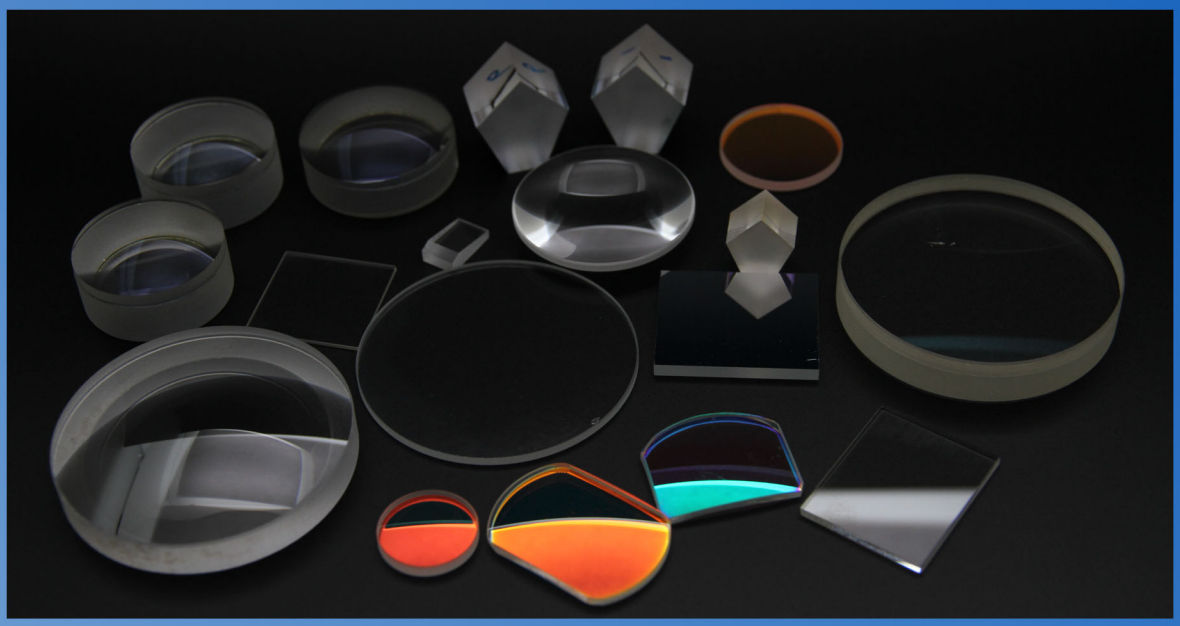
Catalog 2026



Fuzhou EastOptics Inc.

EastOptics is a professional optical components supplier in China.Our precision optical components are used for optical instruments,laser systems and telecom devices.Our team has over 10 years experience in optical design,manufacturing and customer communications.We are dedicating to provide high quality optics products and services to our valued customers.

EastOptics focus on manufacturing high precision optical components for the laboratory and for production or OEM requirements, EastOptics’s product include windows,prisms,lenses,mirros,polarization optics products,crystal products and coatings, windows,prisms,mirros and lenses are our featured products.

EastOptics's quality assurance system is constructed according to ISO9001:2008 quality management system.EastOptics also equipped advanced inspedtion instruments.EastOptics’s inspection standard is according to MIL-PRF-13830B,DIN ISO 10110 and Chinese State Standards.Our optical materials are compliance with RoHS Directive(2002/95/EC).

EastOptics will keep good cooperation relationship with our valued customers,and will continue to provide the best products,reasonable price,on time delivery and better services to the customers.

Flexible customizing

EastOptics has the capability to create products that meet customer needs.We are willing to take on more specialized projects to make special optical components.

Prototype and volume production

With our extensive tooling inventory,EastOptics can make prototype in a short time with very low cost.We have enough facilities and people to manufacture large quantity products in schedule and on time.

Quality Assurance

Any product shipped before shall be subject to EastOptics's standard examination procedure.EastOptics's metrologies include spectral photometers,goniometers,interferometers and other advanced instruments.

Professinal Services

Our team has over 10 years experiences in optical design,manufacturing and customer interactive communications.

Content

Windows

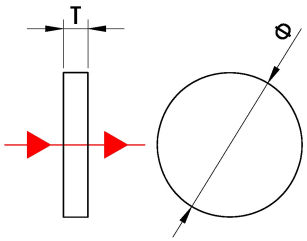
Optical windows are optical glass with ground and polished faces that are relatively parallel. They are used as a protective element between two environments and their impact on the passage of visible light is neutral. When selecting windows you should consider the following properties, transmission, scattering, wavefront distortion, parallelism and resistance to certain environment. Eastoptics offers a wide range windows. Special materials are available upon requset. Eastoptics provides varieties of single layer or multi-layer anti-reflecting coating on optical windows. please refer to the coating chapter for more information.

Material	Properties	Application
BK7	Transmission Range:330-2100nm Refractive Index:1.5164@588nm Thermal Expansion Coefficient:7.5×10^{-6}K Density:2.52g/cm^3	Good performance over visible and near IR spectrum for most application.
Fused silica	Transmission Range:185-2500nm Refractive Index:1.4858@308nm Thermal Expansion Coefficient:0.54×10^{-6}K Density:2.2g/cm^3	Better performance from UV to IR spectrum. Also,it is the best choice for resistance thermal application.
Sapphire	Transmission Range:180nm-4500nm Refractive Index:1.755@1000nm Thermal Expansion Coefficient:8.4×10^{-6}K Density:3.98g/cm^3	Suit for scratch resistance application with better transmission over the wide range spectrum.It can be made much thinner.
Calcium Fluoride	Transmission Range:170-7800nm Refractive Index:1.399@5000nm Thermal Expansion Coefficient:18.85×10^{-6}K Density:3.18g/cm^3	It is applicable for wide rang spectrum, and it is particularly useful for IR laser application.
Magnesium Fluoride	Transmission Range: 120-7000nm Refractive Index:1.376@700nm Thermal Expansion Coefficient:13.7×10^{-6}K（13.7||a;8.48||c） Density:3.17g/cm^3	It is applicable for wide range spectrum, and it is particularly useful for Excimer laser application.
Si	Transmission Range: 1200~7000nm Refractive Index:3.426@5000nm Thermal Expansion Coefficient:2.55×10^{-6}K Density:2.33g/cm^3	IR application
Ge	Transmission Range: 2000~14000nm Refractive Index:4.003@10000nm Thermal Expansion Coefficient:5.5×10^{-6}K Density:5.33g/cm^3	IR application
ZnSe	Transmission Range: 550~19000nm Refractive Index:5.27@5000nm Thermal Expansion Coefficient:7.60×10^{-6}K Density:5.27g/cm^3	IR application

Eastoptics offer following windows:

- BK7 Window
- Fused Silica Window
- Sapphire Window
- Laser Line Window
- Calcium Fluoride Window
- Magnesium Fluoride Window
- Germanium Window
- Silicon Window
- Zinc Selenide Window

BK7 Window



N-BK7(Chinese Equivalent H-K9L),a relatively hard galss,does not scratch easily and can be handled without special precautions.N-BK7 performs well in chemical tests such that special treatment during polishing is not necessary.The bubble and inclusion content of N-BK7 is less than 0.029mm2 per 100 cm3.N-BK7 has excellent transmittance as low as 350nm.

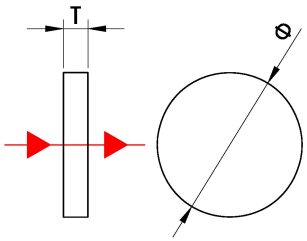
Grade	*E*	*H*	*S*
Material	*N-BK7*		
Diameter Tolerance	*+0.0, -0.1mm*		
Thinkness Tolerance	*±0.1mm*		*±0.2mm*
Clear Aperture	*>90%*		
Parallelism	*5"*	*10"*	*30"*
Wavefront Distortion (@632.8nm)	*λ/10*	*λ/8*	*λ/4*
Surface Quality	*10/5*	*20/10*	*60/40*
Bevel	*Protective*		
Coating	*Uncoated*		

P/N	Φ	T	Grade
10101	10.00	6.00	E
10102	12.70	6.00	E
10103	15.00	6.00	E
10104	20.00	6.00	E
10105	25.40	6.00	E
10106	10.00	6.00	H
10107	12.70	6.00	H
10108	15.00	6.00	H
10109	20.00	6.00	H
10110	25.40	6.00	H
10111	10.00	3.00	S
10112	12.70	3.00	S
10113	25.40	3.00	S
10114	38.00	3.00	S
10115	50.00	3.00	S

●Demension unit:mm

●Other sizes and coatings are available upon request.

