537-248-0	1.500"	0.375"	0°
ARF-2037-193-0	KRF-2037-248-0	2.00"	0.375"	0°
ARF-3050-193-0	KRF-3050-248-0	3.00"	0.500"	0°
ARF-0537-193-45	KRF-0537-248-45	0.500"	0.375"	45°
ARF-0737-193-45	KRF-0737-248-45	0.750"	0.375"	45°
ARF-1037-193-45	KRF-1037-248-45	1.000"	0.375"	45°
ARF-1537-193-45	KRF-1537-248-45	1.500"	0.375"	45°
ARF-2037-193-45	KRF-2037-248-45	2.00"	0.375"	45°
ARF-3050-193-45	KRF-0537-248-45	3.00"	0.500"	45°

* Other sizes and spherical mirrors available in prototype and production quantities.



High Energy Excimer Laser Mirrors XeCl(308nm) / XeF(351-353nm)

Tutorials

Lenses

Windows

Mirrors

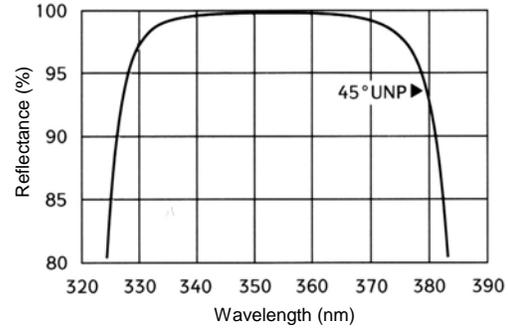
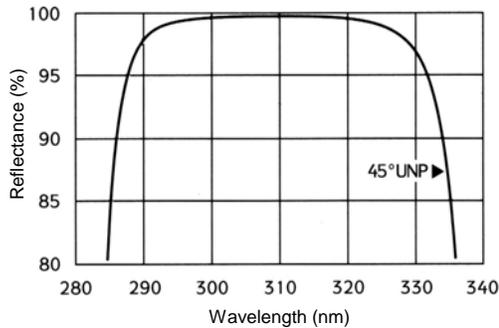
Prisms

Beamsplitters

Polarizers

Filters

Index



SPECIFICATIONS

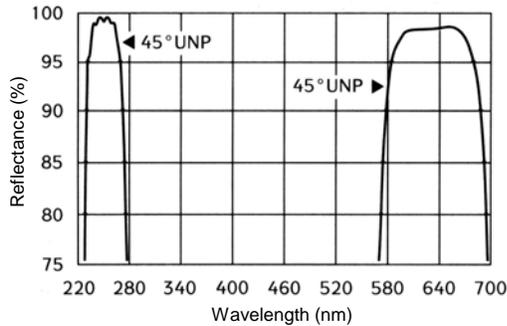
Substrate material :	UV fused Silica or BK7	Min. Reflectance :	XeCl \geq 99.0%
S1 Surface Figure :	$\lambda/10$ @ 633nm		XeF \geq 99.0%
S1 Surface Quality :	10-5 laser quality	Clear Aperture	> 85% of diameter
S2 Surface Quality :	Commercial Polish	Chamfer :	0.3mm at 45 typical
Diameter Tolerance :	+0.0/-0.20 mm	Damage Threshold :	1J/cm ² , 10ns pulse
Thickness Tolerance :	\pm 0.25 mm	Adhesion and Durability :	Per MIL-C-675A

Part Number		Diameter (D)	Thickness (T)	Angle of Incidence (Degree)
XeCl (308nm)	XeF (352nm)			
XECL-0537UV-308-0	XEF-0537UV-352-0	0.500"	0.375"	0
XECL-0737UV-308-0	XEF-3737UV-352-0	0.750"	0.375"	0
XECL-1037UV-308-0	XEF-1037UV-352-0	1.000"	0.375"	0
XECL-1537UV-308-0	XEF-1537UV-352-0	1.500"	0.375"	0
XECL-2037UV-308-0	XEF-2037UV-352-0	2.00"	0.375"	0
XECL-3050UV-308-0	XEF-3050UV-352-0	3.00"	0.500"	0
XECL-0537UV-308-45	XEF-0537UV-352-45	0.500"	0.375"	45
XECL-0737UV-308-45	XEF-0737UV-352-45	0.750"	0.375"	45
XECL-1037UV-308-45	XEF-1037UV-352-45	1.000"	0.375"	45
XECL-1537UV-308-45	XEF-1537UV-352-45	1.500"	0.375"	45
XECL-2037UV-308-45	XEF-2037UV-352-45	2.00"	0.375"	45
XECL-3050UV-308-45	XEF-0537UV-352-45	3.00"	0.500"	45

* Other sizes and spherical mirrors available in prototype and production quantities.



High Energy Excimer / He-Ne Laser Mirrors



SPECIFICATIONS

Substrate material :	UV fused silica
S1 Surface Figure :	$\lambda/10$ @ 633nm
S2 Surface Figure :	Commercial Polish
S1 Surface Quality :	10-5 laser quality
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Wedge :	≤ 3 arcmin.
Clear Aperture :	> 85% of diameter
Chamfer :	0.3mm at 45 typical
Adhesion and Durability :	Per MIL-C-675A

Part Number	Wavelength(nm)	Diameter (D)	Thickness (T)	Angle of Incidence	Min. Reflectance	Min. Reflectance at 633nm
EHM-1037-248/633-0	248/633	1.000"	0.375"	0°	99%	80%
EHM-1537-248/633-0	248/633	1.500"	0.375"	0°	99%	80%
EHM-2037-248/633-0	248/633	2.000"	0.375"	0°	99%	80%
EHM-1037-248/633-45	248/633	1.000"	0.375"	45°	99%	80%
EHM-1537-248/633-45	248/633	1.500"	0.375"	45°	99%	80%
EHM-2037-248/633-45	248/633	2.000"	0.375"	45°	99%	80%
EHM-1037-308/633-0	308/633	1.000"	0.375"	0°	99%	80%
EHM-1537-308/633-0	308/633	1.500"	0.375"	0°	99%	80%
EHM-2037-308/633-0	308/633	2.000"	0.375"	0°	99%	80%
EHM-1037-308/633-45	308/633	1.000"	0.375"	45°	99%	80%
EHM-1537-308/633-45	308/633	1.500"	0.375"	45°	99%	80%
EHM-2037-308/633-45	308/633	2.000"	0.375"	45°	99%	80%
EHM-1037-353/633-0	353/633	1.000"	0.375"	0°	99%	80%
EHM-1537-353/633-0	353/633	1.500"	0.375"	0°	99%	80%
EHM-2037-353/633-0	353/633	2.000"	0.375"	0°	99%	80%
EHM-1037-353/633-45	353/633	1.000"	0.375"	45°	99%	80%
EHM-1537-353/633-45	353/633	1.500"	0.375"	45°	99%	80%
EHM-2037-353-633-45	353/633	2.000"	0.375"	45°	99%	80%

* Other sizes and spherical mirrors available in prototype and production quantities.



Nitrogen Laser Mirrors (337nm)

Tutorials

Lenses

Windows

Mirrors

Prisms

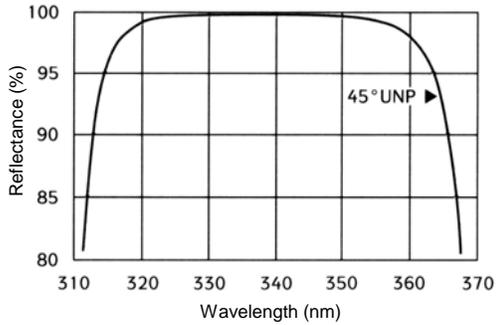
Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS



Substrate material :	UV fused silica or BK7
S1 Surface Figure :	$\lambda/10$ @ 633nm
S2 Surface Figure :	Commercial Polish
S1 Surface Quality :	10-5 laser quality
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Wedge :	≤ 3 arcmin.
Clear Aperture :	$> 85\%$ of diameter
Chamfer :	0.3mm at 45 typical
Damage Threshold :	1J/cm ² , 10ns pulse
Adhesion and Durability :	Per MIL-C-675A

Part Number		Diameter (D)	Thickness (T)	Angle of Incidence	Min. Reflectance
UV fused silica	BK7				
NGM-0537U-337-0	NGM-0537C-337-0	0.500"	0.375"	0°	99.5%
NGM-0737U-337-0	NGM-0737C-337-0	0.750"	0.375"	0°	99.5%
NGM-1037U-337-0	NGM-1037C-337-0	1.000"	0.375"	0°	99.5%
NGM-1537U-337-0	NGM-1537C-337-0	1.500"	0.375"	0°	99.5%
NGM-2037U-337-0	NGM-2037C-337-0	2.00"	0.375"	0°	99.5%
NGM-3050U-337-0	NGM-3050C-337-0	3.00"	0.500"	0°	99.5%
NGM-0537U-337-45	NGM-0537C-337-45	0.500"	0.375"	45°	99.0%
NGM-0737U-337-45	NGM-0737C-337-45	0.750"	0.375"	45°	99.0%
NGM-1037U-337-45	NGM-1037C-337-45	1.000"	0.375"	45°	99.0%
NGM-1537U-337-45	NGM-1537C-337-45	1.500"	0.375"	45°	99.0%
NGM-2037U-337-45	NGM-2037C-337-45	2.00"	0.375"	45°	99.0%
NGM-3050U-337-45	NGM-3050C-337-45	3.00"	0.500"	45°	99.0%

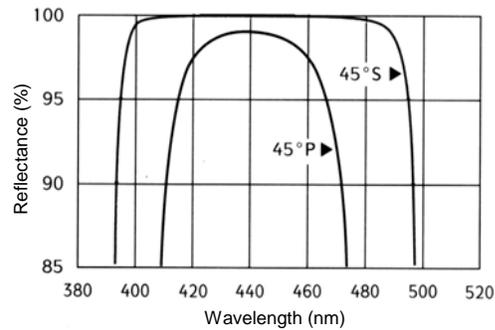
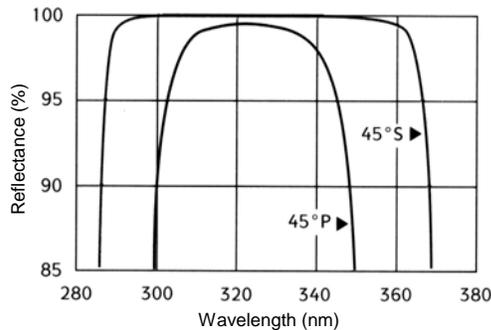
* Other sizes and spherical mirrors available in prototype and production quantities.

How to order





He-Cd Laser Mirrors



SPECIFICATIONS

Substrate material :	UV fused silica or BK7	Thickness Tolerance :	± 0.25 mm
S1 Surface Figure :	$\lambda/10$ @ 633nm	Clear Aperture	> 85% of diameter
S1 Surface Quality :	10-5 laser quality	Chamfer :	0.3mm at 45 typical
S2 Surface Quality :	Commercial Polish	Damage Threshold :	1J/cm ² , 10ns pulse
Diameter Tolerance :	+0.0/-0.20 mm	Adhesion and Durability :	Per MIL-C-675A

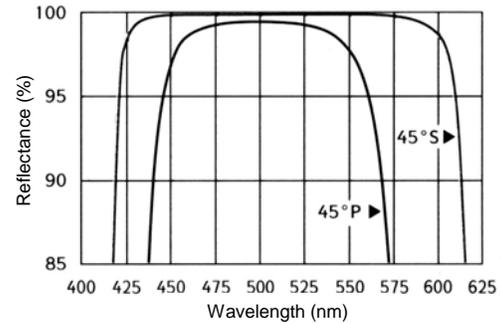
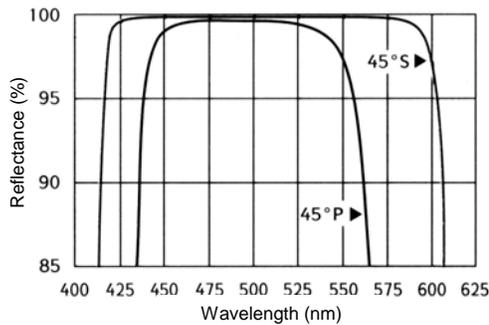
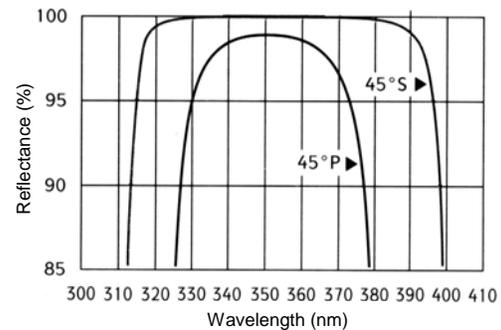
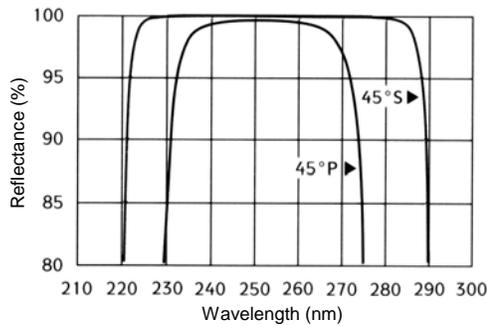
Part Number		Wavelength (nm)	Diameter (D)	Thickness (T)	Angle of Incidence	Min. Reflectance
UV fused silica	BK7					
HCM-0537U-325-0	HCM-0537C-325-0	325	0.500"	0.375"	0°	99.5%
HCM-1037U-325-0	HCM-1037C-325-0	325	1.000"	0.375"	0°	99.5%
HCM-1537U-325-0	HCM-1537C-325-0	325	1.500"	0.375"	0°	99.5%
HCM-2037U-325-0	HCM-2037C-325-0	325	2.000"	0.375"	0°	99.5%
HCM-3050U-325-0	HCM-3050C-325-0	325	3.000"	0.500"	0°	99.5%
HCM-0537U-325-45	HCM-0537C-325-45	325	0.500"	0.375"	45°	99.0%
HCM-1037U-325-45	HCM-1037C-325-45	325	1.000"	0.375"	45°	99.0%
HCM-1537U-325-45	HCM-1537C-325-45	325	1.500"	0.375"	45°	99.0%
HCM-2037U-325-45	HCM-2037C-325-45	325	2.000"	0.375"	45°	99.0%
HCM-3050U-325-45	HCM-3050C-325-45	325	3.000"	0.500"	45°	99.0%
HCM-0537U-442-0	HCM-0537C-442-0	441.6	0.500"	0.375"	0°	99.5%
HCM-1037U-442-0	HCM-1037C-442-0	441.6	1.000"	0.375"	0°	99.5%
HCM-1537U-442-0	HCM-1537C-442-0	441.6	1.500"	0.375"	0°	99.5%
HCM-2037U-442-0	HCM-2037C-442-0	441.6	2.000"	0.375"	0°	99.5%
HCM-3050U-442-0	HCM-3050C-442-0	441.6	3.000"	0.500"	0°	99.5%
HCM-0537U-442-45	HCM-0537C-442-45	441.6	0.500"	0.375"	45°	99.0%
HCM-1037U-442-45	HCM-1037C-442-45	441.6	1.000"	0.375"	45°	99.0%
HCM-1537U-442-45	HCM-1537C-442-45	441.6	1.500"	0.375"	45°	99.0%
HCM-2037U-442-45	HCM-2037C-442-45	441.6	2.000"	0.375"	45°	99.0%
HCM-3050U-442-45	HCM-3050C-442-45	441.6	3.000"	0.500"	45°	99.0%

* Other sizes and spherical mirrors available in prototype and production quantities.



SPECIFICATIONS

Substrate material :	UV fused silica or BK7	Wedge :	≤ 3 arc min.
S1 Surface Figure :	$\lambda/10$ @ 633nm	Radius Tolerance :	± 0.5%
S1 Surface Quality :	10-5 laser quality	Clear Aperture :	> 85% of diameter
S2 Surface Quality :	Commercial Polish	Chamfer :	0.3mm at 45° typical
Diameter Tolerance :	+0.0/-0.20 mm	Adhesion and Durability :	Per MIL-C-675A
Thickness Tolerance :	± 0.25 mm		



How to order





Argon-Ion Laser Mirrors

Part Number		Wavelength (nm)	Diameter (D)	Thickness (T)	Angle of Incidence	Min. Unpolarized Reflectance
UV fused silica	BK7					
AIM-0537U-250-0		244-257	0.500"	0.375"	0°	99.5%
AIM-1037U-250-0		244-257	1.000"	0.375"	0°	99.5%
AIM-1537U-250-0		244-257	1.500"	0.375"	0°	99.5%
AIM-2037U-250-0		244-257	2.000"	0.375"	0°	99.5%
AIM-3050U-250-0		244-257	3.000"	0.500"	0°	99.5%
AIM-0537U-250-45		244-257	0.500"	0.375"	45°	99.0%
AIM-1037U-250-45		244-257	1.000"	0.375"	45°	99.0%
AIM-1537U-250-45		244-257	1.500"	0.375"	45°	99.0%
AIM-2037U-250-45		244-257	2.000"	0.375"	45°	99.0%
AIM-3050U-250-45		244-257	3.000"	0.500"	45°	99.0%
AIM-0537U-360-0		351-364	0.500"	0.375"	0°	99.5%
AIM-1037U-360-0		351-364	1.000"	0.375"	0°	99.5%
AIM-1537U-360-0		351-364	1.500"	0.375"	0°	99.5%
AIM-2037U-360-0		351-364	2.000"	0.375"	0°	99.5%
AIM-3050U-360-0		351-364	3.000"	0.500"	0°	99.5%
AIM-0537U-360-45		351-364	0.500"	0.375"	45°	99.0%
AIM-1037U-360-45		351-364	1.000"	0.375"	45°	99.0%
AIM-1537U-360-45		351-364	1.500"	0.375"	45°	99.0%
AIM-2037U-360-45		351-364	2.000"	0.375"	45°	99.0%
AIM-3050U-360-45		351-364	3.000"	0.500"	45°	99.0%
AIM-0537U-480-0	AIM-0537C-480-0	458-529	0.500"	0.375"	0°	99.0%
AIM-1037U-480-0	AIM-1037C-480-0	458-529	1.000"	0.375"	0°	99.0%
AIM-1537U-480-0	AIM-1537C-480-0	458-529	1.500"	0.375"	0°	99.0%
AIM-2037U-480-0	AIM-2037C-480-0	458-529	2.000"	0.375"	0°	99.0%
AIM-3050U-480-0	AIM-3050C-480-0	458-529	3.000"	0.500"	0°	99.0%
AIM-0537U-480-45	AIM-0537C-480-45	458-529	0.500"	0.375"	45°	98.0%
AIM-1037U-480-45	AIM-1037C-480-45	458-529	1.000"	0.375"	45°	98.0%
AIM-1537U-480-45	AIM-1537C-480-45	458-529	1.500"	0.375"	45°	98.0%
AIM-2037U-480-45	AIM-2037C-480-45	458-529	2.000"	0.375"	45°	98.0%
AIM-3050U-480-45	AIM-3050C-480-45	458-529	3.000"	0.500"	45°	98.0%
AIM-0537U-500-0	AIM-0537C-500-0	488-515	0.500"	0.375"	0°	99.5%
AIM-1037U-500-0	AIM-1037C-500-0	488-515	1.000"	0.375"	0°	99.5%
AIM-1537U-500-0	AIM-1537C-500-0	488-515	1.500"	0.375"	0°	99.5%
AIM-2037U-500-0	AIM-2037C-500-0	488-515	2.000"	0.375"	0°	99.5%
AIM-3050U-500-0	AIM-3050C-500-0	488-515	3.000"	0.500"	0°	99.5%
AIM-0537U-500-45	AIM-0537C-500-45	488-515	0.500"	0.375"	45°	99.0%
AIM-1037U-500-45	AIM-1037C-500-45	488-515	1.000"	0.375"	45°	99.0%
AIM-1537U-500-45	AIM-1537C-500-45	488-515	1.500"	0.375"	45°	99.0%
AIM-2037U-500-45	AIM-2037C-500-45	488-515	2.000"	0.375"	45°	99.0%
AIM-3050U-500-45	AIM-3050C-500-45	488-515	3.000"	0.500"	45°	99.0%

* Other sizes and spherical mirrors available in prototype and production quantities.



Copper Vapor Laser Mirrors (511/578nm)

Tutorials

Lenses

Windows

Mirrors

Prisms

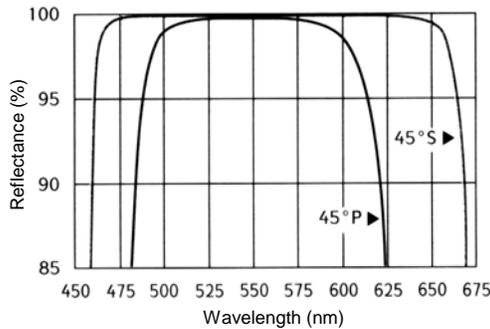
Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS



Substrate material :	UV fused silica or BK7
S1 Surface Figure :	$\lambda/10$ @ 633nm
S1 Surface Quality	15-5 laser quality
S2 Surface Quality	Commercial polish
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical
Damage Threshold :	1J/cm ² , 10ns pulse
Adhesion and Durability :	Per MIL-C-675A

Part Number		Diameter (D)	Thickness (T)	Angle of Incidence	Min. Unpolarized Reflectance
UV fused silica	BK7				
CVM-0525U-545-0	CVM-0525C-545-0	0.500"	0.250"	0°	99.5%
CVM-1025U-545-0	CVM-1025C-545-0	1.000"	0.250"	0°	99.5%
CVM-1537U-545-0	CVM-1537C-545-0	1.500"	0.375"	0°	99.5%
CVM-2037U-545-0	CVM-2037C-545-0	2.000"	0.375"	0°	99.5%
CVM-3050U-545-0	CVM-3050C-545-0	3.000"	0.500"	0°	99.5%
CVM-4050U-545-0	CVM-4050C-545-0	4.000"	0.500"	0°	99.5%
CVM-0525U-545-45	CVM-0525C-545-45	0.500"	0.250"	45°	99.0%
CVM-1025U-545-45	CVM-1025C-545-45	1.000"	0.250"	45°	99.0%
CVM-1537U-545-45	CVM-1537C-545-45	1.500"	0.375"	45°	99.0%
CVM-2037U-545-45	CVM-2037C-545-45	2.000"	0.375"	45°	99.0%
CVM-3050U-545-45	CVM-3050C-545-45	3.000"	0.500"	45°	99.0%
CVM-4050U-545-45	CVM-4050C-545-45	4.000"	0.500"	45°	99.0%

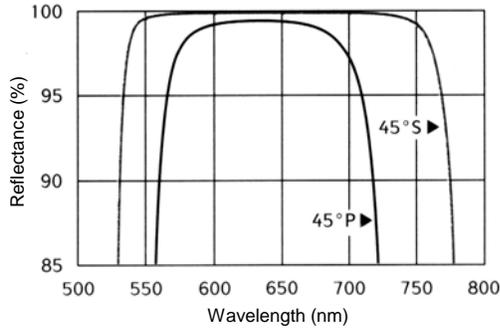
* Other sizes and spherical mirrors available in prototype and production quantities.