Fused Silica Window



Fused silica is formed by chemical combination of silicon and oxygen.Advantages of fused silica material include good UV and IR transmission,low thermal expansion,providing stability and resistance to thermal shock over large temperature excursions,wider thermal operating range and high laser damage threshold.Used for windows,lenses,prisms and mirror substrates.

Transmission Range: 185~2500nm

Thermal Expansion Coefficient: 0.54×10^{-6}/K

Density: 2.20g/cm^3

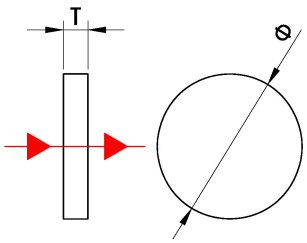
Grade	*E*	*H*	*S*
Material	*UVFS*		
Diameter Tolerance	*+0.0, -0.1mm*		
Thinkness Tolerance	*±0.1mm*		*±0.2mm*
Clear Aperture	*>90%*		
Parallelism	*5"*	*10"*	*30"*
Wavefront Distortion (@632.8nm)	*λ/10*	*λ/8*	*λ/4*
Surface Quality	*10/5*	*20/10*	*60/40*
Bevel	*Protective*		
Coating	*Uncoated*		

P/N	Φ	T	Grade
10201	10.00	6.00	E
10202	12.70	6.00	E
10203	15.00	6.00	E
10204	20.00	6.00	E
10205	25.40	6.00	E
10206	10.00	6.00	H
10207	12.70	6.00	H
10208	15.00	6.00	H
10209	20.00	6.00	H
10210	25.40	6.00	H
10211	10.00	3.00	S
10212	12.70	3.00	S
10213	15.00	3.00	S
10214	20.00	3.00	S
10215	25.40	3.00	S

●Demension unit:mm

●Other sizes and coatings are available upon request.

Sapphire Window



Single crystal sapphire possesses a unique combination of excellent optical, physical and chemical properties. The hardest of the oxide crystals, sapphire retains its high strength at high temperatures, has good thermal properties and excellent transparency. It is chemically resistant to common acids and alkali at temperatures up to 1000 °C as well as to HF below 300°C .These properties encourage its wide use in hostile environments where optical transmission in the range from the vacuum ultraviolet to the near infrared is required. Sapphire is anisotropic hexagonal crystal. Its properties depend on crystallographic direction (relative to the optical c-axis).

Features:

①Transmission in 0.3~5.0μm, no absorption in 2~3μm

②Extremely hard and durable

③High thermal conductivity

④High bulk damage threshold

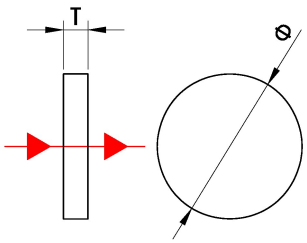
Grade	H	S
Material	Anisotropic synthetic sapphire crystal(Al2O3)	
Orientation	Random	
Diameter Tolerance	±0.1mm	
Thickness Tolerance	±0.1mm	
Clear Aaperture	>90%	
Parallelism	3'	5'
Flatness (@632.8nm)	2λ	3λ
Surface Quality	80/50	120/80
Bevel	Protective	
Coating	Uncoated	

P/N	Φ	T	Grade
10301	5.00	0.50	H
10302	6.35	0.50	H
10303	10.00	1.00	H
10304	12.70	1.00	H
10305	15.00	1.00	H
10306	20.00	1.00	H
10307	25.40	2.00	H
10308	5.00	0.50	S
10309	6.35	0.50	S
10310	10.00	1.00	S
10311	12.70	1.00	S
10312	15.00	1.00	S
10313	20.00	1.00	S
10314	25.40	2.00	S

●Demension unit:mm

●Other sizes and coatings are available upon request.

Laser Line Window



Laser protection window is used for laser output protecting.High damage threshold (>10J/cm2) AR coating on both sides can minimize the reflections.

These windows are used in front of lasers for material processing in order to protect the laser optics from hot material drops.

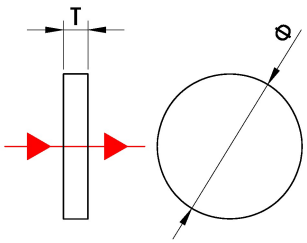
Grade	*E*	*H*	*S*
Material	*UVFS*	*UVFS*	*UVFS(N-BK7)*
Diameter Tolerance	*+0.0, -0.1mm*		
Thickness Tolerance	*±0.1mm*		*±0.2mm*
Clear Aperture	*>90%*		
Parallelism	*5"*	*10"*	*30"*
Flatness (@632.8nm)	*λ/20*	*λ/10*	*λ/4*
Surface Quality	*10/5*	*10/5*	*20/10*
Bevel	*Protective*		
Coating	*Anti-Reflecting coating on S1&S2,R<0.25%@λc,AOI 0°。*		
Damage Threshold (10ns,10Hz@λc)	*10J/cm³*	*7.5J/cm³*	*2J/cm³*

P/N	**Φ**	**T**	**λ_c**	**Grade**
10401	12.70	3.80	532nm	E
10402	25.40	4.50	532nm	E
10403	12.70	3.80	532nm	H
10404	25.40	4.50	532nm	H
10405	12.70	3.80	532nm	S
10406	25.40	4.50	532nm	S
10407	12.70	3.80	1064nm	E
10408	25.40	4.50	1064nm	E
10409	12.70	3.80	1064nm	H
10410	25.40	4.50	1064nm	H
10412	25.40	4.50	1064nm	S
10413	12.70	3.80	1064nm	S

●Demension unit:mm

●Other sizes and coatings are available upon request.

Calcium Fluoride Window



Calcium Fluoride Window is applicable for wide rang spectrum, and it is particularly useful for at 2980nm laser application.

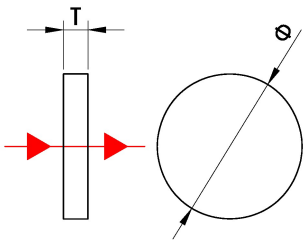
Specifications:

Material.....Calcium Fluoride single crystal
Diameter Tolerance.....+0.0, -0.1mm
Thinkness Tolerance.....±0.1mm
Clear Aperture.....>90%
Parallelism.....<1′
Surface Quality.....60-40
Flatness.....λ/2 per 25mm @632.8nm
Bevel.....Protective
Coating.....Uncoated

P/N	Φ	T
10501	12.70	2.00
10502	25.40	3.00

●Demension unit:mm
●Other sizes and coatings are available upon request.

Magnesium Fluoride Window



Magnesium Fluoride offers excellent broadband transmission from the DUV to the mid-IR. It's DUV transmission makes it ideal for use at the Hydrogen Lyman-alpha line and for UV radiation sources and receivers, as well as excimer laser applications. It is a rugged material resistant to chemical etching, laser damage, and mechanical and thermal shock.Magnesium Fluoride has a Knoop Hardness of 415 and index of refraction of 1.38.

1)Excellent Transmission from 120nm to 7μm

2)Rugged and Durable

Specifications:

Material.....MgF2(Optical Grade)

Clear Aperture.....>90%

Dimensional Tolerance.....+0.0/-0.1mm

Thickness Tolerance.....±0.1mm

Surface Quality.....60-40

Surface Accuracy.....λ/2@632.8nm

Parallelism.....<1 arc min.

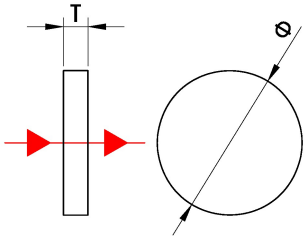
Coating.....No Coating

P/N	Φ	T
10601	10.00	2.00
10602	12.70	2.00
10603	15.00	2.00
10604	20.00	3.00
10605	25.40	3.00

●Demension unit:mm

●Other sizes and coatings are available upon request.

Germanium Window



Germanium is popular for its high index of refraction (around 4.0 from 2-14μm). Due to its high index, an antireflection coating is required for sufficient transmission in the region of interest. Our Germanium windows are available from stock with two AR coating options: 3~12μm for mid IR or broadband multi-spectral applications, or 8-12μm for thermal imaging applications. Germanium is subject to thermal runaway, meaning that the transmission decreases as temperature increases. As such, they should be used at temperatures below 100°C. Germanium's high density (5.33g/cm3) should be considered when designing for weight-sensitive systems. The 8-12μm coated Germanium windows are typically used in thermal imaging and FLIR applications. The Knoop Hardness of Germanium (780) is approximately twice that of Magnesium Fluoride, making it ideal for IR applications requiring rugged optics.

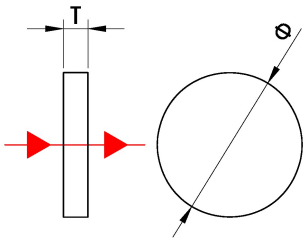
Specifications:

Material.....Ge(Optical Grade)
Clear Aperture.....90% of Diameter
Diameter Tolerance.....+0.0/-0.1mm
Thickness Tolerance.....±0.1mm
Surface Quality.....40-20
Surface Accuracy.....λ/10@632.8nm
Parallelism.....<1 arc min
Coating.....No Coating

P/N	Φ	T
10701	10.00	1.50
10702	12.70	2.00
10703	15.00	2.00
10704	20.00	2.00
10705	25.40	3.00

●Demension unit:mm
●Other sizes and coatings are available upon request.

Silicon Window



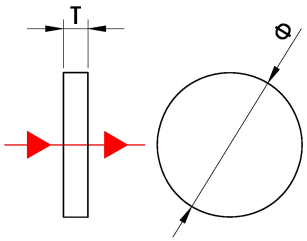
Silicon is another material that is frequently utilized in infrared systems – however due to absorption it is not suitable for CO^2 transmitting optics. Silicon can be used from 1.2 to 7μm but only has about 50% transmission in this range. Because of this, we have added an AR coating to enhance the performance from 3~5μm. With a density of 2.329g/cm3, Si is ideal for use in systems where weight is a concern.

Specifications:
Material.....Si(Optical Grade)
Clear Aperture.....>90%
Dimensional Tolerance.....+0.0/-0.1mm
Thickness Tolerance.....±0.1mm
Surface Quality.....60-40
Surface Accuracy.....1λ@ 632.8nm
Parallelism.....<3'
Coating.....No Coating

P/N	Φ	T
10801	10.00	1.50
10802	12.70	2.00
10803	15.00	2.00
10804	20.00	3.00
10805	25.40	3.00

●Demension unit:mm
●Other sizes and coatings are available upon request.

Zinc Selenide Window



Zinc Selenide haswide transmission band, along with its low absorption in the red portion of the visible spectrum,Zinc Selenideis ideal for 10.6μm CO^2 laser system.

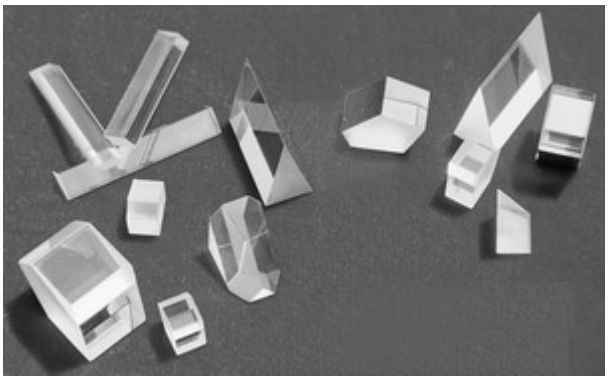
Specifications:

Material.....CVD Laser Grade ZnSe
Diameter Tolerance.....+0.0, - 0.1mm
Thinkness Tolerance.....± 0.1mm
Clear Aperture.....>90%
Parallelism.....<1'
Surface Quality.....40-20 scratch and dig
Flatness.....λ/2 per 25mm @632.8nm
Bevel.....Protective
Coating.....uncoated

P/N	Φ	T
10901	12.7	3.0
10902	25.4	5.0

●Demension unit:mm
●Other sizes and coatings are available upon request.

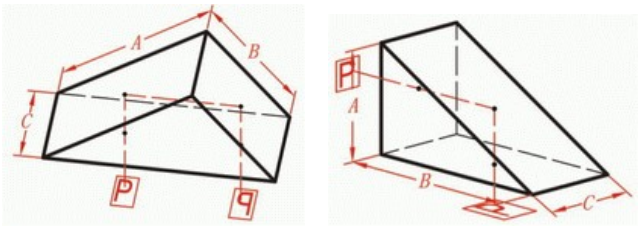
Prisms



Prisms are blocks of optical material with 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 component,wavelengths,and be used to separate states of polarization.

- Right Angle Prism
- Penta Prism
- Beamsplitter Penta Prism
- Half Penta Prism
- Porro Prism
- Dove Prism
- Roof Prism
- Rhombic Prism
- Wedge Prism
- Dispersing Prism
- Corner Cube Prism
- Pellin Broca Prism

Right Angle Prism



Right Angle Prism can be used to deviate a light path by 90° or 180°, depending on which surface is used as the input for the light source. Right Angle Prism is fabricated from N-BK7, UV fused silica, CaF2, ZnSe, or Ge. N-BK7(K9) Right-Angle Prism is available uncoated or with one of our three standard broadband antireflection coatings on either the hypotenuse or both legs,thereby reducing surface losses.

Due to total internal reflection (TIR),the right angle prism can be used as a 90°reflector.When the input light is incident on one of the prism's legs,it undergoes TIR at the glass/air boundary of the hypotenuse and exits via the other prism leg.This 90° deviation of the input light makes the right angle prism a suitable alternative for a mirror.

Right angle prism can be used as a 180° retroreflector.When the input light is incident on the face of the hypotenuse, it undergoes TIR at the glass/air boundary at the prism legs. It undergoes TIR a second time at the next prism leg and exits the hypotenuse in a path parallel to that of the input beam.Like the retroreflector,the 180°deviation of the light path is independent of the angle at which the light enters the prism.

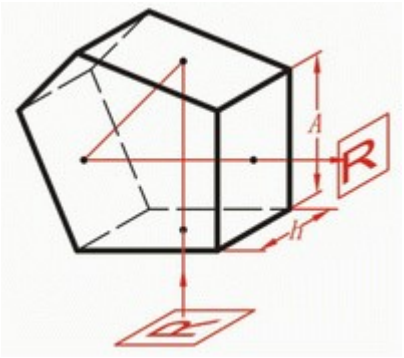
Specification:

Material.....BK7 grade A optical glass
Dimension Tolerance.....+0.0, -0.2mm
Clear Aperture.....> 85%
Angle Tolerance.....see the table
Flatness.....λ/8 @632.8nm
Surface Quality.....60-40
Bevel.....Protective
Coating.....No Coating

P/N	A	B	C	Deviation
20101	3.20	3.20	3.20	180"
20102	3.20	3.20	3.20	60"
20103	3.20	3.20	3.20	30"
20104	3.20	3.20	3.20	10"
20105	8.00	8.00	8.00	180"
20106	8.00	8.00	8.00	60"
20107	8.00	8.00	8.00	30"
20108	8.00	8.00	8.00	10"
20109	10.00	10.00	10.00	180"
20110	10.00	10.00	10.00	60"
20111	10.00	10.00	10.00	30"
20112	10.00	10.00	10.00	10"
20113	12.70	12.70	12.70	180"
20114	12.70	12.70	12.70	60"
20115	12.70	12.70	12.70	30"
20116	12.70	12.70	12.70	10"

●Demension unit:mm
●Other sizes and coatings are available upon request.

Penta Prism



A Penta Prism deviates an input beam or image through 90° without inverting or reversing the image. In addition, the 90° beam deviation is not dependent on a precise alignment of the prism with respect to the incoming beam or image.

Specification:

Material.....BK7 grade A optical glass

Dimension Tolerance.....±0.2mm

90° Deviation Tolerance.....see table

Flatness.....λ/2 @632.8nm

Reflectivity.....R>95% @630~680nm

Surface Quality.....60-40 scratch and dig

Chamfer.....<0.5mm×45°

Coating:

①Entrance & Exit Surfaces: multilayer AR coating,Ravg<0.5% @630~680nm

②Reflecting Surface: Enhanced Alumium with black paint,Ravg>85% @630~680nm

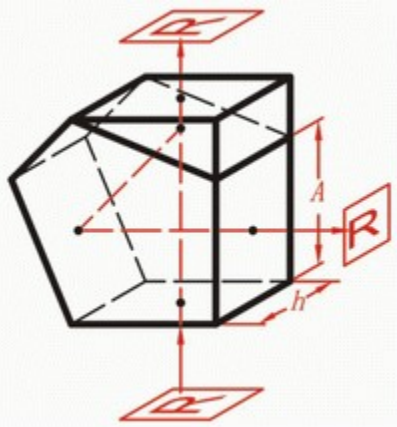
P/N	size(A×h)	deviation
20201	7×6	<60"
20202	7×6	<30"
20203	7×6	<10"
20204	7×6	<5"
20205	8×8	<60"
20206	8×8	<30"
20207	8×8	<10"
20208	8×8	<5"
20209	10×10	<60"

P/N	size(A×h)	deviation
20210	10×10	<30"
20211	10×10	<10"
20212	10×10	<5"
20213	15×15	<60"
20214	15×15	<30"
20215	15×15	<10"
20216	15×15	<5"
20217	10×10	<1"

●Demension unit:mm

●Other sizes and coatings are available upon request.