How to order





He-Ne Laser Mirrors (632.8nm)



SPECIFICATIONS

Substrate material :	UV fused silica or BK7
S1 Surface Figure :	$\lambda/10$ @ 633nm
S1 Surface Quality	15-5 laser quality
S2 Surface Quality	Commercial polish
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical
Damage Threshold :	1J/cm ² , 10ns pulse
Adhesion and Durability :	Per MIL-C-675A

Part Number		Diameter (D))	Thickness (T)	Angle of Incidence	Min. Unpolarized Reflectance
UV fused silica	BK7				
HNM-0525U-633-0	HNM-0525C-633-0	0.500"	0.250"	0°	99.8%
HNM-1025U-633-0	HNM-1025C-633-0	1.000"	0.250"	0°	99.8%
HNM-1537U-633-0	HNM-1537C-633-0	1.500"	0.375"	0°	99.8%
HNM-2037U-633-0	HNM-2037C-633-0	2.000"	0.375"	0°	99.8%
HNM-3050U-633-0	HNM-3050C-633-0	3.000"	0.500"	0°	99.8%
HNM-4050U-633-0	HNM-4050C-633-0	4.000"	0.500"	0°	99.8%
HNM-0525U-633-45	HNM-0525C-633-45	0.500"	0.250"	45°	99.5%
HNM-1025U-633-45	HNM-1025C-633-45	1.000"	0.250"	45°	99.5%
HNM-1537U-633-45	HNM-1537C-633-45	1.500"	0.375"	45°	99.5%
HNM-2037U-633-45	HNM-2037C-633-45	2.000"	0.375"	45°	99.5%
HNM-3050U-633-45	HNM-3050C-633-45	3.000"	0.500"	45°	99.5%
HNM-4050U-633-45	HNM-4050C-633-45	4.000"	0.500"	45°	99.5%

* Other sizes and spherical mirrors available in prototype and production quantities.

How to order





Ruby Laser Mirrors (694.3nm)

Tutorials

Lenses

Windows

Mirrors

Prisms

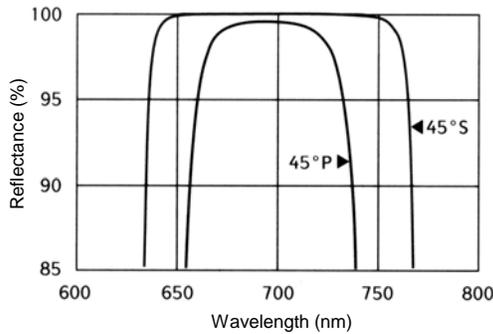
Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS



Substrate material :	UV fused silica or BK7
S1 Surface Figure :	$\lambda/10$ @ 633nm
S1 Surface Quality	15-5 laser quality
S2 Surface Quality	Commercial polish
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical
Damage Threshold :	10J/cm ² , 10ns pulse
Adhesion and Durability :	Per MIL-C-675A

Part Number		Diameter (D)	Thickness (T)	Angle of Incidence	Min. Unpolarized Reflectance
UV fused silica	BK7				
RBM-0525U-694-0	RBM-0525C-694-0	0.500"	0.250"	0°	99.7%
RBM-1025U-694-0	RBM-1025C-694-0	1.000"	0.250"	0°	99.7%
RBM-1537U-694-0	RBM-1537C-694-0	1.500"	0.375"	0°	99.7%
RBM-2037U-694-0	RBM-2037C-694-0	2.000"	0.375"	0°	99.7%
RBM-3050U-694-0	RBM-3050C-694-0	3.000"	0.500"	0°	99.7%
RBM-4050U-694-0	RBM-4050C-694-0	4.000"	0.500"	0°	99.7%
RBM-0525U-694-45	RBM-0525C-694-45	0.500"	0.250"	45°	99.5%
RBM-1025U-694-45	RBM-1025C-694-45	1.000"	0.250"	45°	99.5%
RBM-1537U-694-45	RBM-1537C-694-45	1.500"	0.375"	45°	99.5%
RBM-2037U-694-45	RBM-2037C-694-45	2.000"	0.375"	45°	99.5%
RBM-3050U-694-45	RBM-3050C-694-45	3.000"	0.500"	45°	99.5%
RBM-4050U-694-45	RBM-4050C-694-45	4.000"	0.500"	45°	99.5%

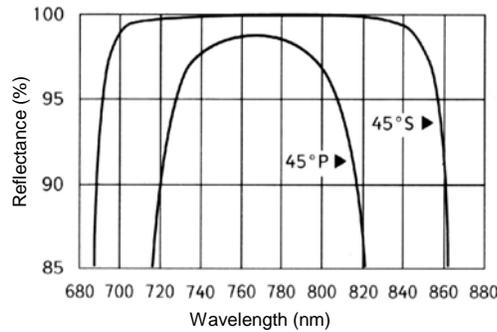
* Other sizes and spherical mirrors available in prototype and production quantities.

How to order





Alexandrite Laser Mirrors (720-780nm)



SPECIFICATIONS

Substrate material :	UV fused silica or BK7
S1 Surface Figure :	$\lambda/10$ @ 633nm
S1 Surface Quality	10-5 laser quality
S2 Surface Quality	Commercial polish
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical
Damage Threshold :	10J/cm ² , 10ns pulse
Adhesion and Durability :	Per MIL-C-675A

Part Number	Diameter (D)	Thickness (T)	Angle of Incidence	Min. Unpolarized Reflectance
AXM-0525C-750-0	0.500"	0.250"	0°	99.6%
AXM-1025C-750-0	1.000"	0.250"	0°	99.6%
AXM-1537C-750-0	1.500"	0.375"	0°	99.6%
AXM-2037C-750-0	2.000"	0.375"	0°	99.6%
AXM-3050C-750-0	3.000"	0.500"	0°	99.6%
AXM-4050C-750-0	4.000"	0.500"	0°	99.6%
AXM-0525C-750-45	0.500"	0.250"	45°	99.0%
AXM-1025C-750-45	1.000"	0.250"	45°	99.0%
AXM-1537C-750-45	1.500"	0.375"	45°	99.0%
AXM-2037C-750-45	2.000"	0.375"	45°	99.0%
AXM-3050C-750-45	3.000"	0.500"	45°	99.0%
AXM-4050C-750-45	4.000"	0.500"	45°	99.0%

* Other sizes and spherical mirrors available in prototype and production quantities.

How to order

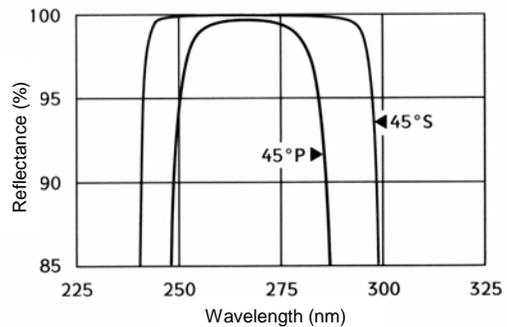
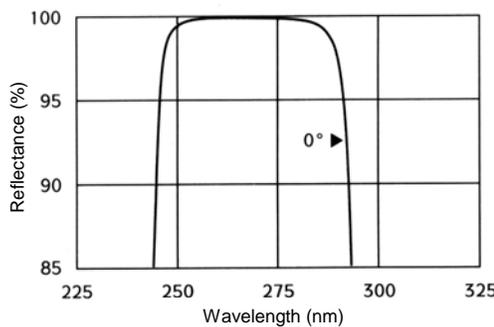
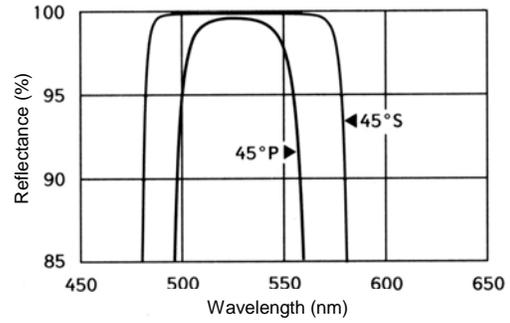
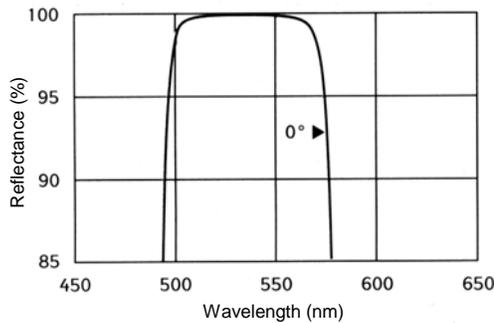
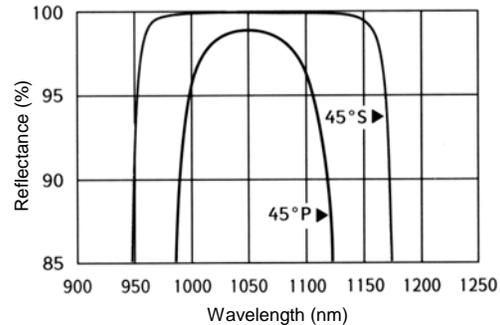
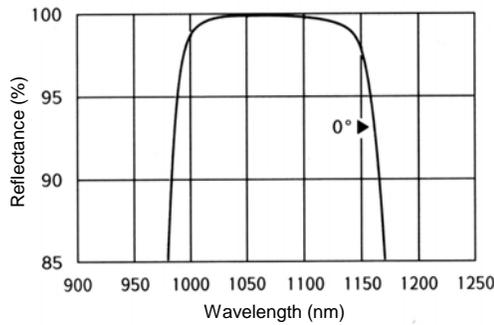




SPECIFICATIONS

Substrate material : BK7, UV fused silica
 S1 Surface Figure : $\lambda/10$ @ 633nm
 S1 Surface Quality : 10-5 laser quality
 S2 Surface Quality : Commercial Polish
 Diameter Tolerance : +0.0/-0.20 mm
 Thickness Tolerance : ± 0.25 mm

Wedge : ≤ 3 arc min.
 Clear Aperture : $> 85\%$ of diameter
 Chamfer : 0.3mm at 45 typical
 Damage Threshold : $20\text{J}/\text{cm}^2$, 10ns pulse
 Adhesion and Durability : Per MIL-C-675A





Nd:YAG Laser Mirrors

Part Number	Wavelength (nm)	Diameter (D)	Thickness (T)	Angle of Incidence	Min. Reflectance
NYM-0525-213-0	213	0.500"	0.250"	0°	98.0%
NYM-1025-213-0	213	1.000"	0.250"	0°	98.0%
NYM-1537-213-0	213	1.500"	0.375"	0°	98.0%
NYM-2037-213-0	213	2.000"	0.375"	0°	98.0%
NYM-3050-213-0	213	3.000"	0.500"	0°	98.0%
NYM-0525-213-45	213	0.500"	0.250"	45°	97.0%
NYM-1025-213-45	213	1.000"	0.250"	45°	97.0%
NYM-1537-213-45	213	1.500"	0.375"	45°	97.0%
NYM-2037-213-45	213	2.000"	0.375"	45°	97.0%
NYM-3050-213-45	213	3.000"	0.500"	45°	98.0%
NYM-0525-266-0	266	0.500"	0.250"	0°	99.5%
NYM-1025-266-0	266	1.000"	0.250"	0°	99.5%
NYM-1537-266-0	266	1.500"	0.375"	0°	99.5%
NYM-2037-266-0	266	2.000"	0.375"	0°	99.5%
NYM-3050-266-0	266	3.000"	0.500"	0°	99.5%
NYM-0525-266-45	266	0.500"	0.250"	45°	99.0%
NYM-1025-266-45	266	1.000"	0.250"	45°	99.0%
NYM-1537-266-45	266	1.500"	0.375"	45°	99.0%
NYM-2037-266-45	266	2.000"	0.375"	45°	99.0%
NYM-3050-266-45	266	3.000"	0.500"	45°	99.0%
NYM-0525-355-0	355	0.500"	0.250"	0°	99.5%
NYM-1025-355-0	355	1.000"	0.250"	0°	99.5%
NYM-1537-355-0	355	1.500"	0.375"	0°	99.5%
NYM-2037-355-0	355	2.000"	0.375"	0°	99.5%
NYM-3050-355-0	355	3.000"	0.500"	0°	99.5%
NYM-0525-355-45	355	0.500"	0.250"	45°	99.0%
NYM-1025-355-45	355	1.000"	0.250"	45°	99.0%
NYM-1537-355-45	355	1.500"	0.375"	45°	99.0%
NYM-2037-355-45	355	2.000"	0.375"	45°	99.0%
NYM-3050-355-45	355	3.000"	0.500"	45°	99.0%
NYM-0525-532-0	532	0.500"	0.250"	0°	99.7%
NYM-1025-532-0	532	1.000"	0.250"	0°	99.7%
NYM-1537-532-0	532	1.500"	0.375"	0°	99.7%
NYM-2037-532-0	532	2.000"	0.375"	0°	99.7%
NYM-3050-532-0	532	3.000"	0.500"	0°	99.7%
NYM-0525-532-45	532	0.500"	0.250"	45°	99.0%
NYM-1025-532-45	532	1.000"	0.250"	45°	99.0%
NYM-1537-532-45	532	1.500"	0.375"	45°	99.0%
NYM-2037-532-45	532	2.000"	0.375"	45°	99.0%
NYM-3050-532-45	532	3.000"	0.500"	45°	99.0%

continued



Nd:YAG Laser Mirrors

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index

Part Number	Wavelength (nm)	Diameter (D)	Thickness (T)	Angle of Incidence	Min. Reflectance
NYM-0525-1064-0	1064	0.500"	0.250"	0°	99.5%
NYM-1025-1064-0	1064	1.000"	0.250"	0°	99.5%
NYM-1537-1064-0	1064	1.500"	0.375"	0°	99.5%
NYM-2037-1064-0	1064	2.000"	0.375"	0°	99.5%
NYM-3050-1064-0	1064	3.000"	0.500"	0°	99.5%
NYM-0525-1064-45	1064	0.500"	0.250"	45°	99.0%
NYM-1025-1064-45	1064	1.000"	0.250"	45°	99.0%
NYM-1537-1064-45	1064	1.500"	0.375"	45°	99.0%
NYM-2037-1064-45	1064	2.000"	0.375"	45°	99.0%
NYM-3050-1064-45	1064	3.000"	0.500"	45°	99.0%
NYM-0525-1319-0	1319	0.500"	0.250"	0°	99.5%
NYM-1025-1319-0	1319	1.000"	0.250"	0°	99.5%
NYM-1537-1319-0	1319	1.500"	0.375"	0°	99.5%
NYM-2037-1319-0	1319	2.000"	0.375"	0°	99.5%
NYM-3050-1319-0	1319	3.000"	0.500"	0°	99.5%
NYM-0525-1319-45	1319	0.500"	0.250"	45°	99.0%
NYM-1025-1319-45	1319	1.000"	0.250"	45°	99.0%
NYM-1537-1319-45	1319	1.500"	0.375"	45°	99.0%
NYM-2037-1319-45	1319	2.000"	0.375"	45°	99.0%
NYM-3050-1319-45	1319	3.000"	0.500"	45°	99.0%

* Other sizes and spherical mirrors available in prototype and production quantities.

How to order

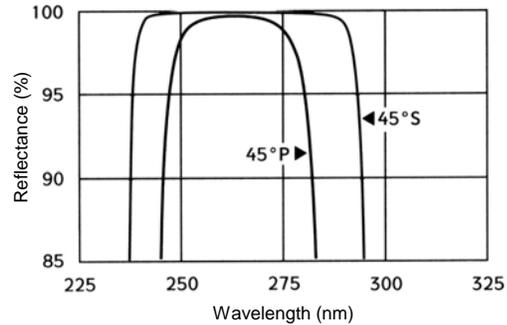
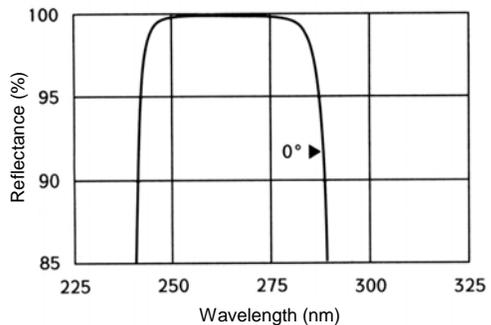
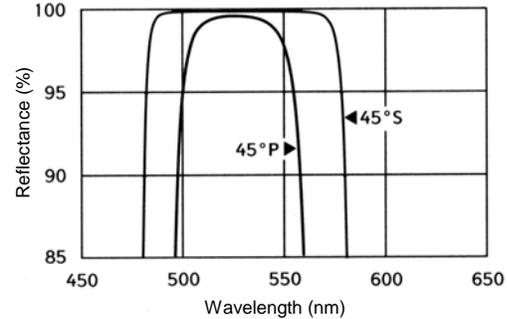
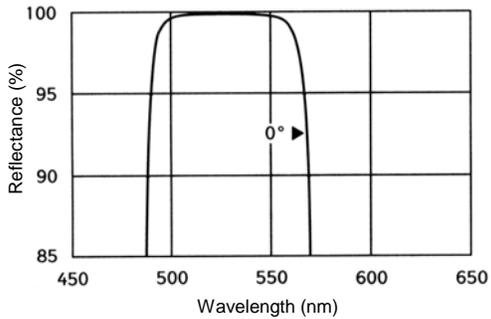
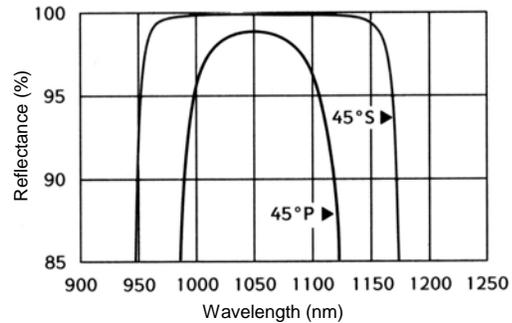
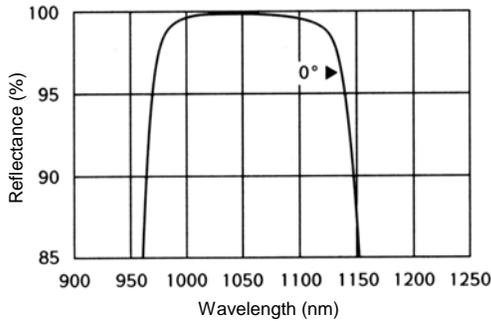




SPECIFICATIONS

Substrate material : BK7, UV fused silica
S1 Surface Figure : $\lambda/10$ @ 633nm
S1 Surface Quality : 10-5 laser quality
S2 Surface Quality : Commercial Polish
Diameter Tolerance : +0.0/-0.20 mm
Thickness Tolerance : ± 0.25 mm

Wedge : ≤ 3 arc min.
Clear Aperture : $> 85\%$ of diameter
Chamfer : 0.3mm at 45 typical
Damage Threshold : 20J/cm^2 , 10ns pulse
Adhesion and Durability : Per MIL-C-675A





Nd:YLF Laser Mirrors

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index

Part Number	Wavelength (nm)	Diameter (D)	Thickness (T)	Angle of Incidence	Min. Reflectance
NFM-0525-210-0	209/211	0.500"	0.250"	0°	98.0%
NFM-1025-210-0	209/211	1.000"	0.250"	0°	98.0%
NFM-1537-210-0	209/211	1.500"	0.375"	0°	98.0%
NFM-2037-210-0	209/211	2.000"	0.375"	0°	98.0%
NFM-3050-210-0	209/211	3.000"	0.500"	0°	98.0%
NFM-0525-210-45	209/211	0.500"	0.250"	45°	97.0%
NFM-1025-210-45	209/211	1.000"	0.250"	45°	97.0%
NFM-1537-210-45	209/211	1.500"	0.375"	45°	97.0%
NFM-2037-210-45	209/211	2.000"	0.375"	45°	97.0%
NFM-3050-210-45	209/211	3.000"	0.500"	45°	98.0%
NFM-0525-262-0	262/263	0.500"	0.250"	0°	99.5%
NFM-1025-262-0	262/263	1.000"	0.250"	0°	99.5%
NFM-1537-262-0	262/263	1.500"	0.375"	0°	99.5%
NFM-2037-262-0	262/263	2.000"	0.375"	0°	99.5%
NFM-3050-262-0	262/263	3.000"	0.500"	0°	99.5%
NFM-0525-262-45	262/263	0.500"	0.250"	45°	99.0%
NFM-1025-262-45	262/263	1.000"	0.250"	45°	99.0%
NFM-1537-262-45	262/263	1.500"	0.375"	45°	99.0%
NFM-2037-262-45	262/263	2.000"	0.375"	45°	99.0%
NFM-3050-262-45	262/263	3.000"	0.500"	45°	99.0%
NFM-0525-350-0	349/351	0.500"	0.250"	0°	99.5%
NFM-1025-350-0	349/351	1.000"	0.250"	0°	99.5%
NFM-1537-350-0	349/351	1.500"	0.375"	0°	99.5%
NFM-2037-350-0	349/351	2.000"	0.375"	0°	99.5%
NFM-3050-350-0	349/351	3.000"	0.500"	0°	99.5%
NFM-0525-350-45	349/351	0.500"	0.250"	45°	99.0%
NFM-1025-350-45	349/351	1.000"	0.250"	45°	99.0%
NFM-1537-350-45	349/351	1.500"	0.375"	45°	99.0%
NFM-2037-350-45	349/351	2.000"	0.375"	45°	99.0%
NFM-3050-350-45	349/351	3.000"	0.500"	45°	99.0%
NFM-0525-525-0	524/527	0.500"	0.250"	0°	99.7%
NFM-1025-525-0	524/527	1.000"	0.250"	0°	99.7%
NFM-1537-525-0	524/527	1.500"	0.375"	0°	99.7%
NFM-2037-525-0	524/527	2.000"	0.375"	0°	99.7%
NFM-3050-525-0	524/527	3.000"	0.500"	0°	99.7%
NFM-0525-525-45	524/527	0.500"	0.250"	45°	99.0%
NFM-1025-525-45	524/527	1.000"	0.250"	45°	99.0%
NFM-1537-525-45	524/527	1.500"	0.375"	45°	99.0%
NFM-2037-525-45	524/527	2.000"	0.375"	45°	99.0%
NFM-3050-525-45	524/527	3.000"	0.500"	45°	99.0%

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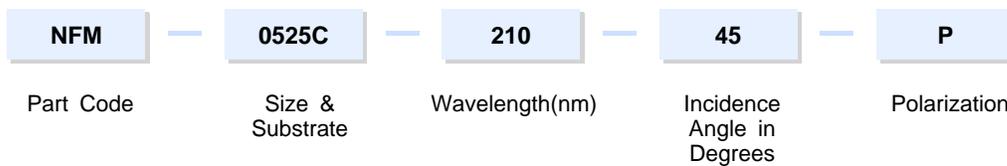


Nd:YLF Laser Mirrors

Part Number	Wavelength (nm)	Diameter (D)	Thickness (T)	Angle of Incidence	Min. Reflectance
NFM-0525-1050-0	1047/1053	0.500"	0.250"	0°	99.5%
NFM-1025-1050-0	1047/1053	1.000"	0.250"	0°	99.5%
NFM-1537-1050-0	1047/1053	1.500"	0.375"	0°	99.5%
NFM-2037-1050-0	1047/1053	2.000"	0.375"	0°	99.5%
NFM-3050-1050-0	1047/1053	3.000"	0.500"	0°	99.5%
NFM-0525-1050-45	1047/1053	0.500"	0.250"	45°	99.0%
NFM-1025-1050-45	1047/1053	1.000"	0.250"	45°	99.0%
NFM-1537-1050-45	1047/1053	1.500"	0.375"	45°	99.0%
NFM-2037-1050-45	1047/1053	2.000"	0.375"	45°	99.0%
NFM-3050-1050-45	1047/1053	3.000"	0.500"	45°	99.0%

* Other sizes and spherical mirrors available in prototype and production quantities.