Beamsplitter Penta Prism



By adding a wedge and with partial reflective coating on surface S1, it can be used as Beamsplitter, which we named as Beamsplitter Penta Prism. Transmission/ Reflection (T/R) ratio of 20/80, 50/50 or others for Beamsplitter Penta Prism is available upon equest.

Specification:

Material.....BK7 grade A optical glass

Dimension Tolerance.....±0.2mm

90°,180° Deviation Tolerance.....see table

Flatness.....inclined surface:λ/8,other:λ/4 @632.8nm

Reflectivity.....R>95% @630~680nm

Surface Quality.....60-40 scratch and dig

Beamsplitter Ratio.....T/R:20/80±5%@630-680nm

Chamfer.....<0.5mm×45°

Coating:

①Entrance & Exit Surfaces: AR coating,R_{avg}<0.5% @630~680nm

②Reflecting Surface: Enhanced Alumium with black paint,R_{avg}>85% @630~680nm

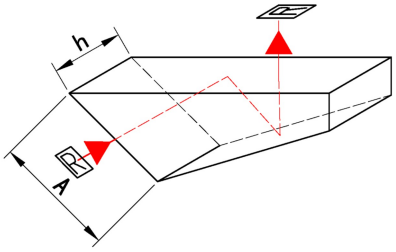
P/N	size(A×h)	deviation
20301	6×5.8	<60"
20302	6×5.8	<30"
20303	6×5.8	<10"
20304	6×5.8	<5"
20305	7×6	<60"
20306	7×6	<30"
20307	7×6	<10"
20308	7×6	<5"
20309	8×8	<60"
20310	8×8	<30"

P/N	size(A×h)	deviation
20311	8×8	<10"
20312	8×8	<5"
20313	10×10	<60"
20314	10×10	<30"
20315	10×10	<10"
20316	10×10	<5"
20317	10×10	<1"

●Demension unit:mm

●Other sizes and coatings are available upon request.

Half Penta Prism



Half Penta Prism is used to deflect a straight light 135 degree,it is exactly an half cut from penta prism,it is widely used in telescope systems.

Specifications:

Material.....N-BK7 glass grade A

Dimension Tolerance.....±0.1mm

Clear Aperture.....>90%

Deviation Tolerance.....see table

Surface Quality.....60-40

Flatness.....<λ/4@632.8nm

Chamfer.....<0.5mm×45°

Coating:

①I/O Surfaces: AR coating,R_{avg}<0.5% @450~650nm

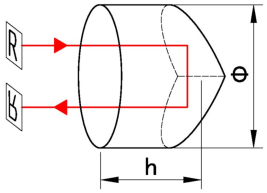
②Reflecting Surface: Enhanced Alumium with black paint,R_{avg}>85% @400~700nm

P/N	A×h	deviation
20410	10×10	<3′
20411	10×10	<1′
20412	15×15	<3′
20413	15×15	<1′
20414	18×18	<3′
20415	18×18	<1′

●Demension unit:mm

●Other sizes and coatings are available upon request.

Porro Prism



Porro prism is a type of reflection prism which can be used to alter the orientation of an image. Light enters the large face of the prism, then hits on the roof, by total internal reflection twice from the roof, the beam exits again through the large face. An image traveling through a Porro prism is rotated by 180° but not inverted.

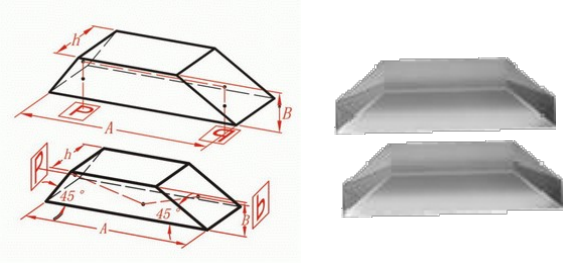
Specification:

Material.....BK7 grade A optical glass
Dimension Tolerance.....±0.2mm
180° Deviation Tolerance.....see table
Flatness.....Reflecting Surfaces:λ/10,I/O surface:λ/8 @632.8nm
Wave distortion.....λ/4 @632.8nm
Surface Quality.....60-40 scratch and dig
Charmfer.....<0.5mm×45°
Coating.....No Coating

P/N	Φ	h	deviation
20501	12.7	12.7	<1"
20502	25.4	25.4	<1"
20503	12.7	12.7	<5"
20504	25.4	25.4	<5"
20505	12.7	12.7	<10"
20506	25.4	25.4	<10"

●Demension unit:mm
●Other sizes and coatings are available upon request.

Dove Prism



A Dove prism is used to rotate, invert, or retroreflect an image, depending upon the prism's rotation angle and the surface through which the light enters the prism. Usally it is fabricated from N-BK7 glass for high transmission from the visible to the near-infrared spectral range.

Dove prisms can be thought of as right-angle prisms with the triangular apex removed, which reduces the weight of the prism and stray internal reflections.They introduce astigmatism when used with converging light, so we recommend using them with collimated light. Additionally, these prisms affect the polarization state of light transmitted through them.

Light is usually propagated along the longitudinal axis of a Dove prism. In this geometry, light reflects once from the bottom face, inverting the image on the other side. Rotation of the prism about the longitudinal axis rotates the image at twice the rate of the prism's rotation. For example, a 20° rotation of the prism results in a 40° rotated image. The AR-coated Dove prisms are designed specifically for the image rotation and inversion application.Due to the high incidence angle, the light reflecting from the bottom face undergoes total internal reflection, even if the light's propagation axis and the prism's longitudinal axis are not exactly parallel. Hence, in a Dove prism, the magnitude of the internal transmission is limited only by absorption.

When light is incident on the longest face, the Dove prism acts as a retroreflector or a right-angle prism. The light exits parallel to the input light (independent of the incidence angle) and is inverted by 180°. In situations with limited space or where more convenient mounting options are needed, the Dove prism can replace a retroreflector or right-angle prism.

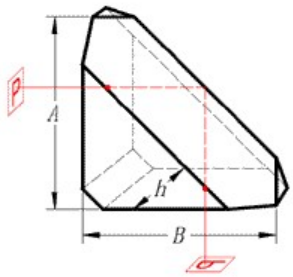
Specification:

Material.....see the table
Dimension Tolerance.....+0.0, -0.2mm
Clear Aperture.....>90%
Angle Tolerance.....<3 arc minutes
Flatness.....λ/8 @632.8nm
Surface Quality.....60-40
Bevel.....Protective
Coating.....No Coating

P/N	A	B	h	Material
20601	9.30	2.60	1.30	SF11
20602	14.00	5.00	2.60	SF11
20603	80	20	20	BK7
20604	21.10	5.00	5.00	BK7
20605	42.30	10.00	10.00	BK7
20606	63.40	15.00	15.00	BK7

●Demension unit:mm
●Other sizes and coatings are available upon request.

Roof Prism



Amici prisms, also called "Roof prisms" or "Right angle roof prisms" revert and invert the image as well as bend the line of sight through a 90°angle. Ideal for use in spotting scopes, and any optical instrument where it is desirable to take an inverted image from an objective, turn it right side up, and bend it through a 90° angle in order to maintain the correct visual orientation.

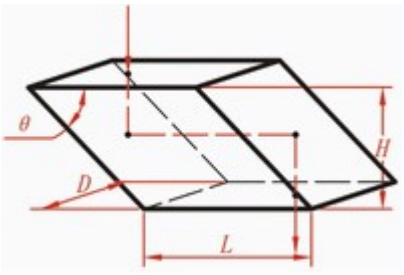
Specification:

Material.....BK7 grade A optical glass
Dimension Tolerance.....+0.0, 0.2mm
Clear Aperture.....>90%
Flatness.....λ/2 @632.8nm
Surface Quality.....60-40
Bevel.....<0.5mm×45°

P/N	A	B	h
20701	19.12	19.12	14.00
20702	27.40	27.40	20.00

●Demension unit:mm
●Other sizes and coatings are available upon request.

Rhombic Prism



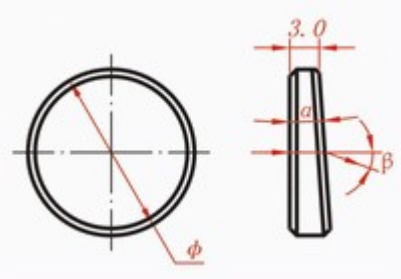
Rhomboid prism can displace a laser beam without change the image orientation, the input beam is totally internal reflected by two 45° faces and goes out from the output face. Then, a lateral displacement is produced. Higher transmission rate can be achieved by anti-reflective coating on the input and output faces.Rhomboid prism is always used in stereoscopic system and periscope system.

Specifications:
Material.....BK7 grade A optical glass
Dimension Tolerance.....+0.0, -0.1mm
Clear Aperture.....> 90%
Surface Quality.....60-40
Flatness.....λ/8 @632.8nm
Parallelism.....< 5 arc seconds
Angle Tolerance.....< 1 arc minute
Bevel.....<0.5mm x 45°

P/N	H	L	D	θ
20801	10.00	10.00	10.00	45°
20802	15.00	15.00	15.00	45°

●Demension unit:mm
●Other sizes and coatings are available upon request.

Wedge Prism



Wedge prism has plane inclined surfaces. It deflects light toward its thicker portion. It can be used individually to deflect a beam to a special angle. Two wedge prisms work together can assembly an anamorphic prism to correct the elliptical shape of laser beam. The wedge prism is ideal for laser beam steering applications.

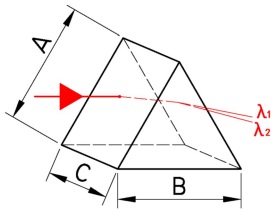
Specification:

Material.....BK7 grade A optical glass
Design Wavelength 632.8nm
Design Index.....1.51467@ 632.8nm
Diameter Tolerance.....+0.0, -0.1mm
Thinkness Tolerance.....±0.2mm
Clear Aperture.....> 85%
Surface Quality.....60-40
Flatness.....λ/4 @632.8nm
Wedge Angle.....< 1 arc minute
Bevel.....0.25mm x 45°

P/N	Φ	α	β
20901	25.40	1°	1°57'
20902	25.40	2°	3°53'
20903	25.40	4°	7°46'

●Demension unit:mm
●Other sizes and coatings are available upon request.

Dispersing Prism



Dispersing Prisms are used to separate a white light beam into its component colors.Gernerally,the light is first collimated and dispersed by the prism.A spectrum id then formed at the focal plane of a lens or curved mirror.

In laser work,dispersing prisms are used to separate two wavelengths following the same beam path.Typically,the dispersed beams are permitted to travel far enough so the beams separate spatially.

Specifications:

Material.....BK7 glass,UV Fused Silica,SF11 glass

Dimension Tolerance.....+0.0, -0.2mm

Clear Aperture.....>80%

Surface Quality.....60-40

Flatness.....λ/2@632.8nm

Angle Tolerance.....±3'

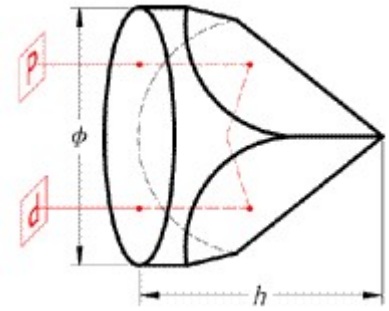
Bevel.....<0.25mm×45°

P/N	A	B	C	Material
21001	5.00	5.00	5.00	BK7
21002	10.00	10.00	10.00	BK7
21003	15.00	15.00	15.00	BK7
21004	20.00	20.00	20.00	BK7
21005	25.00	25.00	25.00	BK7
21006	5.00	5.00	5.00	UVFS
21007	10.00	10.00	10.00	UVFS
21008	15.00	15.00	15.00	UVFS
21009	20.00	20.00	20.00	UVFS
21010	25.00	25.00	25.00	UVFS
21011	5.00	5.00	5.00	SF11
21012	10.00	10.00	10.00	SF11
21013	15.00	15.00	15.00	SF11
21014	20.00	20.00	20.00	SF11
21015	25.00	25.00	25.00	SF11

●Demension unit:mm

●Other sizes,materials and coatings are available upon request.

Corner Cube Prism



Corner Cube Prisms, which have three mutually perpendicular surfaces and a hypotenuse face, are designed to reflect any ray or beam entering the prism face,regardless of the orientation of the prism, back onto itself.A mirror will only do that at the normal angle of incidence.There are three total internal reflections within the corner cube.

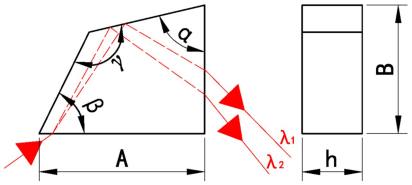
Specification:

Material.....BK7 grade A optical glass
Dimension Tolerance.....+0.0, -0.2mm
Clear Aperture.....> 85%
Deviation.....180°± 3 arc seconds
Flatness.....I/O surface:λ/8,Reflecting surface:λ/10 @ 632.8nm
Wavefront Distortion.....λ/4 @ 632.8nm
Surface Quality.....60-40
Bevel.....<0.5mm x 45°

P/N	Φ	h
21101	15.00	11.30
21102	25.40	19.00
21103	50.80	37.50

●Demension unit:mm
●Other sizes and coatings are available upon request.

Pellin Broca Prism



Pellin Broca Prism is used to separate the harmonics of laser beam, it can be also used to compensate for group velocity dispersion. Due to the beam enters and exits the prism at Brewster's angle, the power loss is extremely low for P-polarized beam. The angle between input and output beam is close to 90°.

Specifications:

Material.....BK7, UV Fused Silica
Design Wavelength.....546.1nm
Dimension Tolerance.....±0.2mm
Clear Aperture.....>90%
Angle Tolerance.....<3 arc minutes
Surface Quality.....60-40 scratch and dig
Flatness.....<λ/8@632.8nm
Chamfer.....<0.5mm×45°
Coating.....No coating

P/N	A	B	h	α	β	γ	Material	Wavelength Range
21201	20.0	11.0	6.4	78.50°	60°	(131.50°)	BK7	380~2100nm
21202	40.0	22.0	12.8	78.50°	60°	(131.50°)	BK7	380~2100nm
21203	20.0	11.0	6.4	78.50°	60°	(131.50°)	UVFS	180~2100nm
21204	40.0	22.0	12.8	78.50°	60°	(131.50°)	UVFS	180~2100nm

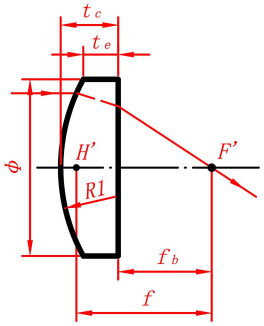
●Demension unit:mm
●Other sizes and coatings are available upon request.

Spherical Lenses

Lenses are a transparent optical component consisting of one or more pieces of optical glass with surfaces so curved (usually spherical) that they serve to converge or diverge the transmitted rays from an object, thus forming a real or virtual image of that object. Lenses are classified as single lenses, cylindrical lenses and achromatic lenses. Eastoptics provides these lenses with BK7 and fused silica. Special focusing systems can be designed by Eastoptics's engineers upon request.

- Plano-Convex Lens
- Double-Convex Lens
- Plano-Concave Lens
- Double Concave Lens
- BK7 Positive Meniscus Lens
- BK7 Negative Meniscus Lens
- Positive Achromatic Lens
- Negative Achromatic Lens

Plano-Convex Lens



Plano-convex lenses are used in many applications including telescopes, collimators,magnifiers, radiometers, optical transceivers,and condensers. These lenses have a plane and a convex surface.