How to order





Dual Reflective Nd:YAG/YLF Laser Mirrors

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

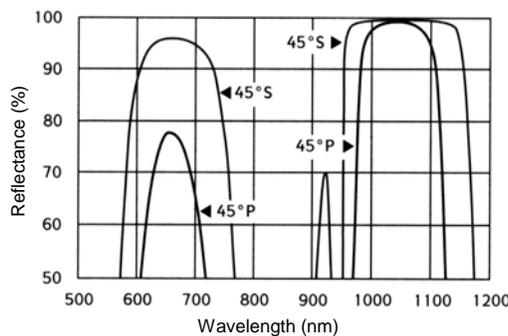
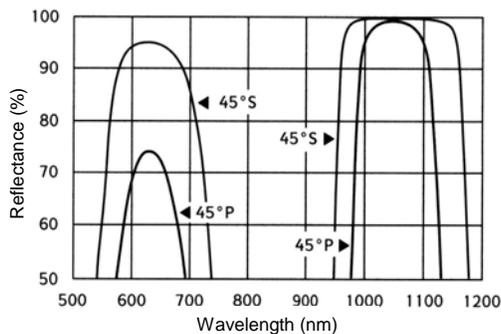
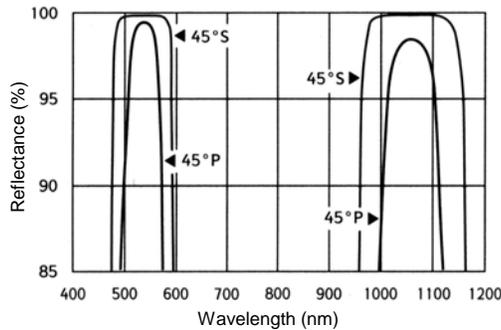
Polarizers

Filters

Index

SPECIFICATIONS

Substrate material :	BK7	Wedge :	≤ 3 arcmin.
S1 Surface Figure :	$\lambda/10$ @ 633nm	Radius Tolerance :	$\pm 0.5\%$
S1 Surface Quality :	10-5 laser quality	Clear Aperture	$> 85\%$ of diameter
S2 Surface Quality :	Commercial Polish	Chamfer :	0.3mm at 45° typical
Diameter Tolerance :	+0.0/-0.20 mm	Damage Threshold :	5J/cm ² , 10ns pulse
Thickness Tolerance :	± 0.25 mm	Adhesion and Durability :	Per MIL-C-675A



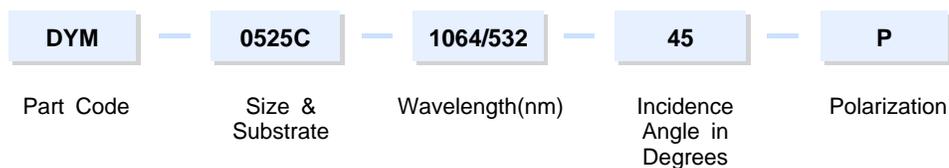


Dual Reflective Nd:YAG/YLF Laser Mirrors

Part Number	Wavelength λ_1/λ_2 (nm)	Diameter (D)	Thickness (T)	Angle of Incidence	Reflectance @ λ_1	Reflectance @ λ_2
DYM-0525C-1064/532-0	1064/532	0.500"	0.250"	0°	99.5%	85.0%
DYM-1025C-1064/532-0	1064/532	1.000"	0.250"	0°	99.5%	85.0%
DYM-1537C-1064/532-0	1064/532	1.500"	0.375"	0°	99.5%	85.0%
DYM-2037C-1064/532-0	1064/532	2.000"	0.375"	0°	99.5%	85.0%
DYM-3050C-1064/532-0	1064/532	3.000"	0.500"	0°	99.5%	85.0%
DYM-0525C-1064/532-45	1064/532	0.500"	0.250"	45°	99.0%	85.0%
DYM-1025C-1064/532-45	1064/532	1.000"	0.250"	45°	99.0%	85.0%
DYM-1537C-1064/532-45	1064/532	1.500"	0.375"	45°	99.0%	85.0%
DYM-2037C-1064/532-45	1064/532	2.000"	0.375"	45°	99.0%	85.0%
DYM-3050C-1064/532-45	1064/532	3.000"	0.500"	45°	99.0%	85.0%
DYM-0525C-1064/633-0	1064/633	0.500"	0.250"	0°	99.0%	80.0%
DYM-1025C-1064/633-0	1064/633	1.000"	0.250"	0°	99.0%	80.0%
DYM-1537C-1064/633-0	1064/633	1.500"	0.375"	0°	99.0%	80.0%
DYM-2037C-1064/633-0	1064/633	2.000"	0.375"	0°	99.0%	80.0%
DYM-3050C-1064/633-0	1064/633	3.000"	0.500"	0°	99.0%	80.0%
DYM-0525C-1064/633-45	1064/633	0.500"	0.250"	45°	99.0%	80.0%
DYM-1025C-1064/633-45	1064/633	1.000"	0.250"	45°	99.0%	80.0%
DYM-1537C-1064/633-45	1064/633	1.500"	0.375"	45°	99.0%	80.0%
DYM-2037C-1064/633-45	1064/633	2.000"	0.375"	45°	99.0%	80.0%
DYM-3050C-1064/633-45	1064/633	3.000"	0.500"	45°	99.0%	80.0%
DYM-0525C-1064/670-0	1064/670	0.500"	0.250"	0°	99.0%	80.0%
DYM-1025C-1064/670-0	1064/670	1.000"	0.250"	0°	99.0%	80.0%
DYM-1537C-1064/670-0	1064/670	1.500"	0.375"	0°	99.0%	80.0%
DYM-2037C-1064/670-0	1064/670	2.000"	0.375"	0°	99.0%	80.0%
DYM-3050C-1064/670-0	1064/670	3.000"	0.500"	0°	99.0%	80.0%
DYM-0525C-1064/670-45	1064/670	0.500"	0.250"	45°	99.0%	80.0%
DYM-1025C-1064/670-45	1064/670	1.000"	0.250"	45°	99.0%	80.0%
DYM-1537C-1064/670-45	1064/670	1.500"	0.375"	45°	99.0%	80.0%
DYM-2037C-1064/670-45	1064/670	2.000"	0.375"	45°	99.0%	80.0%
DYM-3050C-1064/670-45	1064/670	3.000"	0.500"	45°	99.0%	80.0%

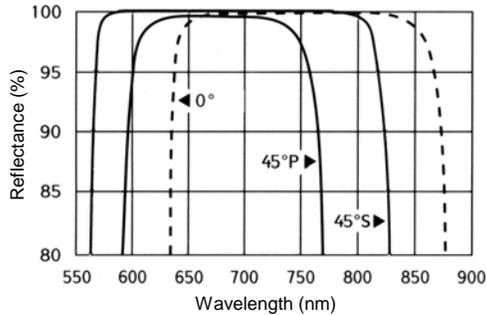
* Other sizes and spherical mirrors available in prototype and production quantities.

How to order





SPECIFICATIONS



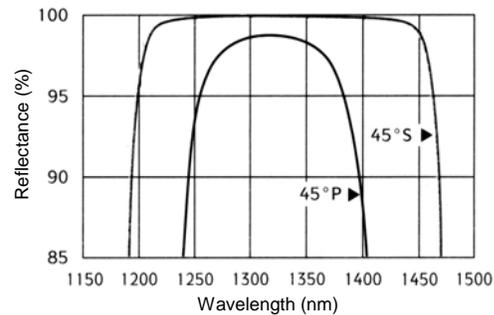
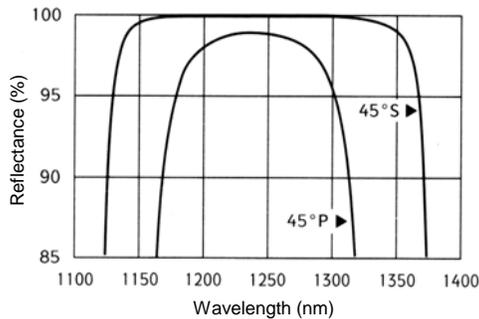
Substrate material :	BK7
S1 Surface Figure :	$\lambda/10$ @ 633nm
S1 Surface Quality	10-5 laser quality
S2 Surface Quality	Commercial polish
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	≤ 0.25 mm
Clear Aperture	$> 85\%$ of diameter
Chamfer :	0.3mm at 45 typical
Minimum Reflectance :	$\geq 99.0\%$
Adhesion and Durability :	Per MIL-C-675A

Part Number		Wavelength (nm)	Diameter (D)	Thickness (T)
0°	45°			
DLM1-0537C-670-0	DLM1-0537C-670-45	670	0.500"	0.375"
DLM1-1037C-670-0	DLM1-1037C-670-45	670	1.000"	0.375"
DLM1-1537C-670-0	DLM1-1537C-670-45	670	1.500"	0.375"
DLM1-2037C-670-0	DLM1-2037C-670-45	670	2.000"	0.375"
DLM1-0537C-780-0	DLM1-0537C-780-45	780	0.500"	0.375"
DLM1-1037C-780-0	DLM1-1037C-780-45	780	1.000"	0.375"
DLM1-1537C-780-0	DLM1-1537C-780-45	780	1.500"	0.375"
DLM1-2037C-780-0	DLM1-2037C-780-45	780	2.000"	0.375"
DLM1-0537C-980-0	DLM1-0537C-980-45	980	0.500"	0.375"
DLM1-1037C-980-0	DLM1-1037C-980-45	980	1.000"	0.375"
DLM1-1537C-980-0	DLM1-1537C-980-45	980	1.500"	0.375"
DLM1-2037C-980-0	DLM1-2037C-980-45	980	2.000"	0.375"
DLM1-0537C-1300-0	DLM1-0537C-1300-45	1300	0.500"	0.375"
DLM1-1037C-1300-0	DLM1-1037C-1300-45	1300	1.000"	0.375"
DLM1-1537C-1300-0	DLM1-1537C-1300-45	1300	1.500"	0.375"
DLM1-2037C-1300-0	DLM1-2037C-1300-45	1300	2.000"	0.375"
DLM1-0537C-1550-0	DLM1-0537C-1550-45	1550	0.500"	0.375"
DLM1-1037C-1550-0	DLM1-1037C-1550-45	1550	1.000"	0.375"
DLM1-1537C-1550-0	DLM1-1537C-1550-45	1550	1.500"	0.375"
DLM1-2037C-1550-0	DLM1-2037C-1550-45	1550	2.000"	0.375"

* Other sizes and spherical mirrors available in prototype and production quantities.



Forsterite(1235nm),Iodine(1315nm) Laser Mirrors



SPECIFICATIONS

Substrate material : UV Fused Silica or BK7
 S1 Surface Figure : $\lambda/10$ @ 633nm
 S1 Surface Quality : 10-5 laser quality
 S2 Surface Quality : Commercial Polish
 Diameter Tolerance : +0.0/-0.20 mm

Thickness Tolerance : ± 0.25 mm
 Clear Aperture : $> 85\%$ of diameter
 Chamfer : 0.3mm at 45 typical
 Damage Threshold : $1\text{J}/\text{cm}^2$, 10ns pulse
 Adhesion and Durability : Per MIL-C-675A

Part Number		Wavelength (nm)	Diameter (D)	Thickness (T)	Angle of Incidence	Runp.
UV Fused Silica	BK7					
FRM-0525U-1235-0	FRM-0525C-1235-0	1235	0.500"	0.250"	0°	99.5%
FRM-1025U-1235-0	FRM-1025C-1235-0	1235	1.000"	0.250"	0°	99.5%
FRM-1537U-1235-0	FRM-1537C-1235-0	1235	1.500"	0.375"	0°	99.5%
FRM-2037U-1235-0	FRM-2037C-1235-0	1235	2.000"	0.375"	0°	99.5%
FRM-3050U-1235-0	FRM-3050C-1235-0	1235	3.000"	0.500"	0°	99.5%
FRM-4050U-1235-0	FRM-4050C-1235-0	1235	4.000"	0.500"	0°	99.5%
FRM-0525U-1235-45	FRM-0525C-1235-45	1235	0.500"	0.250"	45°	99.0%
FRM-1025U-1235-45	FRM-1025C-1235-45	1235	1.000"	0.250"	45°	99.0%
FRM-1537U-1235-45	FRM-1537C-1235-45	1235	1.500"	0.375"	45°	99.0%
FRM-2037U-1235-45	FRM-2037C-1235-45	1235	2.000"	0.375"	45°	99.0%
FRM-3050U-1235-45	FRM-3050C-1235-45	1235	3.000"	0.500"	45°	99.0%
FRM-4050U-1235-45	FRM-4050C-1235-45	1235	4.000"	0.500"	45°	99.0%
IDM-0525U-1315-0	IDM-0525C-1315-0	1315	0.500"	0.250"	0°	99.5%
IDM-1025U-1315-0	IDM-1025C-1315-0	1315	1.000"	0.250"	0°	99.5%
IDM-1537U-1315-0	IDM-1537C-1315-0	1315	1.500"	0.375"	0°	99.5%
IDM-2037U-1315-0	IDM-2037C-1315-0	1315	2.000"	0.375"	0°	99.5%
IDM-3050U-1315-0	IDM-3050C-1315-0	1315	3.000"	0.500"	0°	99.5%
IDM-4050U-1315-0	IDM-4050C-1315-0	1315	4.000"	0.500"	0°	99.5%
IDM-0525U-1315-45	IDM-0525C-1315-45	1315	0.500"	0.250"	45°	99.0%
IDM-1025U-1315-45	IDM-1025C-1315-45	1315	1.000"	0.250"	45°	99.0%
IDM-1537U-1315-45	IDM-1537C-1315-45	1315	1.500"	0.375"	45°	99.0%
IDM-2037U-1315-45	IDM-2037C-1315-45	1315	2.000"	0.375"	45°	99.0%
IDM-3050U-1315-45	IDM-3050C-1315-45	1315	3.000"	0.500"	45°	99.0%
IDM-4050U-1315-45	IDM-4050C-1315-45	1315	4.000"	0.500"	45°	99.0%

* Other sizes and spherical mirrors available in prototype and production quantities.



Er:Glass Laser Mirrors (1540nm)

Tutorials

Lenses

Windows

Mirrors

Prisms

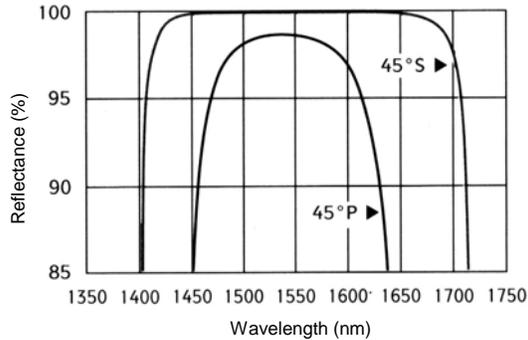
Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS



Substrate material :	BK7
S1 Surface Figure :	$\lambda/10$ @ 633nm
S1 Surface Quality	10-5 laser quality
S2 Surface Quality	Commercial polish
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical
Damage Threshold :	10J/cm ² , 10ns pulse
Adhesion and Durability :	Per MIL-C-675A

Part Number		Wavelength (nm)	Diameter D	Thickness T	Angle of Incidence	Min. Reflectance
UV fused silica	BK7					
ERM-0525U-1540-0	ERM-0525C-1540-0	1540	0.500"	0.250"	0°	99.5%
ERM-1025U-1540-0	ERM-1025C-1540-0	1540	1.000"	0.250"	0°	99.5%
ERM-1537U-1540-0	ERM-1537C-1540-0	1540	1.500"	0.375"	0°	99.5%
ERM-2037U-1540-0	ERM-2037C-1540-0	1540	2.000"	0.375"	0°	99.5%
ERM-3050U-1540-0	ERM-3050C-1540-0	1540	3.000"	0.500"	0°	99.5%
ERM-4050U-1540-0	ERM-4050C-1540-0	1540	4.000"	0.500"	0°	99.5%
ERM-0525U-1540-45	ERM-0525C-1540-45	1540	0.500"	0.250"	45°	99.0%
ERM-1025U-1540-45	ERM-1025C-1540-45	1540	1.000"	0.250"	45°	99.0%
ERM-1537U-1540-45	ERM-1537C-1540-45	1540	1.500"	0.375"	45°	99.0%
ERM-2037U-1540-45	ERM-2037C-1540-45	1540	2.000"	0.375"	45°	99.0%
ERM-3050U-1540-45	ERM-3050C-1540-45	1540	3.000"	0.500"	45°	99.0%
ERM-4050U-1540-45	ERM-4050C-1540-45	1540	4.000"	0.500"	45°	99.0%

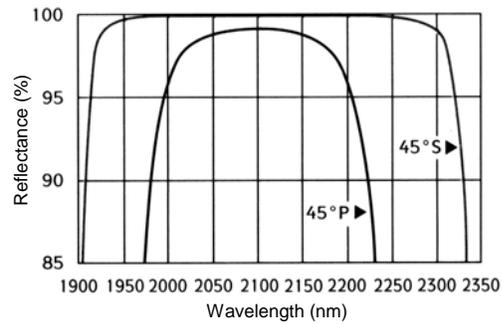
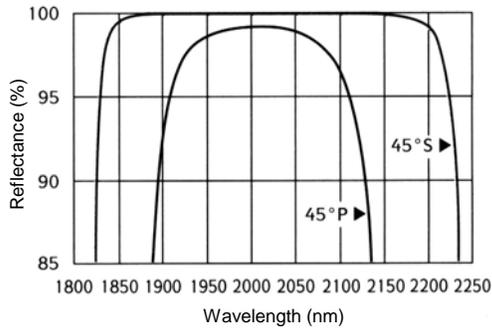
* Other sizes and spherical mirrors available in prototype and production quantities.

How to order





Tm:YAG(2010nm), Ho:YAG(2100nm) Laser Mirrors



SPECIFICATIONS

Substrate material :	BK7	Thickness Tolerance :	± 0.25 mm
S1 Surface Figure :	$\lambda/10$ @ 633nm	Clear Aperture	> 85% of diameter
S1 Surface Quality :	10-5 laser quality	Chamfer :	0.3mm at 45 typical
S2 Surface Quality :	Commercial Polish	Damage Threshold :	10J/cm ² , 10ns pulse
Diameter Tolerance :	+0.0/-0.20 mm	Adhesion and Durability :	Per MIL-C-675A

Part Number	Wavelength (nm)	Diameter (D)	Thickness (T)	Angle of Incidence	Runp.
TYM-0525C-2010-0	2010	0.500"	0.250"	0°	99.5%
TYM-1025C-2010-0	2010	1.000"	0.250"	0°	99.5%
TYM-1537C-2010-0	2010	1.500"	0.375"	0°	99.5%
TYM-2037C-2010-0	2010	2.000"	0.375"	0°	99.5%
TYM-3050C-2010-0	2010	3.000"	0.500"	0°	99.5%
TYM-4050C-2010-0	2010	4.000"	0.500"	0°	99.5%
TYM-0525C-2010-45	2010	0.500"	0.250"	45°	99.0%
TYM-1025C-2010-45	2010	1.000"	0.250"	45°	99.0%
TYM-1537C-2010-45	2010	1.500"	0.375"	45°	99.0%
TYM-2037C-2010-45	2010	2.000"	0.375"	45°	99.0%
TYM-3050C-2010-45	2010	3.000"	0.500"	45°	99.0%
TYM-4050C-2010-45	2010	4.000"	0.500"	45°	99.0%
HYM-0525C-2100-0	2100	0.500"	0.250"	0°	99.5%
HYM-1025C-2100-0	2100	1.000"	0.250"	0°	99.5%
HYM-1537C-2100-0	2100	1.500"	0.375"	0°	99.5%
HYM-2037C-2100-0	2100	2.000"	0.375"	0°	99.5%
HYM-3050C-2100-0	2100	3.000"	0.500"	0°	99.5%
HYM-4050C-2100-0	2100	4.000"	0.500"	0°	99.5%
HYM-0525C-2100-45	2100	0.500"	0.250"	45°	99.0%
HYM-1025C-2100-45	2100	1.000"	0.250"	45°	99.0%
HYM-1537C-2100-45	2100	1.500"	0.375"	45°	99.0%
HYM-2037C-2100-45	2100	2.000"	0.375"	45°	99.0%
HYM-3050C-2100-45	2100	3.000"	0.500"	45°	99.0%
HYM-4050C-2100-45	2100	4.000"	0.500"	45°	99.0%

* Other sizes and spherical mirrors available in prototype and production quantities.



Er:YAG Laser Mirrors (2940nm)

Tutorials

Lenses

Windows

Mirrors

Prisms

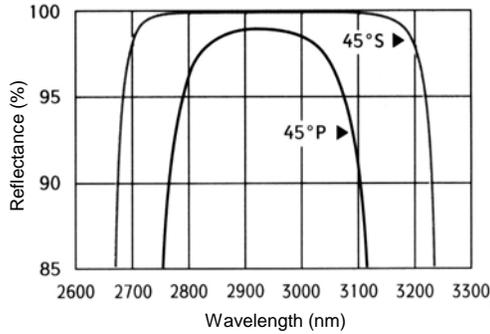
Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS



Substrate material :	CaF2, Yag, IR fused silica
S1 Surface Figure :	$\lambda/10$ @ 633nm
S1 Surface Quality	10-5 laser quality
S2 Surface Quality	Commercial polish
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical
Damage Threshold :	2J/cm ² , 10ns pulse
Adhesion and Durability :	Per MIL-C-675A

Part Number	Diameter (D)	Thickness (T)	Angle of Incidence	Min. Reflectance
EYM-0525-2940-0	0.500"	0.250"	0°	99.5%
EYM-1025-2940-0	1.000"	0.250"	0°	99.5%
EYM-1537-2940-0	1.500"	0.375"	0°	99.5%
EYM-2037-2940-0	2.000"	0.375"	0°	99.5%
EYM-3050-2940-0	3.000"	0.500"	0°	99.5%
EYM-4050-2940-0	4.000"	0.500"	0°	99.5%
EYM-0525-2940-45	0.500"	0.250"	45°	99.0%
EYM-1025-2940-45	1.000"	0.250"	45°	99.0%
EYM-1537-2940-45	1.500"	0.375"	45°	99.0%
EYM-2037-2940-45	2.000"	0.375"	45°	99.0%
EYM-3050-2940-45	3.000"	0.500"	45°	99.0%
EYM-4050-2940-45	4.000"	0.500"	45°	99.0%

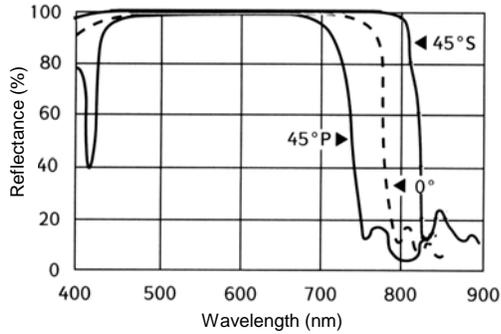
* Other sizes and spherical mirrors available in prototype and production quantities.