Specification:

Material.....BK7,UVFS
Design Wavelength.....546.1nm
Design Index.....BK7 @1.5183;UVFS @1.46008±0.00005
Diameter Tolerance.....+0.00,-0.15mm
Paraxial Focus Length.....±2%(f<400mm);±5%(f>=400mm)
Centration.....<3 arc minutes
Clear Aperture.....>90%
Surface Quality.....60-40
Bevel.....0.25mmx45°

P/N	f	Φ	t_c	t_e	f_b	Material
30101	6.00	4.00	1.50	0.77	5.00	UVFS
30102	8.00	6.00	3.30	-	5.80	UVFS
30103	10.00	5.00	1.64	-	8.91	UVFS
30104	10.00	6.00	3.00	-	8.00	UVFS
30105	15.00	12.70	6.20	2.00	10.80	UVFS
30106	20.00	12.70	4.50	2.00	16.90	UVFS
30107	25.00	12.70	3.90	2.00	22.30	UVFS
30108	30.00	12.70	3.60	2.00	27.50	UVFS
30109	40.00	12.70	3.10	2.00	37.90	UVFS
30110	35.00	25.40	8.20	2.00	29.40	UVFS
30111	50.00	25.40	5.80	2.00	46.00	UVFS
30112	75.00	25.40	4.40	2.00	72.00	UVFS
30113	100.00	25.40	3.80	2.00	97.40	UVFS
30114	150.00	25.40	3.20	2.00	147.80	UVFS
30115	175.00	25.40	3.00	2.00	172.90	UVFS
30116	200.00	25.40	2.90	2.00	198.00	UVFS
30117	250.00	25.40	2.70	2.00	248.20	UVFS
30118	300.00	25.40	2.60	2.00	298.20	UVFS
30119	500.00	25.40	2.40	2.00	498.40	UVFS
30120	1000.00	25.40	2.20	2.00	998.50	UVFS

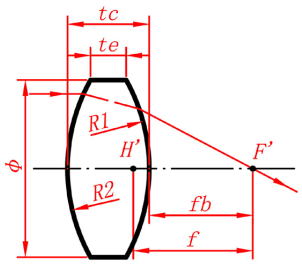
P/N	f	Φ	t_c	t_e	f_b	Material
30121	50.00	38.00	13.00	3.00	41.10	UVFS
30122	100.00	38.00	7.10	3.00	95.10	UVFS
30123	150.00	38.00	5.70	3.00	146.10	UVFS
30124	200.00	38.00	5.00	3.00	196.60	UVFS
30125	350.00	38.00	4.10	3.00	347.20	UVFS
30126	500.00	38.00	3.80	3.00	497.40	UVFS
30127	4.00	2.00	1.26	1.00	3.20	BK7
30128	5.00	3.00	1.48	1.00	4.00	BK7
30129	6.00	4.00	1.50	0.77	5.00	BK7
30130	8.00	6.00	3.30	2.00	5.80	BK7
30131	22.0	10.0	3.1	1.9	20.0	BK7
30132	20.0	12.7	4.2	2.0	17.2	BK7
30133	30.0	12.7	3.4	2.0	27.8	BK7
30134	50.0	12.7	2.8	2.0	48.2	BK7
30135	100.0	12.7	2.4	2.0	98.4	BK7
30136	34.0	17.0	4.20	2.00	31.2	BK7
30137	35.0	20.0	4.20	1.20	32.2	BK7
30138	50.0	20.0	4.00	2.00	47.4	BK7
30139	40.0	22.4	5.3	2.0	36.5	BK7
30140	60.0	22.4	4.1	2.0	57.3	BK7
30141	75.0	22.4	3.50	1.85	72.7	BK7
30142	700.0	25.0	2.20	2.00	689.6	BK7
30143	35.0	25.4	7.2	2.0	30.3	BK7
30144	50.0	25.4	5.3	2.0	46.5	BK7
30145	60.0	25.4	4.7	2.0	56.9	BK7
30146	75.0	25.4	4.1	2.0	72.3	BK7
30147	125.0	25.4	3.3	2.0	122.8	BK7
30148	152.4	25.4	3.0	2.0	150.4	BK7
30149	200.0	25.4	2.8	2.0	198.2	BK7
30150	300.0	25.4	2.5	2.0	298.4	BK7
30151	1000.0	25.4	2.2	2.0	998.6	BK7
30152	80.0	30.0	4.8	2.0	76.8	BK7
30153	120.0	30.0	3.8	2.0	117.5	BK7
30154	50.0	38.0	11.3	3.0	42.6	BK7
30155	100.0	38.0	6.6	3.0	95.7	BK7
30156	200.0	38.0	4.8	3.0	196.8	BK7
30157	500.0	38.0	3.7	3.0	497.6	BK7
30158	150.0	42.0	4.90	2.00	146.8	BK7
30159	150.0	50.0	7.1	3.0	145.3	BK7
30160	250.0	50.0	5.4	3.0	246.4	BK7

P/N	f	Φ	t_c	t_e	f_b	Material
30161	400.0	50.0	4.5	3.0	397.0	BK7
30162	500.0	50.0	4.2	3.0	497.2	BK7
30163	800.0	50.0	3.8	3.0	797.5	BK7
30164	88.9	50.8	10.60	3.00	81.9	BK7
30165	127.0	50.8	8.0	2.90	121.7	BK7

●Demension unit:mm

●Other sizes and coatings are available upon request.

Double-Convex Lens



Double-Convex Lenses are most suitable where the conjugates are on opposite sides of the lenses and the ratio of the distances is less than 5:1, e.g. as simple image relay components.

Specifications:

Material BK7,UVFS

Design Wavelength 546.1nm

Design Index .....BK7 @1.5183;UVFS @1.46008

Diameter Tolerance .....+0.0/-0.15mm

Paraxial Focal Length .....±2%(f<400mm);±5%(f>=400mm)

Centration .....<3 arc minutes

Clear Aperture .....>90%

Surface Quality 60-40

Bevel.....Protective

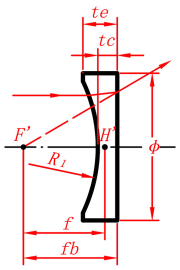
P/N	f	Φ	t_c	t_e	f_b	Material
30201	15.0	12.7	5.3	2.0	13.1	UVFS
30202	20.0	12.7	4.4	2.0	18.4	UVFS
30203	25.0	12.7	3.8	2.0	23.7	UVFS
30204	30.0	12.7	3.5	2.0	28.8	UVFS
30205	40.0	12.7	3.1	2.0	38.9	UVFS
30206	25.0	25.4	10.4	2.0	21.1	UVFS
30207	35.0	25.4	7.4	2.0	32.4	UVFS
30208	50.0	25.4	5.7	2.0	48.0	UVFS
30209	75.0	25.4	4.4	2.0	73.5	UVFS
30210	100.0	25.4	3.8	2.0	98.7	UVFS

P/N	f	Φ	t_c	t_e	f_b	Material
30211	150.0	25.4	3.2	2.0	148.9	UVFS
30212	200.0	25.4	2.9	.2	199.0	UVFS
30213	250.0	25.4	2.7	2.0	249.1	UVFS
30214	300.0	25.4	2.6	2.0	299.1	UVFS
30215	500.0	25.4	2.4	2.0	499.2	UVFS
30216	1000.0	25.4	2.2	2.0	999.2	UVFS
30217	50.0	38.0	11.6	3.0	45.9	UVFS
30218	100.0	38.0	7.0	3.0	97.6	UVFS
30219	150.0	38.0	5.7	3.0	148.0	UVFS
30220	200.0	38.0	5.0	3.0	198.3	UVFS
30221	350.0	38.0	4.1	3.0	348.6	UVFS
30222	500.0	38.0	3.8	3.0	498.7	UVFS
30223	8.00	6.00	3.20	2.00	6.90	BK7
30224	15.0	12.7	4.9	2.0	13.3	BK7
30225	25.0	12.7	3.6	2.0	23.8	BK7
30226	40.0	12.7	3.0	2.0	39.0	BK7
30227	75.0	12.7	2.6	2.0	74.1	BK7
30228	22.0	20.0	6.9	2.0	19.6	BK7
30229	20.0	21.0	8.2	2.0	17.1	BK7
30230	125.0	25.0	3.2	2.0	123.9	BK7
30231	31.7	25.4	7.3	2.0	29.2	BK7
30232	50.0	25.4	5.2	2.0	48.3	BK7
30233	100.0	25.4	3.6	2.0	98.8	BK7
30234	150.0	25.4	3.0	2.0	149.0	BK7
30235	200.0	25.4	2.8	2.0	199.0	BK7
30236	300.0	25.4	2.5	2.0	299.2	BK7
30237	1000.0	25.4	2.2	2.0	999.3	BK7
30238	500.0	30.0	2.4	2.0	499.2	BK7
30239	45.0	38.0	10.4	2.0	41.4	BK7
30240	100.0	38.0	6.5	3.0	97.8	BK7
30241	200.0	38.0	4.8	3.0	198.4	BK7
30242	500.0	38.0	3.7	3.0	498.8	BK7
30243	50.8	38.1	9.3	1.9	47.6	BK7
30244	100.0	50.0	9.2	3.0	96.9	BK7
30245	200.0	50.0	6.0	3.0	198.0	BK7
30246	400.0	50.0	4.5	3.0	398.5	BK7
30247	500.0	50.0	4.2	3.0	498.6	BK7
30248	800.0	50.0	3.8	3.0	798.7	BK7
30249	250.0	100.0	13.7	3.9	245.4	BK7

●Demension unit:mm

●Other sizes and coatings are available upon request.