How to order





0~45° Visible Laser Mirrors (488-694nm)



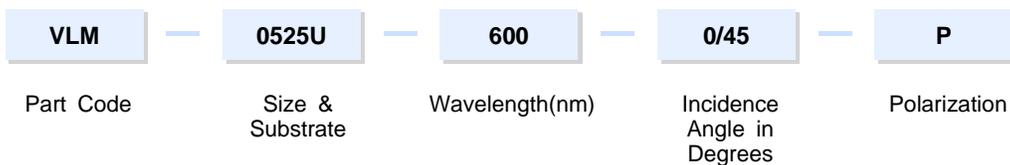
SPECIFICATIONS

Substrate material :	UV fused silica or BK7
S1 Surface Figure :	$\lambda/10$ @ 633nm
S1 Surface Quality	15-5 laser quality
S2 Surface Quality	Commercial polish
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical
Adhesion and Durability :	Per MIL-C-675A

Part Number		Diameter D	Thickness T	Min. Unpolarized Reflectance
UV Fused Silica	BK7			
VLM-0525U-600-0/45	VLM-0525C-600-0/45	0.500"	0.250"	99.0%
VLM-1025U-600-0/45	VLM-1025C-600-0/45	1.000"	0.250"	99.0%
VLM-1537U-600-0/45	VLM-1537C-600-0/45	1.500"	0.375"	99.0%
VLM-2037U-600-0/45	VLM-2037C-600-0/45	2.000"	0.375"	99.0%
VLM-3050U-600-0/45	VLM-3050C-600-0/45	3.000"	0.500"	99.0%
VLM-4050U-600-0/45	VLM-4050C-600-0/45	4.000"	0.500"	99.0%

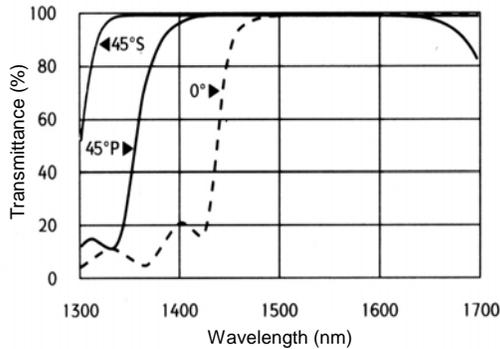
* Other sizes and spherical mirrors available in prototype and production quantities.

How to order





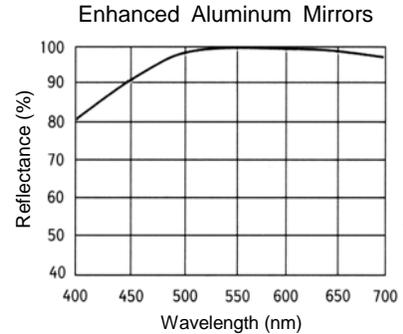
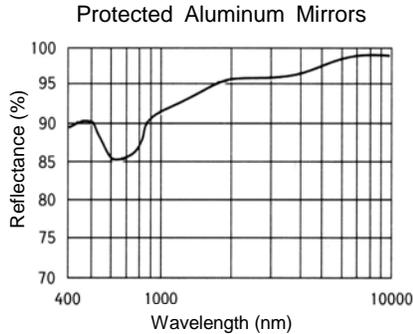
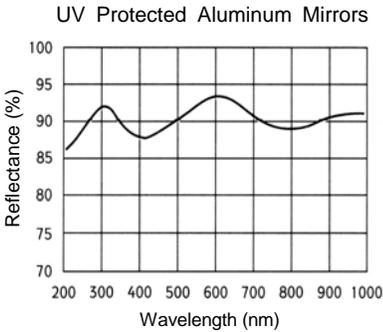
SPECIFICATIONS



Substrate material :	BK7
S1 Surface Figure :	$\lambda/10$ @ 633nm
S1 Surface Quality	15-5 laser quality
S2 Surface Quality	Commercial polish
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Clear Aperture	> 85% of diameter
Chamfer :	0.3mm at 45 typical
Angle of Incidence :	0~45°
Adhesion and Durability :	Per MIL-C-675A

Part Number	Wavelength (nm)	Diameter (D)	Thickness (T)	Min. Reflectance
DLM-0525C-800-0/45	670-905	0.500"	0.250"	99.0%
DLM-1025C-800-0/45	670-905	1.000"	0.250"	99.0%
DLM-1537C-800-0/45	670-905	1.500"	0.375"	99.0%
DLM-2037C-800-0/45	670-905	2.000"	0.375"	99.0%
DLM-3050C-800-0/45	670-905	3.000"	0.500"	99.0%
DLM-4050C-800-0/45	670-905	4.000"	0.500"	99.0%
DLM-0525C-1250-0/45	1200-1310	0.500"	0.250"	99.0%
DLM-1025C-1250-0/45	1200-1310	1.000"	0.250"	99.0%
DLM-1537C-1250-0/45	1200-1310	1.500"	0.375"	99.0%
DLM-2037C-1250-0/45	1200-1310	2.000"	0.375"	99.0%
DLM-3050C-1250-0/45	1200-1310	3.000"	0.500"	99.0%
DLM-4050C-1250-0/45	1200-1310	4.000"	0.500"	99.0%
DLM-0525C-1520-0/45	1480-1550	0.500"	0.250"	99.0%
DLM-1025C-1520-0/45	1480-1550	1.000"	0.250"	99.0%
DLM-1537C-1520-0/45	1480-1550	1.500"	0.375"	99.0%
DLM-2037C-1520-0/45	1480-1550	2.000"	0.375"	99.0%
DLM-3050C-1520-0/45	1480-1550	3.000"	0.500"	99.0%
DLM-4050C-1520-0/45	1480-1550	4.000"	0.500"	99.0%

* Other sizes and spherical mirrors available in prototype and production quantities.



SPECIFICATIONS

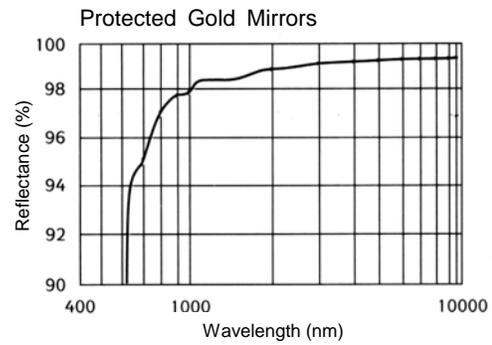
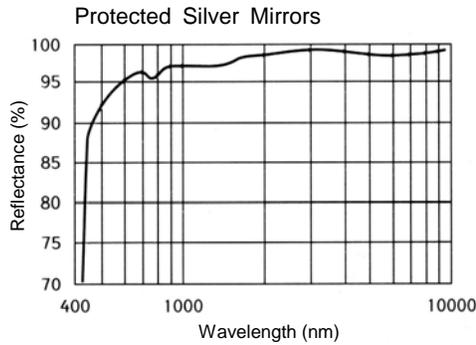
Substrate material :	UV fused silica or BK7	Thickness Tolerance :	± 0.25 mm
S1 Surface Figure :	$\lambda/10$ @ 633nm	Wedge :	≤ 3 arcmin.
S1 Surface Quality :	10-5 laser quality	Clear Aperture	$> 85\%$ of diameter
S2 Surface Quality :	Commercial Polish	Chamfer :	0.3mm at 45 typical
Diameter Tolerance :	+0.0/-0.20 mm	Adhesion and Durability :	Per MIL-C-675A

Part Number	Diameter (D)	Thickness (T)	Min. Reflectance
UV Protected Aluminum Mirrors			
UPAM-0525-C	0.500"	0.250"	85.0%
UPAM-1025-C	1.000"	0.250"	85.0%
UPAM-1537-C	1.500"	0.375"	85.0%
UPAM-2037-C	2.000"	0.375"	85.0%
UPAM-3050-C	3.000"	0.500"	85.0%
UPAM-4050-C	4.000"	0.500"	85.0%
Protected Aluminum Mirrors			
PAM-0525-C	0.500"	0.250"	90.0%
PAM-1025-C	1.000"	0.250"	90.0%
PAM-1537-C	1.500"	0.375"	90.0%
PAM-2037-C	2.000"	0.375"	90.0%
PAM-3050-C	3.000"	0.500"	90.0%
PAM-4050-C	4.000"	0.500"	90.0%
Enhanced Aluminum Mirrors			
EAM-0525-C	0.500"	0.250"	92.0%
EAM-1025-C	1.000"	0.250"	92.0%
EAM-1537-C	1.500"	0.375"	92.0%
EAM-2037-C	2.000"	0.375"	92.0%
EAM-3050-C	3.000"	0.500"	92.0%
EAM-4050-C	4.000"	0.500"	92.0%

* Other sizes and spherical mirrors available in prototype and production quantities.



Protected Silver and Gold Mirrors



SPECIFICATIONS

Substrate material :	BK7	Thickness Tolerance :	± 0.25 mm
S1 Surface Figure :	$\lambda/10$ @ 633nm	Wedge :	≤ 3 arcmin.
S1 Surface Quality :	10-5 laser quality	Clear Aperture	$> 85\%$ of diameter
S2 Surface Quality :	Commercial Polish	Chamfer :	0.3mm at 45 typical
Diameter Tolerance :	+0.0/-0.20 mm	Adhesion and Durability :	Per MIL-C-675A

Part Number	Diameter (D)	Thickness(T)	Min. Reflectance
Protected Silver Mirrors			
PSM-0525-C	0.500"	0.250"	95.0%
PSM-1025-C	1.000"	0.250"	95.0%
PSM-1537-C	1.500"	0.375"	95.0%
PSM-2037-C	2.000"	0.375"	95.0%
PSM-3050-C	3.000"	0.500"	95.0%
PSM-4050-C	4.000"	0.500"	85.0%
Protected Gold Mirrors			
PGM-0525-C	0.500"	0.250"	95.0%
PGM-1025-C	1.000"	0.250"	95.0%
PGM-1537-C	1.500"	0.375"	95.0%
PGM-2037-C	2.000"	0.375"	95.0%
PGM-3050-C	3.000"	0.500"	95.0%
PGM-4050-C	4.000"	0.500"	95.0%

* Other sizes and spherical mirrors available in prototype and production quantities.



Table of Contents

Right Angle Prisms, Uncoated	108
Right Angle Bending Prisms	109
Right Angle Folding Prisms	110
Isosceles Brewster Prisms	111
Rhomboid Prisms	112
Equilateral Dispersing Prisms	113
Porro Prisms	114
Littrow Prisms	114
Penta Prisms	115
Corner Cube Prisms	116
Dove Prisms	117



Right Angle Prisms, Uncoated

Tutorials

Lenses

Windows

Mirrors

Prisms

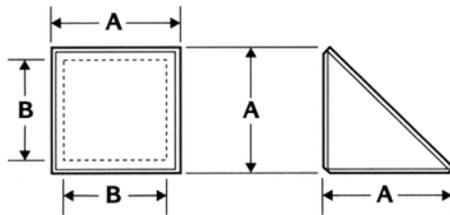
Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS



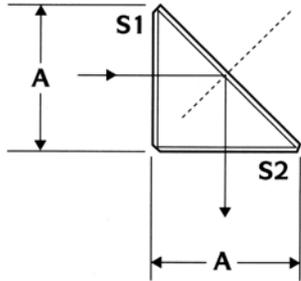
Substrate material :	Suprasil 1, UV fused silica, BK7 or SF2
Angular Deviation	≤ 3 arcmin.
Dimension Tolerance :	+0.0/-0.20 mm
Clear Aperture	>85% of central circular dimension
Chamfer :	0.3mm at 45 typical

Part Number	Dimension (A)	Surface Figure	Surface Quality	Material
RAP-050-SS	0.500"	$\lambda/10$	10-5	Suprasil
RAP-100-SS	1.000"	$\lambda/10$	10-5	Suprasil
RAP-020-UV	5.0mm	$\lambda/10$	10-5	Fused Silica
RAP-040-UV	10.0mm	$\lambda/10$	10-5	Fused Silica
RAP-050-UV	0.500"	$\lambda/10$	10-5	Fused Silica
RAP-060-UV	15.0mm	$\lambda/10$	10-5	Fused Silica
RAP-080-UV	20.0mm	$\lambda/10$	10-5	Fused Silica
RAP-100-UV	1.000"	$\lambda/10$	10-5	Fused Silica
RAP-150-UV	1.500"	$\lambda/10$	10-5	Fused Silica
RAP-200-UV	2.000"	$\lambda/10$	10-5	Fused Silica
RAP-020-C	5.0mm	$\lambda/8$	20-10	BK7
RAP-024-C	6.0mm	$\lambda/8$	20-10	BK7
RAP-032-C	8.0mm	$\lambda/8$	20-10	BK7
RAP-040-C	10.0mm	$\lambda/8$	20-10	BK7
RAP-048-C	12.0mm	$\lambda/8$	20-10	BK7
RAP-050-C	0.500"	$\lambda/8$	20-10	BK7
RAP-060-C	15.0mm	$\lambda/8$	20-10	BK7
RAP-080-C	20.0mm	$\lambda/8$	20-10	BK7
RAP-100-C	1.000"	$\lambda/8$	20-10	BK7
RAP-150-C	1.500"	$\lambda/8$	20-10	BK7
RAP-200-C	2.000"	$\lambda/8$	20-10	BK7
RAP-020-SF2	5.0mm	$\lambda/8$	20-10	SF2
RAP-040-SF2	10.0mm	$\lambda/8$	20-10	SF2
RAP-050-SF2	0.500"	$\lambda/8$	20-10	SF2
RAP-060-SF2	15.0mm	$\lambda/8$	20-10	SF2
RAP-080-SF2	20.0mm	$\lambda/8$	20-10	SF2
RAP-100-SF2	1.000"	$\lambda/8$	20-10	SF2
RAP-150-SF2	1.500"	$\lambda/8$	20-10	SF2
RAP-200-SF2	2.000"	$\lambda/8$	20-10	SF2

* Other dimensions and materials available in prototype and production quantities.



Right Angle Bending Prisms



SPECIFICATIONS

Substrate material :	Suprasil 1, UV fused silica, BK7 or SF2
Angular Deviation	≤ 3 arc min.
Dimension Tolerance :	+0.0/-0.20 mm
S1 & S2 AR Coating :	Single Wavelength AR R<0.25% Broadband AR R _{avg} <0.50%
Chamfer :	0.3mm at 45 typical
Clear Aperture	>85% of central circular dimension

Part Number	Dimension (A)	Surface Figure	Surface Quality	Material
BRP-020-UV	5.0mm	λ/10	10-5	Fused Silica
BRP-040-UV	10.0mm	λ/10	10-5	Fused Silica
BRP-050-UV	0.500"	λ/10	10-5	Fused Silica
BRP-060-UV	15.0mm	λ/10	10-5	Fused Silica
BRP-080-UV	20.0mm	λ/10	10-5	Fused Silica
BRP-100-UV	1.000"	λ/10	10-5	Fused Silica
BRP-150-UV	1.500"	λ/10	10-5	Fused Silica
BRP-200-UV	2.000"	λ/10	10-5	Fused Silica
BRP-020-C	5.0mm	λ/8	20-10	BK7
BRP-024-C	6.0mm	λ/8	20-10	BK7
BRP-032-C	8.0mm	λ/8	20-10	BK7
BRP-040-C	10.0mm	λ/8	20-10	BK7
BRP-048-C	12.0mm	λ/8	20-10	BK7
BRP-050-C	0.500"	λ/8	20-10	BK7
BRP-060-C	15.0mm	λ/8	20-10	BK7
BRP-080-C	20.0mm	λ/8	20-10	BK7
BRP-100-C	1.000"	λ/8	20-10	BK7
BRP-150-C	1.500"	λ/8	20-10	BK7
BRP-200-C	2.000"	λ/8	20-10	BK7
BRP-020-SF2	5.0mm	λ/8	20-10	SF2
BRP-040-SF2	10.0mm	λ/8	20-10	SF2
BRP-050-SF2	0.500"	λ/8	20-10	SF2
BRP-060-SF2	15.0mm	λ/8	20-10	SF2
BRP-080-SF2	20.0mm	λ/8	20-10	SF2
BRP-100-SF2	1.000"	λ/8	20-10	SF2
BRP-150-SF2	1.500"	λ/8	20-10	SF2
BRP-200-SF2	2.000"	λ/8	20-10	SF2

* Other dimensions and materials available in prototype and production quantities.



Right Angle Folding Prisms

Tutorials

Lenses

Windows

Mirrors

Prisms

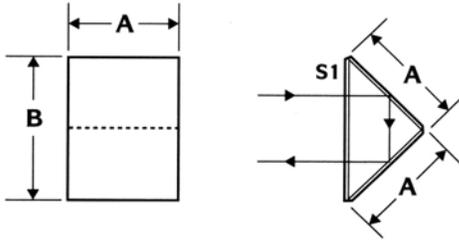
Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS



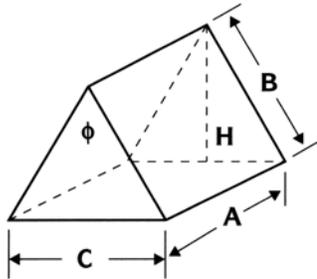
Substrate material :	UV fused silica or BK7 glass
Angular Deviation	≤ 3 arc min.
Dimension Tolerance :	+0.0/-0.20 mm
S1 AR Coating :	Single Wavelength AR $R < 0.25\%$ Broadband AR $R_{avg} < 0.50\%$
Chamfer :	0.3mm at 45 typical
Clear Aperture	>85% of central circular dimension

Part Number	Dimension (A)	Surface Figure	Surface Quality	Material
FRP-020-UV	5.0mm	$\lambda/10$	10-5	Fused Silica
FRP-040-UV	10.0mm	$\lambda/10$	10-5	Fused Silica
FRP-050-UV	0.500"	$\lambda/10$	10-5	Fused Silica
FRP-060-UV	15.0mm	$\lambda/10$	10-5	Fused Silica
FRP-080-UV	20.0mm	$\lambda/10$	10-5	Fused Silica
FRP-100-UV	1.000"	$\lambda/10$	10-5	Fused Silica
FRP-150-UV	1.500"	$\lambda/10$	10-5	Fused Silica
FRP-200-UV	2.000"	$\lambda/10$	10-5	Fused Silica
FRP-020-C	5.0mm	$\lambda/8$	20-10	BK7
FRP-024-C	6.0mm	$\lambda/8$	20-10	BK7
FRP-032-C	8.0mm	$\lambda/8$	20-10	BK7
FRP-040-C	10.0mm	$\lambda/8$	20-10	BK7
FRP-048-C	12.0mm	$\lambda/8$	20-10	BK7
FRP-050-C	0.500"	$\lambda/8$	20-10	BK7
FRP-060-C	15.0mm	$\lambda/8$	20-10	BK7
FRP-080-C	20.0mm	$\lambda/8$	20-10	BK7
FRP-100-C	1.000"	$\lambda/8$	20-10	BK7
FRP-150-C	1.500"	$\lambda/8$	20-10	BK7
FRP-200-C	2.000"	$\lambda/8$	20-10	BK7

* Other dimensions and materials available in prototype and production quantities.



Isosceles Brewster Prisms

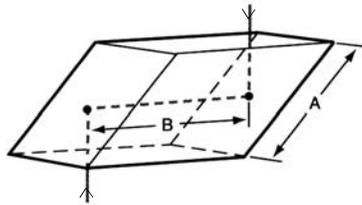


SPECIFICATIONS

Substrate material :	Suprasil 1, UV fused silica or SF10
Surface Figure :	$\lambda/10$ @ 633nm
Surface Quality :	10-5 (Suprasil 1, UV fused silica) 20-10 (SF10)
Angular Deviation	≤ 10 arcmin
Dimension Tolerance :	+0.0/-0.20 mm
Chamfer :	0.3mm at 45 typical
Clear Aperture	>85% of central circular dimension

Part Number	Altitude H (mm)	Dimension A (mm)	Dimension B (mm)	Dimension C (mm)	Apex Angle(ϕ)	Material	Abbe Constant
IBP-10.5-68.7-SS	10.5	7.9	12.7	14.4	68.7°	Suprasil	67.82
IBP-15.0-68.7-SS	15.0	12.7	18.2	20.6	68.7°	Suprasil	67.82
IBP-19.0-68.7-SS	19.0	12.7	23.0	26.0	68.7°	Suprasil	67.82
IBP-12.4-69.1-UV	12.4	15.0	15.0	17.0	69.1°	Fused Silica	67.82
IBP-13.0-60.6-SF10	13.0	15.0	15.0	15.1	60.6°	SF10	28.41
IBP-21.6-60.6-SF10	21.6	25.0	25.0	25.2	60.6°	SF10	28.41

* Other dimensions and materials available in prototype and production quantities.



SPECIFICATIONS

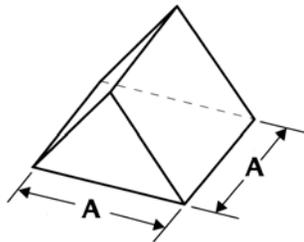
Substrate material :	UV fused silica or BK7
Surface Figure :	$\lambda/8$ @ 633nm
Angular Deviation	≤ 3 arcmin.
Dimension Tolerance :	+0.0/-0.20 mm
Chamfer :	0.3mm at 45 typical
Clear Aperture	>85% of central circular dimension

Part Number	Dimension (A=C)	Dimension (B)	Surface Quality	Material
RBP-012-UV	3.0mm	25.0mm	10-5	Fused Silica
RBP-020-UV	5.0mm	33.6mm	10-5	Fused Silica
RBP-040-UV	10.0mm	42.0mm	10-5	Fused Silica
RBP-050-UV	12.7mm	53.3mm	10-5	Fused Silica
RBP-100-UV	25.4mm	106.7mm	10-5	Fused Silica
RBP-012-C	3.0mm	25.0mm	20-10	BK7
RBP-020-C	5.0mm	33.6mm	20-10	BK7
RBP-040-C	10.0mm	42.0mm	20-10	BK7
RBP-050-C	12.7mm	53.3mm	20-10	BK7
RBP-100-C	25.4mm	106.7mm	20-10	BK7

* Other dimensions and materials available in prototype and production quantities.



Equilateral Dispersing Prisms



SPECIFICATIONS

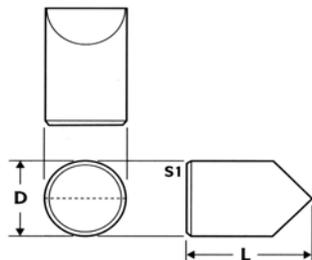
Substrate material :	BK7A, F2 or SF10
Surface Figure :	$\lambda/8$ @ 633nm
Angular Deviation	≤ 3 arcmin.
Dimension Tolerance :	+0.0/-0.20 mm
Chamfer :	0.3mm at 45 typical
Clear Aperture	>85% of central circular dimension

Part Number	Dimension A (mm)	Dimension H (mm)	Surface Quality	Material
EDP-20.0-16.2-C	20.0	16.2	20.-10	BK7
EDP-25.0-20.2-C	25.0	20.2	20.-10	BK7
EDP-30.0-24.3-C	30.0	24.3	20.-10	BK7
EDP-35.0-28.3-C	35.0	28.3	20.-10	BK7
EDP-40.0-32.4-C	40.0	32.4	20.-10	BK7
EDP-50.0-40.4-C	50.0	40.4	20.-10	BK7
EDP-50.0-40.4-C	60.0	48.5	20.-10	BK7
EDP-30.0-34.3-F2	30.0	34.3	40-20	F2
EDP-60.0-48.5-F2	60.0	48.5	40-20	F2
EDP-30.0-34.3-SF10	30.0	24.3	40-20	SF10
EDP-60.0-48.5-SF10	60.0	48.5	40-20	SF10

* Other dimensions and materials available in prototype and production quantities.



Porro Prisms



SPECIFICATIONS

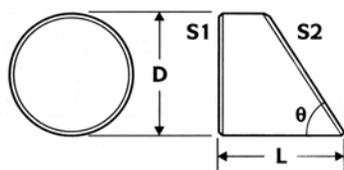
Substrate material :	UV Fused Silica or BK7
Surface Figure :	$\lambda/10$ @ 633nm
Angular Deviation	≤ 10 arcsec.
Dimension Tolerance :	+0.0/-0.20 mm
Chamfer :	0.3mm at 45 typical
Clear Aperture	>85% of central circular dimension

Part Number	Dimension (D)	Length (L)	Surface Quality	Material
PRP-050-UV	12.7mm	12.7mm	10-5	Fused Silica
PRP-100-UV	25.4mm	25.4mm	10-5	Fused Silica
PRP-050-C	12.7mm	12.7mm	10-5	BK7
PRP-100-C	25.4mm	25.4mm	10-5	BK7

* Other dimensions and materials available in prototype and production quantities.



Littrow Prisms

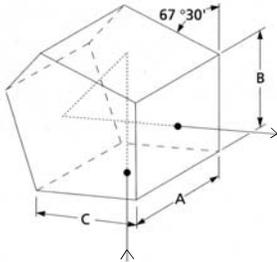


SPECIFICATIONS

Substrate material :	UV fused silica
Surface Figure :	$\lambda/10$ @ 633nm
Angular Deviation	≤ 10 arcsec.
Dimension Tolerance :	+0.0/-0.20 mm
Chamfer :	0.3mm at 45 typical
Clear Aperture	>85% of central circular dimension

Part Number	Dimension (D)	Length (L)	Surface Quality	Material
LOP-050-UV	0.500"	0.500"	10-5	Fused Silica
LOP-100-UV	15.0mm	15.0mm	10-5	Fused Silica
LOP-050-UV	1.000"	1.000"	10-5	Fused Silica

* Other dimensions and materials available in prototype and production quantities.

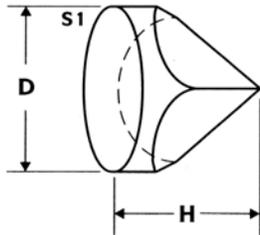


SPECIFICATIONS

Substrate material :	BK7
Surface Figure :	$\lambda/4$ @ 633nm
Angular Deviation	≤ 30 arcsec.
Dimension Tolerance :	+0.0/-0.20 mm
Chamfer :	0.3mm at 45 typical
Clear Aperture	>85% of central circular dimension

Part Number	Dimension (B)	Height (A)	Surface Quality	Material
PTP-040-C	10.0mm	10.0mm	40-20	BK7
PTP-050-C	12.7mm	12.7mm	40-20	BK7
PTP-050-C	12.7mm	12.7mm	40-20	BK7
PTP-080-C	20.0mm	20.0mm	40-20	BK7
PTP-100-C	25.4mm	25.4mm	40-20	BK7
PTP-160-C	40.0mm	40.0mm	40-20	BK7

* Other dimensions and materials available in prototype and production quantities.



SPECIFICATIONS

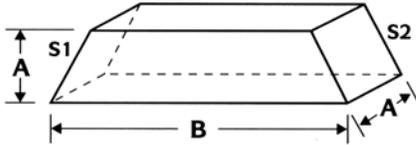
Substrate material :	BK7A
Surface Figure :	$\lambda/8$ @ 633nm
Surface Quality :	40-20
Beam Deviation	$180^\circ \pm 2, 5, \text{ or } 10$ arcsec.
Dimension Tolerance :	$+0.0/-0.20$ mm
Chamfer :	0.3mm at 45 typical
Clear Aperture	>85% of central circular dimension

Part Number	Dimension D (mm)	Dimension H (mm)	Angular Deviation(arcsec.)	Material
CCP-6.4-4.8-2-C	6.4	4.8	2	BK7
CCP-6.4-4.8-5-C	6.4	4.8	5	BK7
CCP-6.4-4.8-10-C	6.4	4.8	10	BK7
CCP-12.7-9.5-2-C	12.7	9.5	2	BK7
CCP-12.7-9.5-5-C	12.7	9.5	5	BK7
CCP-12.7-9.5-10-C	12.7	9.5	10	BK7
CCP-15.0-11.2-2-C	15.0	11.2	2	BK7
CCP-15.0-11.2-5-C	15.0	11.2	5	BK7
CCP-15.0-11.2-10-C	15.0	11.2	10	BK7
CCP-25.4-19.0-2-C	25.4	19.0	2	BK7
CCP-25.4-19.0-5-C	25.4	19.0	5	BK7
CCP-25.4-19.0-10-C	25.4	19.0	10	BK7
CCP-50.8-38.0-2-C	50.8	38.0	2	BK7
CCP-50.8-38.0-5-C	50.8	38.0	5	BK7
CCP-50.8-38.0-10-C	50.8	38.0	10	BK7

* Other dimensions and materials available in prototype and production quantities.



SPECIFICATIONS



Substrate material :	UV fused silica or BK7
Surface Figure :	$\lambda/4$ @ 633nm
Angular Deviation	≤ 3 arc min.
Dimension Tolerance :	+0.0/-0.20 mm
Chamfer :	0.3mm at 45 typical
Clear Aperture	>85% of central circular dimension

Part Number	Dimension (A)	Dimension (B)	Surface Quality	Material
DOP-024-UV	6.0mm	25.0mm	10-5	Fused Silica
DOP-032-UV	8.0mm	33.6mm	10-5	Fused Silica
DOP-040-UV	10.0mm	42.0mm	10-5	Fused Silica
DOP-050-UV	12.7mm	53.3mm	10-5	Fused Silica
DOP-100-UV	25.4mm	106.7mm	10-5	Fused Silica
DOP-024-C	6.0mm	25.0mm	20-10	BK7
DOP-032-C	8.0mm	33.6mm	20-10	BK7
DOP-040-C	10.0mm	42.0mm	20-10	BK7
DOP-050-C	12.7mm	53.3mm	20-10	BK7
DOP-100-C	25.4mm	106.7mm	20-10	BK7

* Other dimensions and materials available in prototype and production quantities.

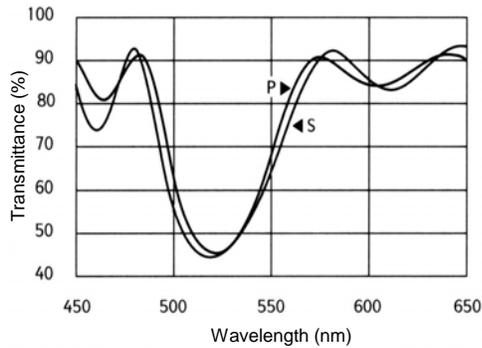


Table of Contents

Non-Polarizing Plat Beamsplitters	119
Broadband 50:50 Plate Beamsplitters	120
High Energy Plate Beamsplitters	121
Partially Reflective Cube Beamsplitters	122
Non-Polarizing Cube Beamsplitters	123
High Energy Harmonic Separators	124
Dichroic Beamsplitters	125



Non-Polarizing Plate Beamsplitter



SPECIFICATIONS

Substrate material :	BK7
Surface Figure :	$\lambda/10$ @ 633nm
Surface Quality	10-5 laser quality
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
$ R_s - R_p $, $ T_s - T_p $:	< 5%
Clear Aperture	> 85% of diameter
AR Coating :	R < 0.5% (typical)
Chamfer :	0.3mm at 45 typical
Adhesion and Durability :	Per MIL-C-675A
Damage Threshold :	3J/cm ² , 10nsec pulse

Part Number	Reflectance (%)	Diameter (D)	Thickness (T)	Angle of Incidence
NPB-0525-30	30 \pm 5%	0.500"	0.250"	45°
NPB-1025-30	30 \pm 5%	1.000"	0.250"	45°
NPB-2025-30	30 \pm 5%	2.000"	0.250"	45°
NPB-3037-30	30 \pm 5%	3.000"	0.375"	45°
NPB-0525-50	50 \pm 5%	0.500"	0.250"	45°
NPB-1025-50	50 \pm 5%	1.000"	0.250"	45°
NPB-2025-50	50 \pm 5%	2.000"	0.250"	45°
NPB-3037-50	50 \pm 5%	3.000"	0.375"	45°
NPB-0525-70	70 \pm 5%	0.500"	0.250"	45°
NPB-1025-70	70 \pm 5%	1.000"	0.250"	45°
NPB-2025-70	70 \pm 5%	2.000"	0.250"	45°
NPB-3037-70	70 \pm 5%	3.000"	0.375"	45°

* Other dimensions and wavelengths available in prototype and production quantities.

Available Wavelengths (nm)

442, 488, 514, 532, 633, 650, 670, 694, 780, 808, 830,
980, 1053, 1064, 1320, 1550



Broadband 50:50 Plate Beamsplitters

Tutorials

Lenses

Windows

Mirrors

Prisms

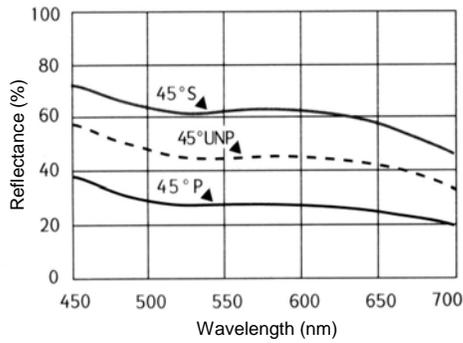
Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS



Substrate material :	BK7
Surface Figure :	$\lambda/10$ @ 633nm
Surface Quality	10-5 laser quality
Runp :	50% \pm 10%
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	\pm 0.25 mm
Wedge :	\leq 3 arcmin.
Clear Aperture	> 85% of diameter
AR Coating :	R < 0.5% (typical)
Chamfer :	0.3mm at 45 typical
Adhesion and Durability :	Per MIL-C-675A

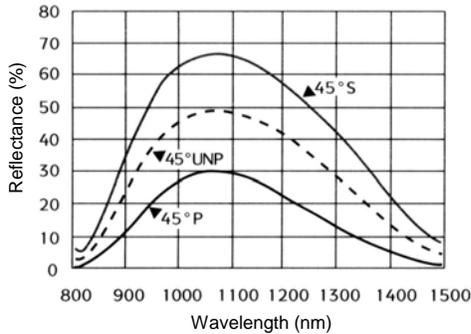
Part Number	Wavelength (nm)	Diameter (D)	Thickness (T)	Angle of Incidence
BHB-1025C-493-45	458-529	1.000"	0.250"	45°
BHB-2037C-493-45	458-529	2.000"	0.375"	45°
BHB-3050C-493-45	458-529	3.000"	0.500"	45°
BHB-4050C-493-45	458-529	4.000"	0.500"	45°
BHB-1025C-591-45	488-694	1.000"	0.250"	45°
BHB-2037C-591-45	488-694	2.000"	0.375"	45°
BHB-3050C-591-45	488-694	3.000"	0.500"	45°
BHB-4050C-591-45	488-694	4.000"	0.500"	45°
BHB-1025C-875-45	650-1100	1.000"	0.250"	45°
BHB-2037C-875-45	650-1100	2.000"	0.375"	45°
BHB-3050C-875-45	650-1100	3.000"	0.500"	45°
BHB-4050C-875-45	650-1100	4.000"	0.500"	45°
BHB-1025C-1375-45	1200-1550	1.000"	0.250"	45°
BHB-2037C-1375-45	1200-1550	2.000"	0.375"	45°
BHB-3050C-1375-45	1200-1550	3.000"	0.500"	45°
BHB-4050C-1375-45	1200-1550	4.000"	0.500"	45°

* Other dimensions and wavelengths available in prototype and production quantities.



High Energy Plate Beamsplitters

SPECIFICATIONS



Substrate material : UV fused silica, CaF₂ or BK7
 Surface Figure : $\lambda/10$ @ 633nm
 Surface Quality : 10-5 laser quality
 Diameter Tolerance : +0.0/-0.20 mm
 Thickness Tolerance : ± 0.25 mm
 Wedge : ≤ 3 armin.
 Clear Aperture : $> 85\%$ of diameter
 AR Coating : $R < 0.25\%$ (typical)
 Chamfer : 0.3mm at 45 typical
 Damage Threshold : 10J/cm^2 , 10ns pulse
 Adhesion and Durability : Per MIL-C-675A

How to order



Code	Size	
	Diameter D	Thickness T
0512	0.500"	0.125"
0525	0.500"	0.250"
0537	0.500"	0.375"
0712	0.750"	0.125"
0725	0.750"	0.250"
0737	0.750"	0.375"
1012	1.000"	0.125"
1025	1.000"	0.250"
1037	1.000"	0.375"
1525	1.500"	0.250"
1537	1.500"	0.375"
2025	2.000"	0.250"
2037	2.000"	0.375"
3037	3.000"	0.375"
3050	3.000"	0.500"
4050	4.000"	0.500"

Standard Wavelength(nm)	
193	694
213	755
248	780
266	800
308	830
325	850
351-353	980
355	1053
364	1047,1053
442	1064
488-515	1235
527	1319
532	1550
543	2010
633	2100
670	2940

Reflectance(%)
10 ± 2
20 ± 3
25 ± 3
30 ± 3
35 ± 3
40 ± 3
50 ± 5
60 ± 4
70 ± 4
75 ± 4
80 ± 4
85 ± 4
90 ± 3
95 ± 2
98 ± 1
99 ± 0.5



Partially Reflective Cube Beamsplitters

Tutorials

Lenses

Windows

Mirrors

Prisms

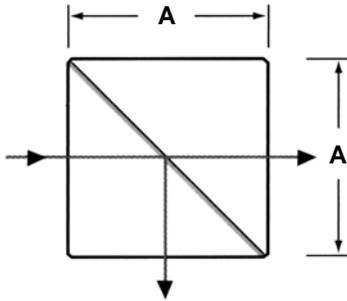
Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS



Substrate material :	BK7
Surface Figure :	$\lambda/4$ @ 633nm
Surface Quality	10-5 laser quality
Diameter Tolerance :	+0.0/-0.20 mm
Thickness Tolerance :	± 0.25 mm
Beam Deviation :	≤ 3 arcmin.
Clear Aperture	$> 85\%$ of diameter
AR Coating :	$R < 0.25\%$ (typical)
Chamfer :	0.3mm at 45 typical
Damage Threshold :	$> 100 \text{mJ/cm}^2$, 10ns pulse
Adhesion and Durability :	Per MIL-C-675A

How to order



Size (A)	
020	5.0mm
040	10.0mm
050	0.500"
100	1.000"
150	1.500"
200	2.000"

Wavelength(nm)	
488	755
515	800
527	830
532	980
578	1047
590	1053
633	1064
670	1319
694	1550

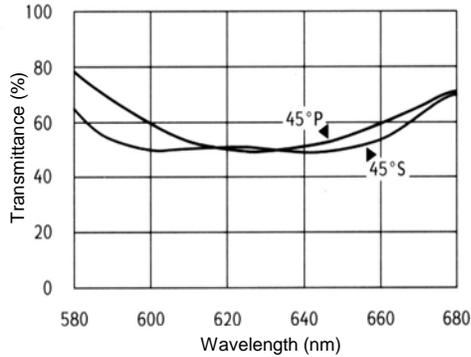
Reflectance(%)
20 ± 5
25 ± 5
30 ± 5
33 ± 5
40 ± 5
50 ± 5
60 ± 5
70 ± 5
80 ± 5

Polarization
S
P
UNP



Non-Polarizing Cube Beamsplitters

SPECIFICATIONS



Substrate material :	BK7
S1 Surface Figure :	$\lambda/4$ @ 633nm
S1 Surface Quality :	20-10 laser quality
Dimension Tolerance :	+0.0/-0.25 mm
Thickness Tolerance :	± 0.25 mm
Runp :	$50 \pm 5\%$
$ R_s - R_p $, $ T_s - T_p $:	< 5%
Clear Aperture :	> 85% of diameter
AR Coating :	R < 0.25%
Chamfer :	0.3mm at 45 typical
Adhesion and Durability :	Per MIL-C-675A
Damage Threshold :	>1J/cm ² , 10nsec pulse

Wavelength (nm)	Part Number				
	10mm	0.500"	1.000"	1.500"	2.000"
413	NCB-413-040	NCB-413-050	NCB-413-100	NCB-413-150	NCB-413-200
442	NCB-442-040	NCB-442-050	NCB-442-100	NCB-442-150	NCB-442-200
488	NCB-488-040	NCB-488-050	NCB-488-100	NCB-488-150	NCB-488-200
515	NCB-515-040	NCB-515-050	NCB-515-100	NCB-515-150	NCB-515-200
532	NCB-532-040	NCB-532-050	NCB-532-100	NCB-532-150	NCB-532-200
633	NCB-633-040	NCB-633-050	NCB-633-100	NCB-633-150	NCB-633-250
670	NCB-670-040	NCB-670-050	NCB-670-100	NCB-670-150	NCB-670-200
780	NCB-780-040	NCB-780-050	NCB-780-100	NCB-780-150	NCB-780-200
800	NCB-800-040	NCB-800-050	NCB-800-100	NCB-800-150	NCB-800-200
830	NCB-830-040	NCB-830-050	NCB-830-100	NCB-830-150	NCB-830-200
930	NCB-930-040	NCB-930-050	NCB-930-100	NCB-930-150	NCB-930-200
1064	NCB-1064-040	NCB-1064-050	NCB-1064-100	NCB-1064-150	NCB-1064-200
1319	NCB-1319-040	NCB-1319-050	NCB-1319-100	NCB-1319-150	NCB-1319-200
1550	NCB-1550-040	NCB-1550-050	NCB-1550-100	NCB-1550-150	NCB-1550-200

* Other dimensions and wavelengths available in prototype and production quantities.



High Energy Harmonic Separators

Tutorials

Lenses

Windows

Mirrors

Prisms

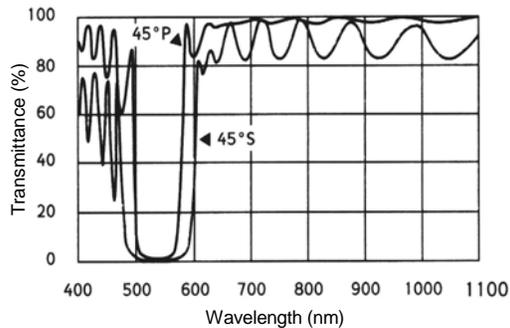
Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS



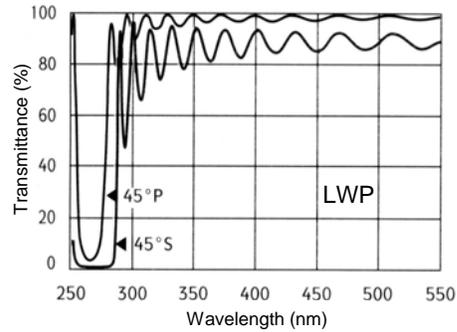
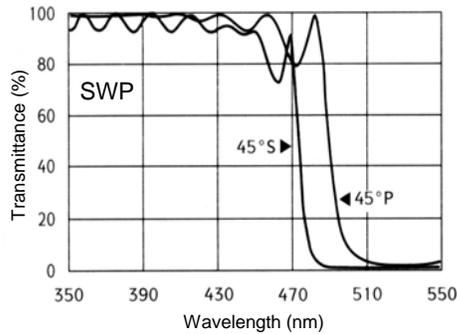
Substrate material :	UV Fused silica or BK7
S1 Surface Figure :	$\lambda/10$ @ 633nm
S1 Surface Quality	10-5 laser quality
Dimension Tolerance :	+0.0/-0.25 mm
Thickness Tolerance :	\pm 0.25 mm
Clear Aperture	> 85% of diameter
Angle of Incidence :	45°
Chamfer :	0.3mm at 45 typical
Adhesion and Durability :	Per MIL-C-675A
Damage Threshold :	>5J/cm ² , 10nsec pulse

Part Number	UV Fused Silica	BK7	Diameter	Thickness	Runp.	Tunp.
R355nm / T1064 & 532nm - Dual AR Coating for 1064 & 532nm						
HHS-0525U-R355/T1064&532			0.500"	0.250"	>99.5%	>90.0%
HHS-1025U-R355/T1064&532			1.000"	0.250"	>99.5%	>90.0%
HHS-1525U-R355/T1064&532			1.500"	0.250"	>99.5%	>90.0%
HHS-1537U-R355/T1064&532			1.500"	0.375"	>99.5%	>90.0%
HHS-2025U-R355/T1064&532			2.000"	0.250"	>99.5%	>90.0%
HHS-2037U-R355/T1064&532			2.000"	0.375"	>99.5%	>90.0%
R266nm / T1064 & 532 & 355nm - Triple AR Coating for 1064 & 532 & 355nm						
HHS-0525U-R266/T1064&532&355			0.500"	0.250"	>99.5%	>90.0%
HHS-1025U-R266/T1064&532&355			1.000"	0.250"	>99.5%	>90.0%
HHS-1525U-R266/T1064&532&355			1.500"	0.250"	>99.5%	>90.0%
HHS-1537U-R266/T1064&532&355			1.500"	0.375"	>99.5%	>90.0%
HHS-2025U-R266/T1064&532&355			2.000"	0.250"	>99.5%	>90.0%
HHS-2037U-R266/T1064&532&355			2.000"	0.375"	>99.5%	>90.0%
R532nm / T1064nm - AR Coating for 1064nm						
HHS-0525U-R532/T1064	HHS-0525C-R532/T1064		0.500"	0.250"	>99.5%	>90.0%
HHS-1025U-R532/T1064	HHS-1025C-R532/T1064		1.000"	0.250"	>99.5%	>90.0%
HHS-1525U-R532/T1064	HHS-1525C-R532/T1064		1.500"	0.250"	>99.5%	>90.0%
HHS-1537U-R532/T1064	HHS-1537C-R532/T1064		1.500"	0.375"	>99.5%	>90.0%
HHS-2025U-R532/T1064	HHS-2025C-R532/T1064		2.000"	0.250"	>99.5%	>90.0%
HHS-2037U-R532/T1064	HHS-2037C-R532/T1064		2.000"	0.375"	>99.5%	>90.0%
R1064nm / T532nm - AR Coating for 532nm						
HHS-0525U-R1064/T532	HHS-0525C-R1064/T532		0.500"	0.250"	>99.0%	>90.0%
HHS-1025U-R1064/T532	HHS-1025C-R1064/T532		1.000"	0.250"	>99.0%	>90.0%
HHS-1525U-R1064/T532	HHS-1525C-R1064/T532		1.500"	0.250"	>99.0%	>90.0%
HHS-1537U-R1064/T532	HHS-1537C-R1064/T532		1.500"	0.375"	>99.0%	>90.0%
HHS-2025U-R1064/T532	HHS-2025C-R1064/T532		2.000"	0.250"	>99.0%	>90.0%
HHS-2037U-R1064/T532	HHS-2037C-R1064/T532		2.000"	0.375"	>99.0%	>90.0%

* Other dimensions available in prototype and production quantities.