Plano-Concave Lens



Plano-concave lenses diverge a collimated beam from a virtual focus and are commonly used in Galilean-type beam expanders. Plano-Concave lenses have a negative focal length and negative spherical aberration, which can be used to balance out aberrations of other lenses in the system.

Specifications:

Material BK7,UVFS
Design Wavelength 546.1nm
Design Index .....BK7 @1.5183;UVFS @1.46008
Diameter Tolerance .....+0.0/-0.15mm
Paraxial Focal Length .....±2%(f<400mm);±5%(f>=400mm)
Centration .....<3 arc minutes
Clear Aperture .....>90%
Surface Quality 60-40
Bevel.....Protective

P/N	f	Φ	t_c	t_e	f_b	Material
30301	-15.0	12.7	2.0	6.2	-16.4	UVFS
30302	-20.0	12.7	2.0	4.5	-21.4	UVFS
30303	-25.0	12.7	2.0	3.9	-26.4	UVFS
30304	-30.0	12.7	2.0	3.5	-31.4	UVFS
30305	-40.0	12.7	2.0	3.1	-41.4	UVFS
30306	-35.0	25.4	2.0	8.2	-36.4	UVFS
30307	-50.0	25.4	2.0	5.8	-51.4	UVFS
30308	-75.0	25.4	2.0	4.4	-76.4	UVFS
30309	-100.0	25.4	2.0	3.8	-101.4	UVFS
30310	-150.0	25.4	2.0	3.2	-151.4	UVFS
30311	-175.0	25.4	2.0	3.0	-176.4	UVFS
30312	-200.0	25.4	2.0	2.9	-201.4	UVFS
30313	-250.0	25.4	2.0	2.7	-251.4	UVFS
30314	-300.0	25.4	2.0	2.6	-301.4	UVFS
30315	-500.0	25.4	2.0	2.4	-501.4	UVFS
30316	-1000.0	25.4	2.0	2.2	-1001.4	UVFS
30317	-50.0	38.0	3.0	13.0	-52.1	UVFS
30318	-100.0	38.0	3.0	7.1	-102.1	UVFS
30319	-150.0	38.0	3.0	5.7	-152.1	UVFS
30320	-200.0	38.0	3.0	5.0	-202.1	UVFS

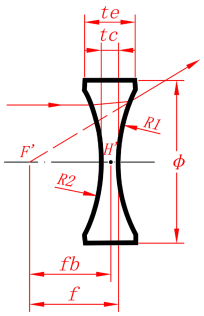
P/N	f	Φ	t_c	t_e	f_b	Material
30321	-350.0	38.0	3.0	4.1	-352.1	UVFS
30322	-500.0	38.0	3.0	3.8	-502.1	UVFS
30323	-10.00	6.00	2.00	2.90	-11.30	BK7
30324	-20.0	10.0	2.0	3.2	-21.3	BK7
30325	-15.0	12.7	2.0	5.3	-16.3	BK7
30326	-20.0	12.7	2.0	4.1	-21.3	BK7
30327	-25.0	12.7	2.0	3.7	-26.3	BK7
30328	-30.0	12.7	2.0	3.4	-31.3	BK7
30329	-40.0	12.7	2.0	3.0	-41.3	BK7
30330	-50.0	12.7	2.0	2.8	-51.3	BK7
30331	-75.0	12.7	2.0	2.5	-76.3	BK7
30332	-100.0	12.7	2.0	2.3	-101.3	BK7
30333	-75.0	15.0	2.0	2.7	-76.3	BK7
30334	-40.0	21.0	2.0	4.7	-41.3	BK7
30335	-50.0	22.4	2.0	4.4	-51.3	BK7
30336	-100.0	22.4	2.0	3.2	-101.3	BK7
30337	-25.0	25.0	2.0	10.9	-26.3	BK7
30338	-35.0	25.4	2.0	7.2	-36.3	BK7
30339	-38.1	25.4	2.0	6.5	-39.4	BK7
30340	-50.0	25.4	2.0	5.3	-51.3	BK7
30341	-70.0	25.4	2.0	4.3	-71.3	BK7
30342	-75.0	25.4	2.0	4.1	-76.3	BK7
30343	-100.0	25.4	2.0	3.6	-101.3	BK7
30344	-125.0	25.4	2.0	3.3	-126.3	BK7
30345	-150.0	25.4	2.0	3.0	-151.3	BK7
30346	-175.0	25.4	2.0	2.8	-176.3	BK7
30347	-200.0	25.4	2.0	2.7	-201.3	BK7
30348	-250.0	25.4	2.0	2.6	-251.3	BK7
30349	-300.0	25.4	2.0	2.5	-301.3	BK7
30350	-500.0	25.4	2.0	2.3	-501.3	BK7
30351	-1000.0	25.4	2.0	2.2	-1001.3	BK7
30352	-80.0	30.0	2.0	4.8	-81.3	BK7
30353	-100.0	30.0	2.0	4.2	-101.3	BK7
30354	-200.0	30.0	2.0	3.1	201.3	BK7
30355	-50.0	38.0	3.0	11.3	-52.0	BK7
30356	-100.0	38.0	3.0	6.6	-102.0	BK7
30357	-150.0	38.0	3.0	5.5	-152.0	BK7
30358	-200.0	38.0	3.0	4.8	-202.0	BK7
30359	-350.0	38.0	3.0	4.0	-352.0	BK7
30360	-500.0	38.0	3.0	3.7	-502.0	BK7

P/N	f	Φ	t_c	t_e	f_b	Material
30361	-700.0	38.0	3.0	3.5	-702.0	BK7
30362	-50.0	40.0	2.0	11.2	-51.3	BK7
30363	-75.0	50.0	2.0	11.8	-77.0	BK7
30364	-100.0	50.0	3.0	9.4	-102.0	BK7
30365	-150.0	50.0	3.0	7.1	-152.0	BK7
30366	-200.0	50.0	3.0	6.1	-202.0	BK7
30367	-250.0	50.0	3.0	5.4	-252.0	BK7
30368	-400.0	50.0	3.0	4.5	-402.0	BK7
30369	-450.0	50.0	3.0	4.3	-452.0	BK7
30370	-500.0	50.0	3.0	4.2	-502.0	BK7
30371	-600.0	50.0	3.0	4.0	-602.0	BK7
30372	-800.0	50.0	3.0	3.8	-802.0	BK7

●Demension unit:mm

●Other sizes and coatings are available upon request

Double-Concave Lens



Double-Concave Lenses are popular for many applications. Bi-concave lenses have a negative focal length and are best used to diverge a converging beam. Bi-concave lenses can diverge a collimated beam to a virtual focus and are commonly used in Galilean-type beam expanders.

Specifications:

Material BK7,UVFS
Design Wavelength 546.1nm
Design Index .....BK7 @1.5183;UVFS @1.46008
Diameter Tolerance .....+0.0/-0.15mm
Paraxial Focal Length .....±2%(f<400mm);±5%(f>=400mm)
Centration .....<3 arc minutes
Clear Aperture .....>90%
Surface Quality 60-40
Bevel.....Protective

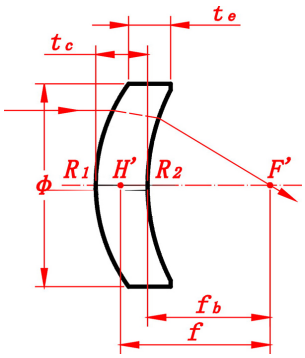
P/N	f	Φ	t_c	t_e	f_b	Material
30401	-15.0	12.7	2.0	5.0	-15.7	UVFS
30402	-20.0	12.7	2.0	4.2	-20.7	UVFS
30403	-25.0	12.7	2.0	3.7	-25.7	UVFS
30404	-30.0	12.7	2.0	3.5	-30.7	UVFS
30405	-40.0	12.7	2.0	3.1	-40.7	UVFS
30406	-25.0	25.4	2.0	9.5	-25.7	UVFS
30407	-35.0	25.4	2.0	7.2	-35.7	UVFS
30408	-50.0	25.4	2.0	5.6	-50.7	UVFS
30409	-75.0	25.4	2.0	4.3	-75.7	UVFS
30410	-100.0	25.4	2.0	3.8	-100.7	UVFS
30411	-150.0	25.4	2.0	3.2	-150.7	UVFS
30412	-200.0	25.4	2.0	2.9	-200.7	UVFS
30413	-250.0	25.4	2.0	2.7	-250.7	UVFS
30414	-300.0	25.4	2.0	2.6	-300.7	UVFS
30415	-500.0	25.4	2.0	2.4	-500.7	UVFS
30416	-1000.0	25.4	2.0	2.2	-1000.7	UVFS
30417	-50.0	38.0	3.0	11.1	-51.0	UVFS
30418	-100.0	38.0	3.0	6.9	-101.0	UVFS
30419	-150.0	38.0	3.0	5.6	-151.0	UVFS
30420	-200.0	38.0	3.0	5.0	-201.0	UVFS