Dichroic Beamsplitter



SPECIFICATIONS

Substrate material :	UV fused silica or BK7	Average Transmission :	SWP : Tave > 90%
Surface Figure :	$\lambda/10$ @ 633nm		LWP : Tave > 85%
Surface Quality :	10-5 laser quality	AR Coating :	R < 0.25%
Diameter Tolerance :	+0.0/-0.20 mm	Clear Aperture	> 85% of diameter
Thickness Tolerance :	± 0.25 mm	Chamfer :	0.3mm at 45 typical
Wedge :	≤ 3 arcmin.	Adhesion and Durability :	Per MIL-C-675A
Reflectance :	> 99.5%	Damage Threshold :	> 5J/cm ² , 10nsec

How to order

SWP	PW-0525-C	R532S	T355P	45
Part Code	Substrate Part Number	Reflected Wavelength in nm with Polarization	Transmitted Wavelength in nm with Polarization	Incidence Angle in Degrees

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index



Table of Contents

UV Polarizing Cube Beamsplitters	127
Thin Film Plate Polarizers	128
Polarizing Cube Beamsplitters	129
High Energy Polarizing Cube Beamsplitters	130
Broadband Polarizing Cube Beamsplitters	131
High Energy Broadband Polarizing Cube Beamsplitters	131
Zero Order Quartz Waveplates	132
Multiple Order Quartz Waveplates	133
Dual Wavelength Waveplates	134
Polarization Rotators	134
Solid Etalon	135

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

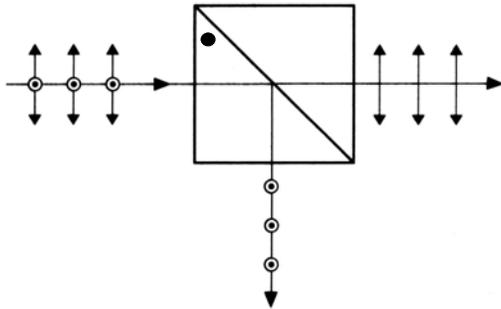
Polarizers

Filters

Index



UV Polarizing Cube Beamsplitters



SPECIFICATIONS

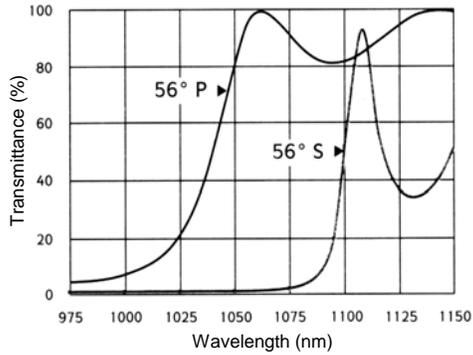
Substrate material :	UV fused Silica
Surface Figure :	$\lambda/4$ @ 633nm
Surface Quality	20-10 laser quality
Dimension Tolerance :	+0.0/-0.25 mm
Thickness Tolerance :	± 0.25 mm
Beam Deviation :	≤ 3 arcmin
Extinction Ratio :	$T_p / T_s > 100:1$
Transmission Efficiency :	$T_p > 90.0\%$
Reflectance Efficiency :	$R_s > 99.0\%$
Clear Aperture	>85% of diameter
AR Coating :	$R < 0.25\%$ per face
Damage Threshold :	$> 10 \text{ mJ/cm}^2$, 10nsec pulse

Wavelengths (nm)	Part Number		
	10mm	0.500"	1.000"
248	UPBC-248-040	UPBC-248-050	UPBC-248-100
257	UPBC-257-040	UPBC-257-050	UPBC-257-100
266	UPBC-266-040	UPBC-266-050	UPBC-266-100
308	UPBC-308-040	UPBC-308-050	UPBC-308-100
351	UPBC-351-040	UPBC-351-050	UPBC-351-100
355	UPBC-355-040	UPBC-355-050	UPBC-355-100

* Other dimensions and wavelengths available prototype and production quantities.



SPECIFICATIONS



- Substrate material : BK7, UV fused silica
- Surface Figure : $\lambda/10$ @ 633nm
- Surface Quality : 10-5 laser quality
- Dimension Tolerance : +0.0/-0.25 mm
- Thickness Tolerance : ± 0.25 mm
- Beam Deviation : ≤ 3 arcmin
- Extinction Ratio : $T_p / T_s > 200:1$
- Transmission Efficiency : $T_p > 95.0\%$
- Reflectance Efficiency : $R_s > 99.0\%$
- Angle of Incidence : $56^\circ \pm 3^\circ$
- Clear Aperture : $>85\%$ of diameter
- Damage Threshold : $>10J/cm^2$, 10nsec pulse

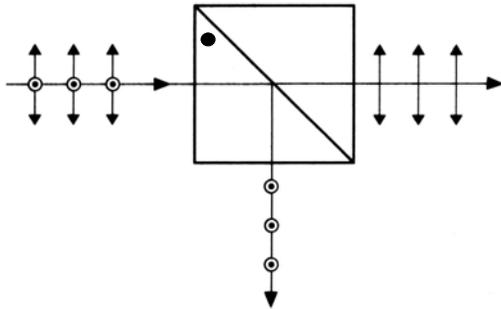
Part Number	Wavelength(nm)	Dimension	Thickness
TFP-527-1025	527	1.000"	0.250"
TFP-527-2025	527	2.000"	0.250"
TFP-527-28.6-14.3-3.2	527	28.6mm x 14.3mm	3.2mm
TFP-532-1025	532	1.000"	0.250"
TFP-532-2025	532	2.000"	0.250"
TFP-532-28.6-14.3-3.2	532	28.6mm x 14.3mm	3.2mm
TFP-1053-1025	1053	1.000"	0.250"
TFP-1053-2025	1053	2.000"	0.250"
TFP-1053-28.6-14.3-3.2	1053	28.6mm x 14.3mm	3.2mm
TFP-1064-1025	1064	1.000"	0.250"
TFP-1064-2025	1064	2.000"	0.250"
TFP-1064-28.6-14.3-3.2	1064	28.6mm x 14.3mm	3.2mm

* Other dimensions and wavelengths available prototype and production quantities.



Polarizing Cube Beamsplitters

SPECIFICATIONS



Substrate material :	BK7, UV fused silica
Surface Figure :	$\lambda/4$ @ 633nm
Surface Quality	20-10 laser quality
Dimension Tolerance :	+0.0/-0.25 mm
Thickness Tolerance :	± 0.25 mm
Beam Deviation :	≤ 3 arcmin
Extinction Ratio :	$T_p / T_s > 1000:1$
Transmission Efficiency :	$T_p > 95.0\%$
Reflectance Efficiency :	$R_s > 99.8\%$
Clear Aperture	$>85\%$ of diameter
AR Coating :	$R < 0.25\%$ per face
Damage Threshold :	$>100\text{mJ}/\text{cm}^2$, 10nsec pulse

Wavelengths (nm)	Part Number					
	5mm	10mm	0.500"	1.000"	1.500"	2.000"
442	PBC-442-020	PBC-442-040	PBC-442-050	PBC-442-100	PBC-442-150	PBC-442-200
488	PBC-488-020	PBC-488-040	PBC-488-050	PBC-488-100	PBC-488-150	PBC-488-200
500	PBC-500-020	PBC-500-040	PBC-500-050	PBC-500-100	PBC-500-150	PBC-500-200
515	PBC-515-020	PBC-515-040	PBC-515-050	PBC-515-100	PBC-515-150	PBC-515-200
532	PBC-532-020	PBC-532-040	PBC-532-050	PBC-532-100	PBC-532-150	PBC-532-200
633	PBC-633-020	PBC-633-040	PBC-633-050	PBC-633-100	PBC-633-150	PBC-633-200
670	PBC-670-020	PBC-670-040	PBC-670-050	PBC-670-100	PBC-670-150	PBC-670-200
780	PBC-780-020	PBC-780-040	PBC-780-050	PBC-780-100	PBC-780-150	PBC-780-200
800	PBC-800-020	PBC-800-040	PBC-800-050	PBC-800-100	PBC-800-150	PBC-800-200
830	PBC-830-020	PBC-830-040	PBC-830-050	PBC-830-100	PBC-830-150	PBC-830-200
850	PBC-850-020	PBC-850-040	PBC-850-050	PBC-850-100	PBC-850-150	PBC-850-200
930	PBC-930-020	PBC-930-040	PBC-930-050	PBC-930-100	PBC-930-150	PBC-930-200
1053	PBC-1053-020	PBC-1053-040	PBC-1053-050	PBC-1053-100	PBC-1053-150	PBC-1053-200
1064	PBC-1064-020	PBC-1064-040	PBC-1064-050	PBC-1064-100	PBC-1064-150	PBC-1064-200
1319	PBC-1319-020	PBC-1319-040	PBC-1319-050	PBC-1319-100	PBC-1319-150	PBC-1319-200
1550	PBC-1550-020	PBC-1550-040	PBC-1550-050	PBC-1550-100	PBC-1550-150	PBC-1550-200

* Other dimensions and wavelengths available prototype and production quantities.



High Energy Polarizing Cube Beamsplitters

Tutorials

Lenses

Windows

Mirrors

Prisms

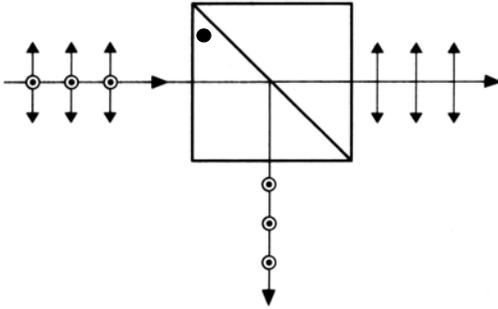
Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS



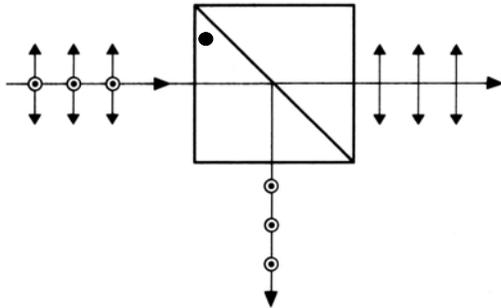
Substrate material :	UV Fused Silica or BK7
Surface Figure :	$\lambda/4$ @ 633nm
Surface Quality	20-10 laser quality
Dimension Tolerance :	+0.0/-0.25 mm
Thickness Tolerance :	± 0.25 mm
Beam Deviation :	≤ 3 arcmin
Extinction Ratio :	$T_p / T_s > 200:1$
Transmission Efficiency :	$T_p > 90.0\%$
Reflectance Efficiency :	$R_s > 99.0\%$
Clear Aperture	>85% of diameter
AR Coating :	$R < 0.25\%$ per face
Damage Threshold :	$>10\text{J/cm}^2$, 10nsec pulse

Wavelengths (nm)	UV Fused Silica		BK7	
	0.500"	1.000"	0.500"	1.000"
248	HPBC-248-050-U	HPBC-248-100-U	HPBC-248-050-C	HPBC-248-100-C
308	HPBC-308-050-U	HPBC-308-100-U	HPBC-308-050-C	HPBC-308-100-C
355	HPBC-355-050-U	HPBC-355-100-U	HPBC-355-050-C	HPBC-355-100-C
488	HPBC-488-050-U	HPBC-488-100-U	HPBC-488-050-C	HPBC-488-100-C
514	HPBC-514-050-U	HPBC-514-100-U	HPBC-514-050-C	HPBC-514-100-C
527	HPBC-527-050-U	HPBC-527-100-U	HPBC-527-050-C	HPBC-527-100-C
532	HPBC-532-050-U	HPBC-532-100-U	HPBC-532-050-C	HPBC-532-100-C
694	HPBC-694-050-U	HPBC-694-100-U	HPBC-694-050-C	HPBC-694-100-C
1053	HPBC-1053-050-U	HPBC-1053-100-U	HPBC-1053-050-C	HPBC-1053-100-C
1064	HPBC-1064-050-U	HPBC-1064-100-U	HPBC-1064-050-C	HPBC-1064-100-C
1550	HPBC-1550-050-U	HPBC-1550-100-U	HPBC-1550-050-C	HPBC-1550-100-C

* Other dimensions and wavelengths available prototype and production quantities.



Broadband Polarizing Cube Beamsplitters



SPECIFICATIONS

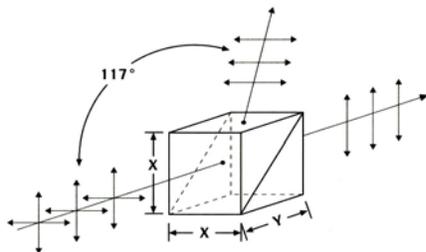
Substrate material :	Schott SF2
S1 Surface Figure :	$\lambda/4$ @ 633nm
S1 Surface Quality :	20-10 laser quality
Extinction Ratio :	$T_p / T_s > 200:1$
Transmission Efficiency :	$T_p > 90.0\%$
Reflectance Efficiency :	$R_s > 99.5\%$
AR Coating :	$R_{avg} < 0.50\%$ per face
Damage Threshold :	$>100\text{mJ/cm}^2$, 10nsec pulse

Wavelengths Range(nm)	Part Number		
	10mm	0.500"	1.000"
450-650	BPBC-450-650-040	BPBC-450-650-050	BPBC-450-650-100
650-950	BPBC-650-950-040	BPBC-650-950-050	BPBC-650-950-100
900-1300	BPBC-900-1300-040	BPBC-900-1300-050	BPBC-900-1300-100
1050-1620	BPBC-1050-1620-040	BPBC-1050-1620-050	BPBC-1050-1620-100

* Other dimensions and wavelengths available prototype and production quantities.



High Energy Broadband Polarizing Cube Beamsplitters



SPECIFICATIONS

S1 Surface Figure :	$\lambda/4$ @ 633nm
S1 Surface Quality :	10-5 laser quality
Beam Deviation :	≤ 3 arcmin
AR Coating :	$R_{avg} < 0.50\%$ per face
Damage Threshold :	$>5\text{J/cm}^2$, 10nsec pulse

Wavelengths Range(nm)	Part Number		Cube Dimension(Y)		Tp	Tp / Ts
	0.500"	1.000"	0.5"(X)	1.0"(X)		
400-600	KPBC-400-600-050	KPBC-400-600-100	0.688"	1.375"	92%	$10^4 : 1$
700-900	KPBC-700-900-050	KPBC-700-900-100	0.688"	1.375"	92%	$10^4 : 1$
950-1230	KPBC-950-1230-050	KPBC-950-1230-100	0.688"	1.375"	92%	$10^4 : 1$
1400-1600	KPBC-1400-1600-050	KPBC-1400-1600-100	0.688"	1.375"	92%	$10^4 : 1$

* Other dimensions and wavelengths available prototype and production quantities.



Zero Order Quartz Waveplates

Tutorials

Lenses

Windows

Mirrors

Prisms

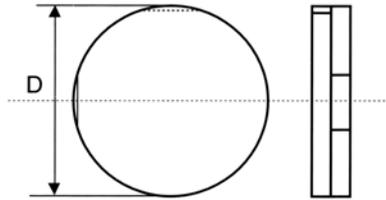
Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS



Substrate material :	Crystal Quartz
Surface Figure :	$\lambda/10$ @ 633nm
Surface Quality	10-5 laser quality
Diameter Tolerance :	+0.0/-0.20 mm
Parallelism :	≤ 1.0 arcsec
Retardation Tolerance :	$< \lambda/200$ at 20°C
Clear Aperture	$> 85\%$ of diameter
AR Coating :	$R < 0.25\%$
Damage Threshold :	$> 10\text{J}/\text{cm}^2$, 10nsec pulse

How to order



Diameter(D)	
020	5.0mm
040	10.0mm
050	0.500"
060	15.0mm
080	20.0mm
100	1.000"
120	30.0mm
150	1.500"
200	2.000"

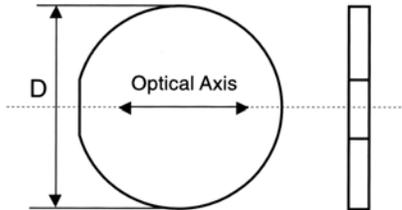
Wavelength(nm)		
213	527	830
244	532	850
248	543	870
257	589	950
266	633	1047
308	670	1053
325	694	1064
355	755	1300
364	775	1315
400	780	1319
442	795	1550
488	800	2020
515	810	

Retardation	
2	$\lambda/2$
4	$\lambda/4$



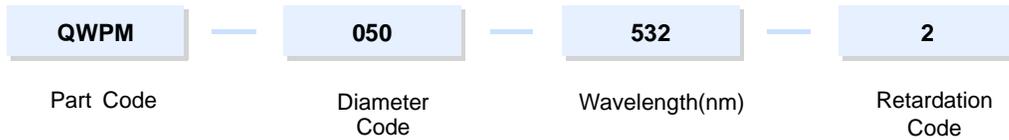
Multiple Order Quartz Waveplates

SPECIFICATIONS



Substrate material :	Crystal Quartz
Surface Figure :	$\lambda/10$ @ 633nm
Surface Quality	10-5 laser quality
Diameter Tolerance :	+0.0/-0.20 mm
Parallelism :	≤ 1.0 arcsec
Retardation Tolerance :	$< \lambda/200$ at 20°C
Clear Aperture	$> 85\%$ of diameter
AR Coating :	$R < 0.25\%$
Damage Threshold :	$> 10\text{J/cm}^2$, 10nsec pulse

How to order



Diameter(D)	
020	5.0mm
040	10.0mm
050	0.500"
060	15.0mm
080	20.0mm
100	1.000"
120	30.0mm
150	1.500"
200	2.000"

Wavelength(nm)		
213	527	830
244	532	850
248	543	870
257	589	950
266	633	1047
308	670	1053
325	694	1064
355	755	1300
364	775	1315
400	780	1319
442	795	1550
488	800	2020
515	810	

Retardation	
2	$\lambda/2$
4	$\lambda/4$



Dual Wavelength Waveplates

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS

Substrate material :	Crystal Quartz	Retardation Tolerance :	< $\lambda/100$ at 20°C
Transmitted Wavefront :	$\lambda/10$ @ 633nm	AR Coating :	R < 0.50%
Surface Quality :	10-5 laser quality	Clear Aperture :	> 90% of diameter
Diameter Tolerance :	+0.0/-0.20 mm	Damage Threshold :	> 2J/cm ² , 10ns pulse
Parallelism :	≤ 1.0 arcsec.	Adhesion and Durability :	Per MIL-C-675A

Part Number	Wavelength 1 (nm)	Wavelength 1 Retardation	Wavelength 2 (nm)	Wavelength 2 Retardation	Diameter (D)
QWPD-355-532-1.50	355	$\lambda/2$	532	λ	1.500"
QWPD-355-1064-1.50	355	$\lambda/2$	1064	λ	1.500"
QWPD-532-266-1.50	532	$\lambda/2$	266	λ	1.500"
QWPD-532-355-1.50	532	$\lambda/2$	355	λ	1.500"
QWPD-532-1064-1.50	532	$\lambda/2$	1064	λ	1.500"
QWPD-1064-266-1.50	1064	$\lambda/2$	266	λ	1.500"
QWPD-1064-355-1.50	1064	$\lambda/2$	355	λ	1.500"
QWPD-1064-532-1.50	1064	$\lambda/2$	532	λ	1.500"
QWPD-1064-633-1.50	1064	$\lambda/2$	633	λ	1.500"

* Other dimensions and wavelengths available prototype and production quantities.



Polarization Rotators

SPECIFICATIONS

Substrate material :	Crystal Quartz	Beam Deviation :	≤ 1.0 arcsec
Transmitted Wavefront :	$\lambda/10$ @ 633nm	Clear Aperture :	> 90% of diameter
Surface Quality :	10-5 laser quality	Rotation Tolerance :	< $\lambda/100$ at 20°C
Dimension Tolerance :	+0.0/-0.20 mm	Damage Threshold :	>10J/cm ² , 10ns pulse

Wavelength (nm)	Diameter (D)	Part Number	
		45°	90°
488	1.000"	PRT-1.00-488-45	PRT-1.00-488-90
515	1.000"	PRT-1.00-515-45	PRT-1.00-515-90
532	1.000"	PRT-1.00-532-45	PRT-1.00-532-90
633	1.000"	PRT-1.00-633-45	PRT-1.00-633-90
694	1.000"	PRT-1.00-694-45	PRT-1.00-694-90
755	1.000"	PRT-1.00-755-45	PRT-1.00-755-90
800	1.000"	PRT-1.00-800-45	PRT-1.00-800-90
850	1.000"	PRT-1.00-850-45	PRT-1.00-850-90
1053	1.000"	PRT-1.00-1053-45	PRT-1.00-1053-90
1064	1.000"	PRT-1.00-1064-45	PRT-1.00-1064-90

* Other dimensions and wavelengths available prototype and production quantities.



SPECIFICATIONS

Substrate material :	UV fused silica	Reflectance :	User specified
Transmitted Wavefront :	$\lambda/10$ @ 633nm	Clear Aperture :	> 85 of diameter
Surface Quality	10-5 laser quality	Rotation Tolerance :	< $\lambda/100$ at 20°C
Dimension Tolerance :	+/-0.25mm	Damage Threshold :	>10J/cm ² , 10ns pulse
Beam Deviation :	≤ 1.0 arcsec	Adhesion and Durability :	Per MIL-C-675A

Part Number	Diameter (D)	Thickness (mm)	Free Spectral Range at 600nm (cm ⁻¹)
SE-1.00-0.25-UV	1.000"	0.25	13.4
SE-1.00-0.30-UV	1.000"	0.30	11.2
SE-1.00-0.50-UV	1.000"	0.50	6.7
SE-1.00-0.70-UV	1.000"	0.70	4.8
SE-1.00-1.00-UV	1.000"	1.00	3.4
SE-1.00-1.50-UV	1.000"	1.50	2.2
SE-1.00-2.00-UV	1.000"	2.00	1.7
SE-1.00-3.00-UV	1.000"	3.00	1.1
SE-1.00-4.00-UV	1.000"	4.00	0.84
SE-1.00-5.00-UV	1.000"	5.00	0.67
SE-1.00-6.00-UV	1.000"	6.00	0.56
SE-1.00-7.00-UV	1.000"	7.00	0.48
SE-1.00-8.00-UV	1.000"	8.00	0.42
SE-1.00-10.00-UV	1.000"	10.00	0.34
SE-1.00-10.50-UV	1.000"	10.50	0.32
SE-1.00-15.00-UV	1.000"	15.00	0.22

* Other dimensions and wavelengths available prototype and production quantities.



Table of Contents

Interference Bandpass Filters	137
Reflective Neutral Density Filters	140
Absorptive Neutral Density Filters	141
Long Wave Pass Filters	142
Short Wave Pass Filters	143
Color Glass Bandpass Filters	144
Color Glass Longwave Sharp Cut Filters	146
Heat Control Filters	149
Heat Absorbing Filters	150

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index



Interference Bandpass Filters

SPECIFICATIONS

Diameter Tolerance :	+0.0/-0.25 mm	Bandwidth Tolerance :	± 20% of FWHM
Thickness :	0.25" nominal	Clear Aperture :	0.50" dia. : > 70% of diameter
Surface Figure :	Commercial Polish		1.00" dia. : > 80% of diameter
Surface Quality :	80-50		2.00" dia. : > 90% of diameter
CWL Tolerance :	± 20% of FWHM	Temperature range :	-60°C ~ +70°C

Part Number			CWL (nm)	FWHM (nm)	Min. Tpeak(%)
0.500"	1.000"	2.000"			
BF-050-220.0-10	BF-100-220.0-10	BF-200-220.0-10	220.0	10	12.0
BF-050-232.0-10	BF-100-232.0-10	BF-200-232.0-10	232.0	10	12.0
BF-050-253.7-10	BF-100-253.7-10	BF-200-253.7-10	253.7	10	12.0
BF-050-260.0-10	BF-100-260.0-10	BF-200-260.0-10	260.0	10	12.0
BF-050-265.0-10	BF-100-265.0-10	BF-200-265.0-10	265.0	10	12.0
BF-050-280.0-10	BF-100-280.0-10	BF-200-280.0-10	280.0	10	12.0
BF-050-289.0-10	BF-100-289.0-10	BF-200-289.0-10	289.0	10	12.0
BF-050-296.7-10	BF-100-296.7-10	BF-200-296.7-10	296.7	10	12.0
BF-050-300.0-10	BF-100-300.0-10	BF-200-300.0-10	300.0	10	12.0
BF-050-307.1-10	BF-100-307.1-10	BF-200-307.1-10	307.1	10	12.0
BF-050-310.0-10	BF-100-310.0-10	BF-200-310.0-10	310.0	10	12.0
BF-050-325.0-10	BF-100-325.0-10	BF-200-325.0-10	325.0	10	12.0
BF-050-337.0-10	BF-100-337.0-10	BF-200-337.0-10	337.0	10	25.0
BF-050-340.0-10	BF-100-340.0-10	BF-200-340.0-10	340.0	10	25.0
BF-050-350.0-10	BF-100-350.0-10	BF-200-350.0-10	350.0	10	25.0
BF-050-360.0-10	BF-100-360.0-10	BF-200-360.0-10	360.0	10	25.0
BF-050-370.0-10	BF-100-370.0-10	BF-200-370.0-10	370.0	10	25.0
BF-050-380.0-10	BF-100-380.0-10	BF-200-380.0-10	380.0	10	25.0
BF-050-390.0-10	BF-100-390.0-10	BF-200-390.0-10	390.0	10	25.0
BF-050-400.0-10	BF-100-400.0-10	BF-200-400.0-10	400.0	10	30.0
BF-050-410.0-10	BF-100-410.0-10	BF-200-410.0-10	410.0	10	35.0
BF-050-415.0-10	BF-100-415.0-10	BF-200-415.0-10	415.0	10	35.0
BF-050-420.0-10	BF-100-420.0-10	BF-200-420.0-10	420.0	10	40.0
BF-050-430.0-10	BF-100-430.0-10	BF-200-430.0-10	430.0	10	40.0
BF-050-244.0-10	BF-100-440.0-10	BF-200-440.0-10	440.0	10	40.0
BF-050-450.0-25	BF-100-450.0-25	BF-200-450.0-25	450.0	25	40.0
BF-050-457.9-03	BF-100-457.9-03	BF-200-457.9-03	457.9	3	35.0
BF-050-470.0-10	BF-100-470.0-10	BF-200-470.0-10	470.0	10	45.0
BF-050-480.0-10	BF-100-480.0-10	BF-200-480.0-10	480.0	10	45.0
BF-050-486.1-10	BF-100-486.1-10	BF-200-486.1-10	486.1	10	45.0
BF-050-490.0-10	BF-100-490.0-10	BF-200-490.0-10	490.0	10	45.0
BF-050-500.0-25	BF-100-500.0-25	BF-200-500.0-25	500.0	25	50.0

continued



Interference Bandpass Filters

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index

	Part Number			CWL (nm)	FWHM (nm)	Min. Tpeak(%)
	0.500"	1.000"	2.000"			
BF-050-505.5-10	BF-100-505.5-10	BF-200-505.5-10	505.0	10	45.0	
BF-050-514.5-10	BF-100-514.5-10	BF-200-514.5-10	514.5	10	45.0	
BF-050-520.0-10	BF-100-520.0-10	BF-200-520.0-10	520.0	10	45.0	
BF-050-527.0-10	BF-100-527.0-10	BF-200-527.0-10	527.0	10	45.0	
BF-050-532.0-10	BF-100-532.0-10	BF-200-532.0-10	532.0	10	45.0	
BF-050-546.1-10	BF-100-546.1-10	BF-200-546.1-10	546.1	10	45.0	
BF-050-550.0-25	BF-100-550.0-25	BF-200-550.0-25	550.0	25	50.0	
BF-050-560.0-10	BF-100-560.0-10	BF-200-560.0-10	560.0	10	50.0	
BF-050-568.2-03	BF-100-568.2-03	BF-200-568.2-03	568.2	3	40.0	
BF-050-570.0-10	BF-100-570.0-10	BF-200-570.0-10	570.0	10	50.0	
BF-050-577.0-10	BF-100-577.0-10	BF-200-577.0-10	577.0	10	50.0	
BF-050-585.0-10	BF-100-585.0-10	BF-200-585.0-10	585.0	10	50.0	
BF-050-589.6-10	BF-100-589.6-10	BF-200-589.6-10	589.6	10	50.0	
BF-050-600.0-25	BF-100-600.0-25	BF-200-600.0-25	600.0	25	50.0	
BF-050-610.0-10	BF-100-610.0-10	BF-200-610.0-10	610.0	10	50.0	
BF-050-620.0-10	BF-100-620.0-10	BF-200-620.0-10	620.0	10	45.0	
BF-050-632.8-10	BF-100-632.8-10	BF-200-632.8-10	632.8	10	50.0	
BF-050-640.0-10	BF-100-640.0-10	BF-200-640.0-10	640.0	10	50.0	
BF-050-650.0-40	BF-100-650.0-40	BF-200-650.0-40	650.0	40	50.0	
BF-050-656.2-10	BF-100-656.2-10	BF-200-656.2-10	656.2	10	50.0	
BF-050-660.0-25	BF-100-660.0-25	BF-200-660.0-25	660.0	25	50.0	
BF-050-670.0-25	BF-100-670.0-25	BF-200-670.0-25	670.0	25	50.0	
BF-050-675.0-20	BF-100-675.0-20	BF-200-675.0-20	675.0	20	50.0	
BF-050-680.0-10	BF-100-680.0-10	BF-200-680.0-10	680.0	10	50.0	
BF-050-685.0-10	BF-100-685.0-10	BF-200-685.0-10	685.0	10	50.0	
BF-050-694.3-10	BF-100-694.3-10	BF-200-694.3-10	694.3	10	50.0	
BF-050-700.0-25	BF-100-700.0-25	BF-200-700.0-25	700.0	25	50.0	
BF-050-710.0-10	BF-100-710.0-10	BF-200-710.0-10	710.0	10	50.0	
BF-050-720.0-10	BF-100-720.0-10	BF-200-720.0-10	720.0	10	50.0	
BF-050-730.0-10	BF-100-730.0-10	BF-200-730.0-10	730.0	10	50.0	
BF-050-740.0-10	BF-100-740.0-10	BF-200-740.0-10	740.0	10	50.0	
BF-050-750.0-25	BF-100-750.0-25	BF-200-750.0-25	750.0	25	50.0	
BF-050-760.0-10	BF-100-760.0-10	BF-200-760.0-10	760.0	10	50.0	
BF-050-765.0-10	BF-100-765.0-10	BF-200-765.0-10	765.0	10	50.0	
BF-050-766.5-25	BF-100-766.5-25	BF-200-766.5-25	766.5	10	50.0	
BF-050-770.0-10	BF-100-770.0-10	BF-200-770.0-10	770.0	10	50.0	
BF-050-780.0-25	BF-100-780.0-25	BF-200-780.0-25	780.0	25	50.0	
BF-050-785.0-10	BF-100-785.0-10	BF-200-785.0-10	785.0	10	50.0	
BF-050-790.0-20	BF-100-790.0-20	BF-200-790.0-20	790.0	10	50.0	
BF-050-794.7-10	BF-100-794.7-10	BF-200-794.7-10	794.7	10	50.0	
BF-050-800.0-25	BF-100-800.0-25	BF-200-800.0-25	800.0	25	45.0	
BF-050-810.0-10	BF-100-810.0-10	BF-200-810.0-10	810.0	10	50.0	

continued



Interference Bandpass Filters

0.500"	Part Number		CWL (nm)	FWHM (nm)	Min. T _{peak} (%)
	1.000"	2.000"			
BF-050-820.0-10	BF-100-820.0-10	BF-200-820.0-10	820.0	10	50.0
BF-050-830.0-10	BF-100-830.0-10	BF-200-830.0-10	830.0	10	50.0
BF-050-840.0-10	BF-100-840.0-10	BF-200-840.0-10	840.0	10	50.0
BF-050-850.0-25	BF-100-850.0-25	BF-200-850.0-25	850.0	25	45.0
BF-050-860.0-15	BF-100-860.0-10	BF-200-860.0-10	860.0	10	50.0
BF-050-870.0-10	BF-100-870.0-10	BF-200-870.0-10	870.0	10	50.0
BF-050-880.0-10	BF-100-880.0-10	BF-200-880.0-10	880.0	10	50.0
BF-050-890.0-10	BF-100-890.0-10	BF-200-890.0-10	890.0	10	50.0
BF-050-900.0-25	BF-100-900.0-25	BF-200-900.0-25	900.0	25	45.0
BF-050-905.0-10	BF-100-905.0-10	BF-200-905.0-10	905.0	10	50.0
BF-050-910.0-10	BF-100-910.0-10	BF-200-910.0-10	910.0	10	45.0
BF-050-920.0-10	BF-100-920.0-10	BF-200-920.0-10	920.0	10	45.0
BF-050-930.0-10	BF-100-930.0-10	BF-200-930.0-10	930.0	10	45.0
BF-050-940.0-10	BF-100-940.0-10	BF-200-940.0-10	940.0	10	45.0
BF-050-950.0-40	BF-100-950.0-40	BF-200-950.0-40	950.0	40	45.0
BF-050-960.0-10	BF-100-960.0-10	BF-200-960.0-10	960.0	10	45.0
BF-050-970.0-10	BF-100-970.0-10	BF-200-970.0-10	970.0	10	45.0
BF-050-980.0-10	BF-100-980.0-10	BF-200-980.0-10	980.0	10	45.0
BF-050-990.0-10	BF-100-990.0-10	BF-200-990.0-10	990.0	10	45.0
BF-050-1000.0-25	BF-100-1000.0-25	BF-200-1000.0-25	1000.0	25	45.0
BF-050-1010.0-10	BF-100-1010.0-10	BF-200-1010.0-10	1010.0	10	45.0
BF-050-1020.0-10	BF-100-1020.0-10	BF-200-1020.0-10	1020.0	10	45.0
BF-050-1030.0-10	BF-100-1030.0-10	BF-200-1030.0-10	1030.0	10	45.0
BF-050-1040.0-10	BF-100-1040.0-10	BF-200-1040.0-10	1040.0	10	45.0
BF-050-1047.0-10	BF-100-1047.0-10	BF-200-1047.0-10	1047.0	10	45.0
BF-050-1050.0-10	BF-100-1050.0-10	BF-200-1050.0-10	1050.0	10	45.0
BF-050-1064.0-10	BF-100-1064.0-10	BF-200-1064.0-10	1064.0	10	45.0
BF-050-1070.0-10	BF-100-1070.0-10	BF-200-1070.0-10	1070.0	10	45.0
BF-050-1080.0-10	BF-100-1080.0-10	BF-200-1080.0-10	1080.0	10	45.0
BF-050-1100.0-10	BF-100-1100.0-10	BF-200-1100.0-10	1100.0	10	45.0
BF-050-1200.0-10	BF-100-1200.0-10	BF-200-1200.0-10	1200.0	10	40.0
BF-050-1300.0-10	BF-100-1300.0-10	BF-200-1300.0-10	1300.0	10	40.0
BF-050-1319.0-10	BF-100-1319.0-10	BF-200-1319.0-10	1319.0	10	40.0
BF-050-1330.0-10	BF-100-1330.0-10	BF-200-1330.0-10	1330.0	10	40.0
BF-050-1400.0-10	BF-100-1400.0-10	BF-200-1400.0-10	1400.0	10	40.0
BF-050-1500.0-10	BF-100-1500.0-10	BF-200-1500.0-10	1500.0	10	40.0
BF-050-1550.0-10	BF-100-1550.0-10	BF-200-1550.0-10	1550.0	10	35.5
BF-050-1600.0-10	BF-100-1600.0-10	BF-200-1600.0-10	1600.0	10	35.0
BF-050-1700.0-10	BF-100-1700.0-10	BF-200-1700.0-10	1700.0	10	35.0
BF-050-1800.0-10	BF-100-1800.0-10	BF-200-1800.0-10	1800.0	10	35.0
BF-050-1900.0-10	BF-100-1900.0-10	BF-200-1900.0-10	1900.0	10	35.0
BF-050-2000.0-10	BF-100-2000.0-10	BF-200-2000.0-10	2000.0	10	35.0

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index



Reflective Neutral Density Filters

Tutorials

Lenses

Windows

Mirrors

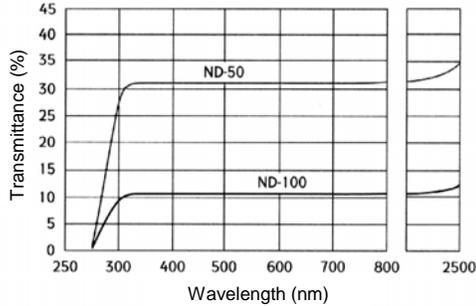
Prisms

Beamsplitters

Polarizers

Filters

Index



SPECIFICATIONS

Material : Schott B270 glass
 Thickness : 0.5mm ~ 3mm
 Size Tolerance ; +0.00 / -0.30
 Surface Figure : Commercial Polish
 Surface Quality : 80-50
 Optical Density : nominal @ 546nm
 Clear Aperture : > 85% of diameter

Nomial Optical Density	Transmittance (%)	Part Number		
		1.000" Round	2.000" Round	2.00" x 2.00" Square
0.04	91.20	RND-0.04-1.00-R	RND-0.04-2.00-R	RND-0.04-2.00-S
0.10	79.43	RND-0.10-1.00-R	RND-0.10-2.00-R	RND-0.10-2.00-S
0.15	70.79	RND-0.15-1.00-R	RND-0.15-2.00-R	RND-0.15-2.00-S
0.20	63.10	RND-0.20-1.00-R	RND-0.20-2.00-R	RND-0.20-2.00-S
0.30	50.12	RND-0.30-1.00-R	RND-0.30-2.00-R	RND-0.30-2.00-S
0.40	39.81	RND-0.40-1.00-R	RND-0.40-2.00-R	RND-0.40-2.00-S
0.50	31.62	RND-0.50-1.00-R	RND-0.50-2.00-R	RND-0.50-2.00-S
0.60	25.12	RND-0.60-1.00-R	RND-0.60-2.00-R	RND-0.60-2.00-S
0.70	19.95	RND-0.70-1.00-R	RND-0.70-2.00-R	RND-0.70-2.00-S
0.80	15.85	RND-0.80-1.00-R	RND-0.80-2.00-R	RND-0.80-2.00-S
0.90	12.59	RND-0.90-1.00-R	RND-0.90-2.00-R	RND-0.90-2.00-S
1.00	10.00	RND-1.00-1.00-R	RND-1.00-2.00-R	RND-1.00-2.00-S
1.30	5.01	RND-1.30-1.00-R	RND-1.30-2.00-R	RND-1.30-2.00-S
1.50	3.16	RND-1.50-1.00-R	RND-1.50-2.00-R	RND-1.50-2.00-S
2.00	1.00	RND-2.00-1.00-R	RND-2.00-2.00-R	RND-2.00-2.00-S
2.50	0.32	RND-2.50-1.00-R	RND-2.50-2.00-R	RND-2.50-2.00-S
3.00	0.10	RND-3.00-1.00-R	RND-3.00-2.00-R	RND-3.00-2.00-S
4.00	0.01	RND-4.00-1.00-R	RND-4.00-2.00-R	RND-4.00-2.00-S
5.00	0.001	RND-5.00-1.00-R	RND-5.00-2.00-R	RND-5.00-2.00-S

* Other dimensions available in prototype and production quantities.



Absorptive Neutral Density Filters

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS

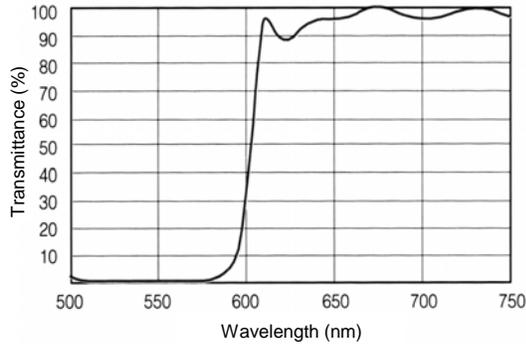
Material :	Schott glass	Surface Quality :	80-50
Thickness :	0.5mm ~ 3mm	Optical Density :	nomial @ 546nm
Size Tolerance ;	+0.00 / -0.30	Clear Aperture :	> 85% of diameter
Surface Figure :	Commercial Polish		

Nomial Optical Density	Transmittance (%)	Part Number		
		1.000" Round	2.000" Round	2.00" x 2.00" Square
0.04	91.20	AND-0.04-1.00-R	AND-0.04-2.00-R	AND-0.04-2.00-S
0.10	79.43	AND-0.10-1.00-R	AND-0.10-2.00-R	AND-0.10-2.00-S
0.15	70.79	AND-0.15-1.00-R	AND-0.15-2.00-R	AND-0.15-2.00-S
0.20	63.10	AND-0.20-1.00-R	AND-0.20-2.00-R	AND-0.20-2.00-S
0.30	50.12	AND-0.30-1.00-R	AND-0.30-2.00-R	AND-0.30-2.00-S
0.40	39.81	AND-0.40-1.00-R	AND-0.40-2.00-R	AND-0.40-2.00-S
0.50	31.62	AND-0.50-1.00-R	AND-0.50-2.00-R	AND-0.50-2.00-S
0.60	25.12	AND-0.60-1.00-R	AND-0.60-2.00-R	AND-0.60-2.00-S
0.70	19.95	AND-0.70-1.00-R	AND-0.70-2.00-R	AND-0.70-2.00-S
0.80	15.85	AND-0.80-1.00-R	AND-0.80-2.00-R	AND-0.80-2.00-S
0.90	12.59	AND-0.90-1.00-R	AND-0.90-2.00-R	AND-0.90-2.00-S
1.00	10.00	AND-1.00-1.00-R	AND-1.00-2.00-R	AND-1.00-2.00-S
1.30	5.01	AND-1.30-1.00-R	AND-1.30-2.00-R	AND-1.30-2.00-S
1.50	3.16	AND-1.50-1.00-R	AND-1.50-2.00-R	AND-1.50-2.00-S
2.00	1.00	AND-2.00-1.00-R	AND-2.00-2.00-R	AND-2.00-2.00-S
2.50	0.32	AND-2.50-1.00-R	AND-2.50-2.00-R	AND-2.50-2.00-S
3.00	0.10	AND-3.00-1.00-R	AND-3.00-2.00-R	AND-3.00-2.00-S
4.00	0.01	AND-4.00-1.00-R	AND-4.00-2.00-R	AND-4.00-2.00-S
5.00	0.001	AND-5.00-1.00-R	AND-5.00-2.00-R	AND-5.00-2.00-S

* Other dimensions available in prototype and production quantities.



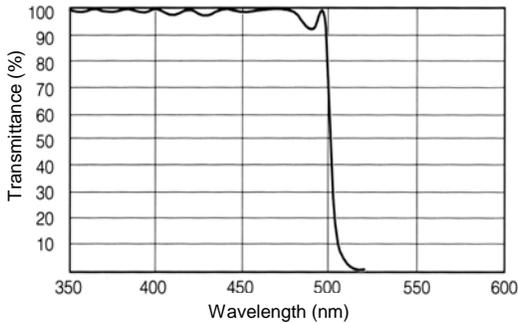
SPECIFICATIONS



Material :	White glass
Thickness :	0.08"~0.26"
Surface Figure :	$<2\lambda$ / inch
Surface Quality :	80-50
Wedge :	< 3 arcmin
Cut off :	50% of peak transmittance
Accuracy :	Cut on $\pm 3\%$ of wavelength
Clear Aperture :	$> 85\%$ of diameter
Reflectance :	$R > 99.5\%$
Transmittance :	$T > 85\%$, below 400nm $T > 75\%$

Cut-on λ in nm	Part Number		
	1.000" Round	2.000" Round	2.00" x 2.00" Square
400	LPF-400-1.00-R	LPF-400-2.00-R	LPF-400-2.00-S
450	LPF-450-1.00-R	LPF-450-2.00-R	LPF-450-2.00-S
500	LPF-500-1.00-R	LPF-500-2.00-R	LPF-500-2.00-S
550	LPF-550-1.00-R	LPF-550-2.00-R	LPF-550-2.00-S
600	LPF-600-1.00-R	LPF-600-2.00-R	LPF-600-2.00-S
650	LPF-650-1.00-R	LPF-650-2.00-R	LPF-650-2.00-S
700	LPF-700-1.00-R	LPF-700-2.00-R	LPF-700-2.00-S
750	LPF-750-1.00-R	LPF-750-2.00-R	LPF-750-2.00-S
800	LPF-800-1.00-R	LPF-800-2.00-R	LPF-800-2.00-S
850	LPF-850-1.00-R	LPF-850-2.00-R	LPF-850-2.00-S
900	LPF-900-1.00-R	LPF-900-2.00-R	LPF-900-2.00-S
950	LPF-950-1.00-R	LPF-950-2.00-R	LPF-950-2.00-S
1000	LPF-1000-1.00-R	LPF-1000-2.00-R	LPF-1000-2.00-S

* Other dimensions and wavelengths available in prototype and production quantities.



SPECIFICATIONS

Material :	White glass
Thickness :	0.08"~0.26"
Surface Figure :	<2λ / inch
Surface Quality :	80-50
Wedge :	< 3 arcmin
Cut off :	50% of peak transmittance
Accuracy :	Cut off ± 3% of wavelength
Clear Aperture :	> 85% of diameter
Reflectance :	R>99.5%
Transmittance :	T>85%, below 400nm T>75%

Cut-off λ in nm	Part Number		
	1.000" Round	2.000" Round	2.00" x 2.00" Square
400	SPF-400-1.00-R	SPF-400-2.00-R	SPF-400-2.00-S
450	SPF-450-1.00-R	SPF-450-2.00-R	SPF-450-2.00-S
500	SPF-500-1.00-R	SPF-500-2.00-R	SPF-500-2.00-S
550	SPF-550-1.00-R	SPF-550-2.00-R	SPF-550-2.00-S
600	SPF-600-1.00-R	SPF-600-2.00-R	SPF-600-2.00-S
650	SPF-650-1.00-R	SPF-650-2.00-R	SPF-650-2.00-S
700	SPF-700-1.00-R	SPF-700-2.00-R	SPF-700-2.00-S
750	SPF-750-1.00-R	SPF-750-2.00-R	SPF-750-2.00-S
800	SPF-800-1.00-R	SPF-800-2.00-R	SPF-800-2.00-S
850	SPF-850-1.00-R	SPF-850-2.00-R	SPF-850-2.00-S
900	SPF-900-1.00-R	SPF-900-2.00-R	SPF-900-2.00-S
950	SPF-950-1.00-R	SPF-950-2.00-R	SPF-950-2.00-S
1000	SPF-1000-1.00-R	SPF-1000-2.00-R	SPF-1000-2.00-S

* Other dimensions and wavelengths available in prototype and production quantities.

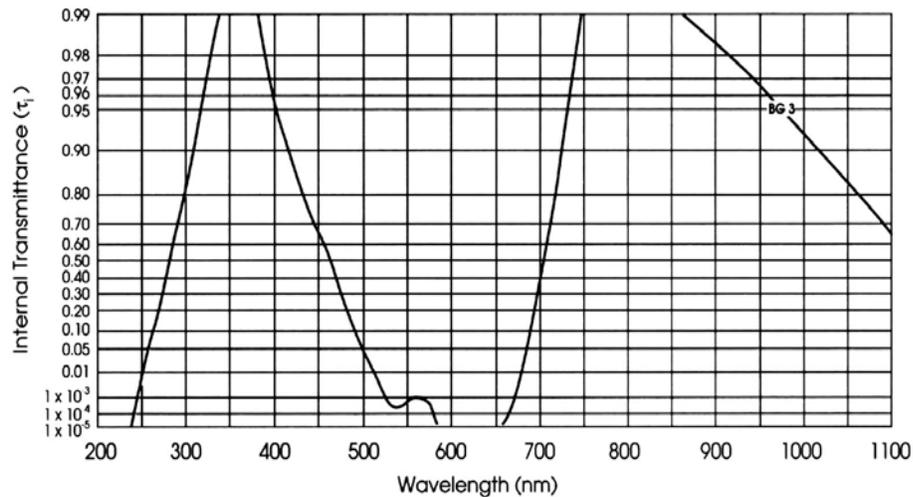


SPECIFICATIONS

Material :	Schott color glass or equivalent	Thickness :	2-3mm nominal
Surface Figure :	Commercial polish	Clear Aperture :	>90% of central dimension
Surface Quality :	80-50		

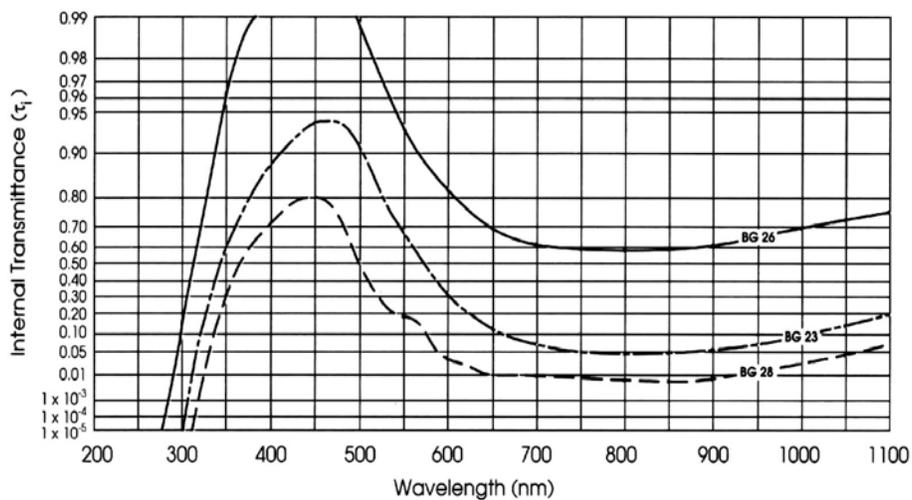
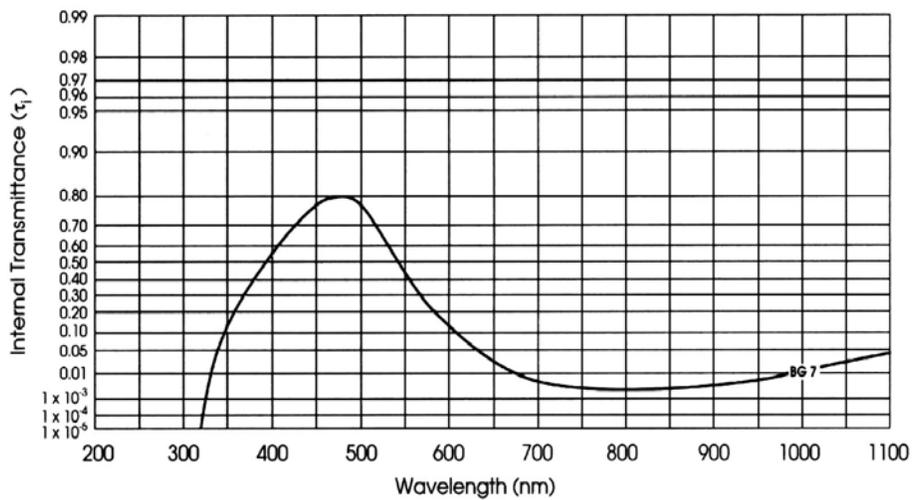
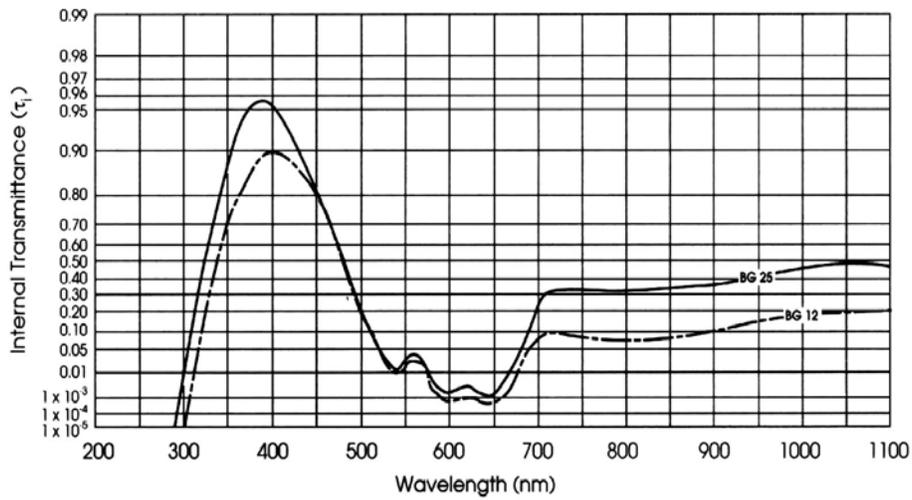
Glass Type	Part Number		
	1.000" Round	2.000" Round	2.00" x 2.00" Square
BG-3	BG-03-1.00-R	BG-03-2.00-R	BG-03-2.00-S
BG-7	BG-07-1.00-R	BG-07-2.00-R	BG-07-2.00-S
BG-12	BG-12-1.00-R	BG-12-2.00-R	BG-12-2.00-S
BG-18	BG-18-1.00-R	BG-18-2.00-R	BG-18-2.00-S
BG-23	BG-23-1.00-R	BG-23-2.00-R	BG-23-2.00-S
BG-24	BG-24-1.00-R	BG-24-2.00-R	BG-24-2.00-S
BG-25	BG-25-1.00-R	BG-25-2.00-R	BG-25-2.00-S
BG-28	BG-28-1.00-R	BG-28-2.00-R	BG-28-2.00-S
BG-38	BG-38-1.00-R	BG-38-2.00-R	BG-38-2.00-S
BG-39	BG-39-1.00-R	BG-39-2.00-R	BG-39-2.00-S
BG-40	BG-40-1.00-R	BG-40-2.00-R	BG-40-2.00-S

* Other dimensions available in prototype and production quantities.





Color Glass Bandpass Filters



Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index



Color Glass Bandpass Filters

Tutorials

Lenses

Windows

Mirrors

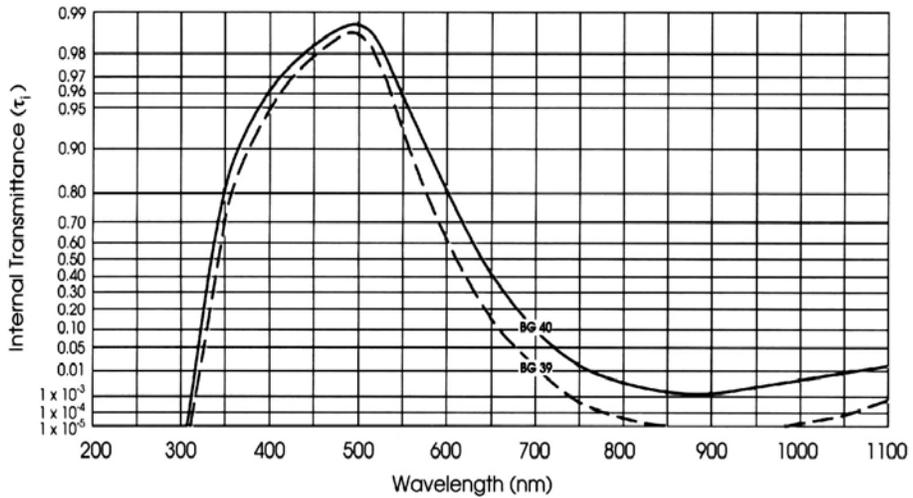
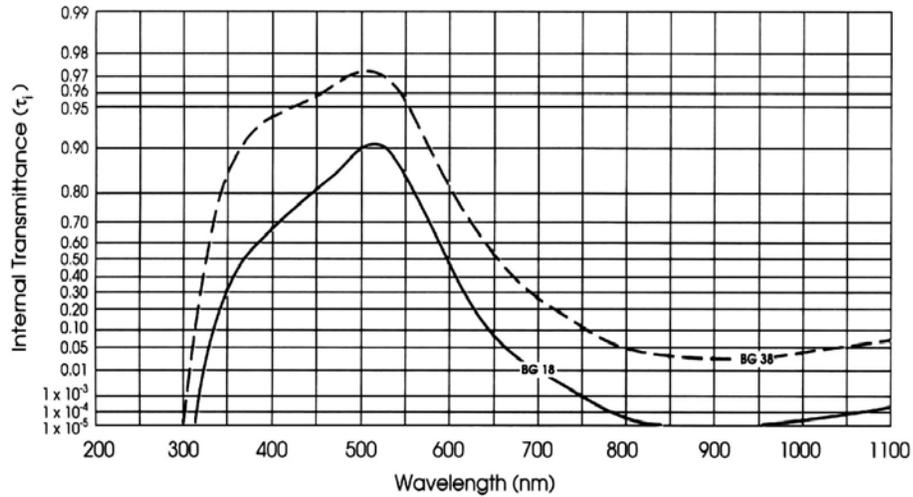
Prisms

Beamsplitters

Polarizers

Filters

Index





Color Glass Longpass Sharp Cut Filters

SPECIFICATIONS

Material :	Schott color glass or equivalent	Thickness :	2-3mm nominal
Surface Figure :	Commercial polish	Clear Aperture :	>90% of central dimension
Surface Quality :	80-50		

Glass Type	Part Number		
	1.000" Round	2.000" Round	2.00" x 2.00" Square
WG-225	WG-225-1.00-R	WG-225-2.00-R	WG-225-2.00-S
WG-280	WG-280-1.00-R	WG-280-2.00-R	WG-280-2.00-S
WG-295	WG-295-1.00-R	WG-295-2.00-R	WG-295-2.00-S
WG-305	WG-305-1.00-R	WG-305-2.00-R	WG-305-2.00-S
WG-320	WG-320-1.00-R	WG-320-2.00-R	WG-320-2.00-S
CG-385	CG-385-1.00-R	CG-385-2.00-R	CG-385-2.00-S
CG-395	CG-395-1.00-R	CG-395-2.00-R	CG-395-2.00-S
CG-400	CG-400-1.00-R	CG-400-2.00-R	CG-400-2.00-S
CG-420	CG-420-1.00-R	CG-420-2.00-R	CG-420-2.00-S
CG-435	CG-435-1.00-R	CG-435-2.00-R	CG-435-2.00-S
CG-455	CG-455-1.00-R	CG-455-2.00-R	CG-455-2.00-S
CG-475	CG-475-1.00-R	CG-475-2.00-R	CG-475-2.00-S
CG-495	CG-495-1.00-R	CG-495-2.00-R	CG-495-2.00-S
CG-515	CG-515-1.00-R	CG-515-2.00-R	CG-515-2.00-S
CG-530	CG-530-1.00-R	CG-530-2.00-R	CG-530-2.00-S
OG-550	OG-550-1.00-R	OG-550-2.00-R	OG-550-2.00-S
OG-570	OG-570-1.00-R	OG-570-2.00-R	OG-570-2.00-S
OG-590	OG-590-1.00-R	OG-590-2.00-R	OG-590-2.00-S
RG-610	RG-610-1.00-R	RG-610-2.00-R	RG-610-2.00-S
RG-630	RG-630-1.00-R	RG-630-2.00-R	RG-630-2.00-S
RG-645	RG-655-1.00-R	RG-655-2.00-R	RG-655-2.00-S
RG-665	RG-665-1.00-R	RG-665-2.00-R	RG-665-2.00-S
RG-695	RG-695-1.00-R	RG-695-2.00-R	RG-695-2.00-S
RG-715	RG-715-1.00-R	RG-715-2.00-R	RG-715-2.00-S
RG-780	RG-780-1.00-R	RG-780-2.00-R	RG-780-2.00-S
RG-830	RG-830-1.00-R	RG-830-2.00-R	RG-830-2.00-S
RG-850	RG-850-1.00-R	RG-850-2.00-R	RG-850-2.00-S
RG-900	RG-900-1.00-R	RG-900-2.00-R	RG-900-2.00-S
RG1000	RG-1000-1.00-R	RG-1000-2.00-R	RG-1000-2.00-R

* Other dimensions available in prototype and production quantities.



Color Glass Longpass Sharp Cut Filters

Tutorials

Lenses

Windows

Mirrors

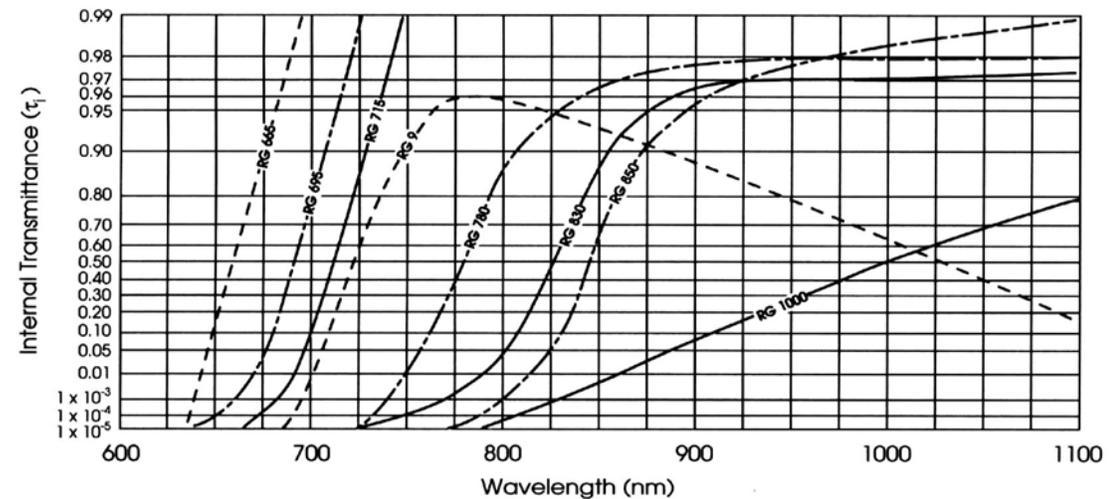
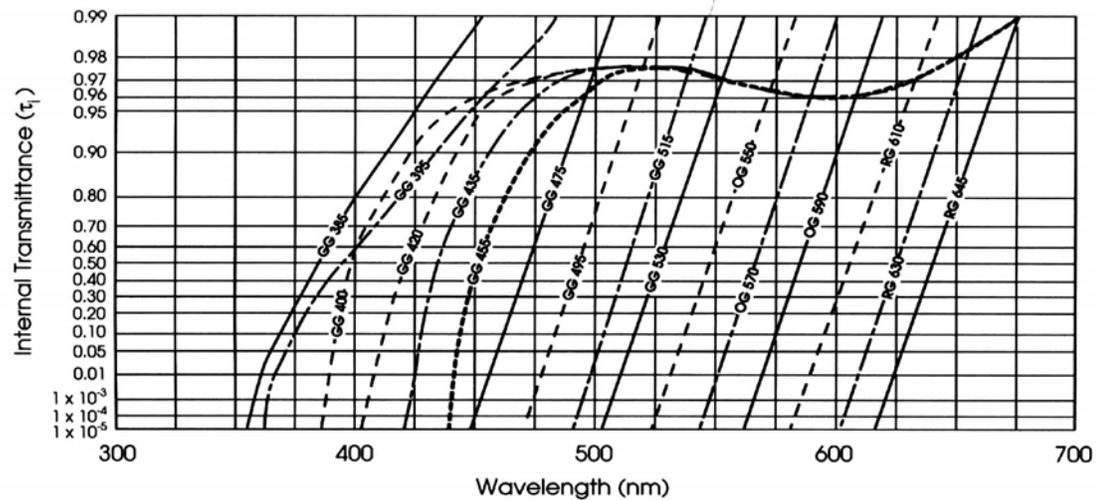
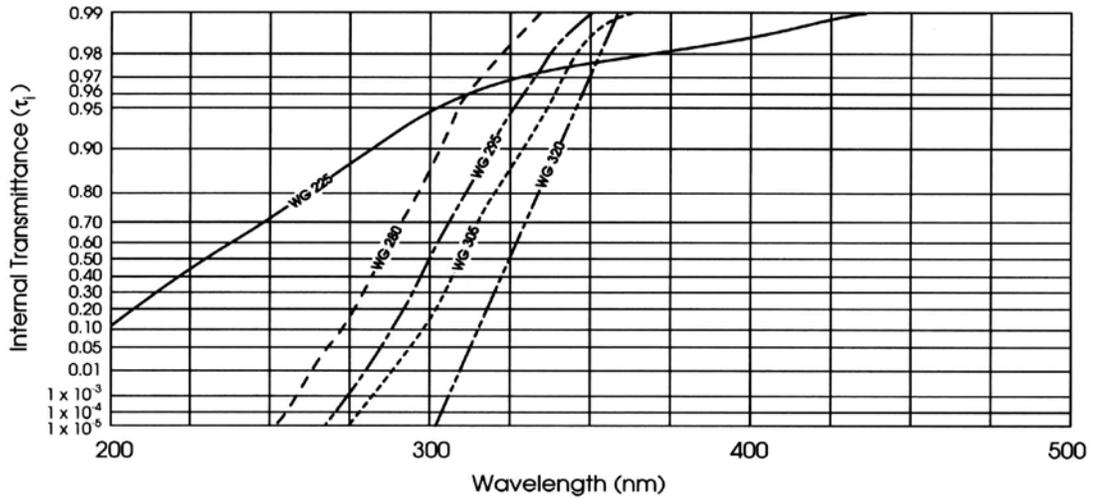
Prisms

Beamsplitters

Polarizers

Filters

Index





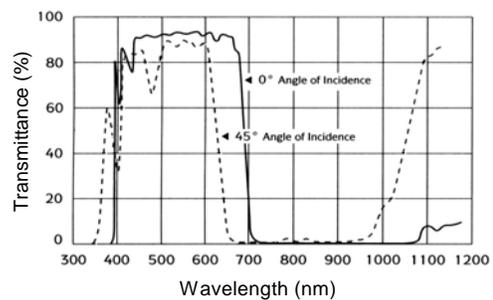
SPECIFICATIONS

Material :	Schott B270 glass	Surface Quality :	80-50
Surface Figure :	$< 2\lambda$ / inch	Clear Aperture :	> 85% of diameter
Thickness :	3.2mm nominal	Operating temperature :	200°C max.
Size Tolerance ;	$<+0.00 / -0.20$	Clear Aperture :	> 85% of diameter

Hot Mirrors

Tave >85% @ 450 - 675nm
 Rave >90% @ 750 - 1200nm

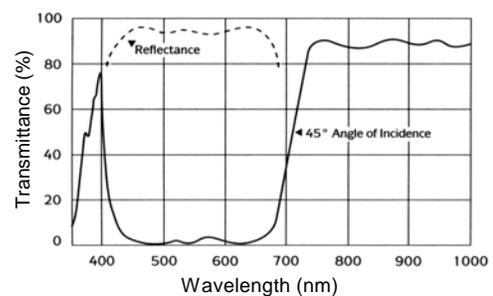
Part Number	Size
HR-1.00-R	1.00" Round
HR-2.00-R	2.00" Round
HR-2.00-S	2.00" Square



Cold Mirrors

Tave >85% @ 750 - 1200nm
 Rave >90% @ 420 - 630nm

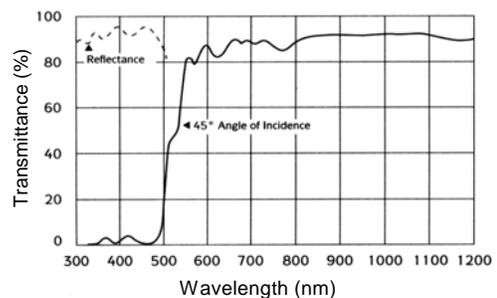
Part Number	Size
CR-1.00-R	1.00" Round
CR-2.00-R	2.00" Round
CR-2.00-S	2.00" Square



UV Cold Mirrors

Tave >85% @ 600 - 1200nm
 Rave >90% @ 325 - 475nm

Part Number	Size
UR-1.00-R	1.00" Round
UR-2.00-R	2.00" Round
UR-2.00-S	2.00" Square



* Other dimensions and wavelengths available in prototype and production quantities.



Heat Absorbing Filters

Tutorials

Lenses

Windows

Mirrors

Prisms

Beamsplitters

Polarizers

Filters

Index

SPECIFICATIONS

Material :	Schott color glass or equivalent	Thickness :	2-3mm nominal
Surface Figure :	Commercial polish	Clear Aperture :	>90% of central dimension
Surface Quality :	80-50		

Glass Type	Part Number		
	1.000" Round	2.000" Round	2.00" x 2.00" Square
KG-1	KG-1-1.00-R	KG-1-2.00-R	KG-1-2.00-S
KG-2	KG-1-1.00-R	KG-1-2.00-R	KG-1-2.00-S
KG-3	KG-1-1.00-R	KG-1-2.00-R	KG-1-2.00-S
KG-4	KG-1-1.00-R	KG-1-2.00-R	KG-1-2.00-S
KG-5	KG-1-1.00-R	KG-1-2.00-R	KG-1-2.00-S

* Other dimensions available in prototype and production quantities.