P/N	f	Φ	t_c	t_e	f_b	Material
30421	-350.0	38.0	322.53	3.0	4.1	-351.0
30422	-500.0	38.0	460.55	3.0	3.8	-501.0
30423	-10.0	10.0	10.70	2.0	4.5	-10.6
30424	-15.0	12.7	15.88	2.0	4.6	-15.6
30425	-20.0	12.7	21.07	2.0	4.0	-20.6
30426	-25.0	12.7	26.25	2.0	3.6	-25.7
30427	-30.0	12.7	31.44	2.0	3.3	-30.7
30428	-40.0	12.7	41.80	2.0	3.0	-40.7
30429	-50.0	12.7	52.17	2.0	2.8	-50.7
30430	-35.0	25.4	36.62	2.0	6.5	-35.7
30431	-50.0	25.4	52.17	2.0	5.1	-50.7
30432	-75.0	25.4	78.09	2.0	4.1	-75.7
30433	-100.0	25.4	104.00	2.0	3.6	-100.7
30434	-125.0	25.4	129.92	2.0	3.2	-125.7
30435	-150.0	25.4	155.83	2.0	3.0	-150.7
30436	-175.0	25.4	181.75	2.0	2.9	-175.7
30437	-200.0	25.4	207.66	2.0	2.8	-200.7
30438	-250.0	25.4	259.49	2.0	2.6	-250.7
30439	-300.0	25.4	311.32	2.0	2.5	-300.7
30440	-500.0	25.4	518.64	2.0	2.3	-500.7
30441	-1000.0	25.4	1036.94	2.0	2.2	-1000.7
30442	-50.0	38.0	52.34	3.0	10.1	-51.0
30443	-100.0	38.0	104.17	3.0	6.5	-101.0
30444	-150.0	38.0	156.00	3.0	5.3	-151.0
30445	-200.0	38.0	207.83	3.0	4.7	-201.0
30446	-350.0	38.0	363.32	3.0	4.0	-351.0
30447	-500.0	38.0	518.81	3.0	3.7	-501.0
30448	-700.0	38.0	726.13	3.0	3.5	-701.0
30449	-100.0	50.0	104.17	3.0	9.1	-101.0
30450	-150.0	50.0	156.00	3.0	7.0	-151.0
30451	-200.0	50.0	207.83	3.0	6.0	-201.0
30452	-250.0	50.0	259.66	3.0	5.4	-251.0
30453	-400.0	50.0	415.15	3.0	4.5	-401.0
30454	-450.0	50.0	466.91	3.0	4.3	-451.0
30455	-500.0	50.0	518.82	3.0	4.2	-501.0
30456	-600.0	50.0	622.47	3.0	4.0	-601.0
30457	-800.0	50.0	829.73	3.0	3.8	-801.0

●Demension unit:mm

●Other sizes and coatings are available upon request

BK7 Positive Meniscus Lens



Positive meniscus lenses are used to decrease the focal length of another lens while maintaining the angular resolution of the optical assembly. These lenses are commonly used to achieve tighter beam focusing when paired with another positive lens.

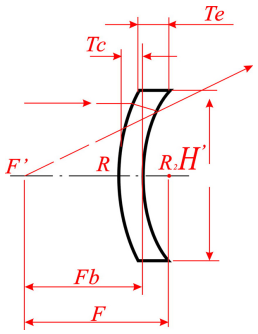
Specifications:

Material BK7
Design Wavelength 546.1nm
Design Index 1.5183
Diameter Tolerance .....+0.0/-0.15mm
Paraxial Focal Length .....±2%(f<400mm);±5%(f>=400mm)
Centration .....<3 arc minutes
Clear Aperture .....>90%
Surface Quality 60-40
Bevel.....Protective

P/N	f	Φ	t_c	t_e	f_b
30501	100.0	25.4	4.0	2.5	97.5
30502	125.0	25.4	4.0	2.8	121.8
30503	150.0	25.4	4.0	3.0	146.3
30504	175.0	25.4	4.0	3.1	171.2
30505	200.0	25.4	3.5	2.8	197.0
30506	250.0	25.4	3.5	2.9	246.5
30507	300.0	25.4	3.5	3.0	296.3
30508	350.0	25.4	3.5	3.1	346.0
30509	400.0	25.4	3.5	3.1	395.8
30510	500.0	25.4	3.5	3.2	495.4
30511	600.0	25.4	3.5	3.2	595.3
30512	800.0	25.4	3.5	3.3	794.5
30513	1000.0	25.4	3.5	3.3	993.7
30514	1500.0	25.4	3.5	3.4	1492.0
30515	2000.0	25.4	3.5	3.4	1990.2
30516	4000.0	25.4	3.5	3.5	3984.5

●Demension unit:mm
●Other sizes and coatings are available upon request.

BK7 Negative Meniscus Lens



Negative meniscus lenses are designed to minimize spherical aberration.Negative meniscus lenses consist of a convex surface and a concave surface where the concave surface has the greater radius of curvature. In combination with another lens, a negative meniscus lens will decrease the NA of the system. A negative meniscus lens is a common element in beam expanding systems.

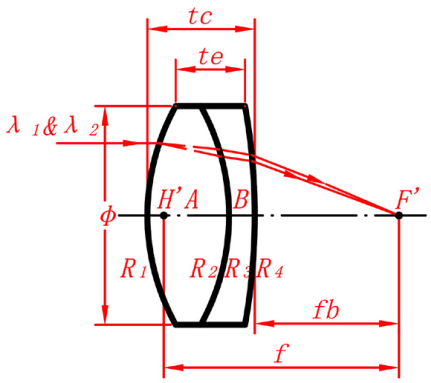
Specifications:

Material BK7
Design Wavelength 546.1nm
Design Index 1.5183
Diameter Tolerance .....+0.0/-0.15mm
Paraxial Focal Length .....±2%(f<400mm);±5%(f>=400mm)
Centration .....<3 arc minutes
Clear Aperture .....>90%
Surface Quality 60-40
Bevel.....Protective

P/N	f	Φ	t_c	t_e	f_b
30601	-100.0	25.4	3.00	4.50	-99.20
30602	-125.0	25.4	3.00	4.20	-123.70
30603	-150.0	25.4	3.00	4.00	-149.50
30604	-175.0	25.4	3.00	3.80	-174.60

●Demension unit:mm
●Other sizes and coatings are available upon request.

Positive Achromatic Lens



Specifications:

Material BK7

Design Wavelength 480.0nm, 546.1nm, 634.8nm

Diameter Tolerance .....+0.0/-0.15mm

Paraxial Focal Length .....±2%(f<400mm);±5%(f>=400mm)

Centration .....<3 arc minutes

Clear Aperture .....>90%

Surface Quality 60-40

Bevel.....Protective

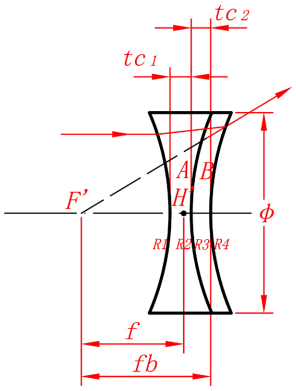
P/N	f	Φ	t_{c1}	t_{c2}	f_b	Lens A	Lens B
30701	10.0	6.0	3.6	0.8	7.54	SK9	SF15
30702	15.0	6.0	2.71	1.0	13.066	BK7	SF5
30703	20.0	6.0	2.6	1.0	18.288	BK7	SF5
30704	25.0	6.0	2.3	1.0	23.455	BK7	SF5
30705	30.0	6.0	1.9	1.0	28.695	BK7	SF5
30706	25.0	8.0	2.9	1.0	23.125	BK7	SF5
30707	30.0	8.0	2.7	1.0	28.277	BK7	SF5
30708	20.0	10.0	3.8	1.0	17.625	BK7	SF5
30709	25.0	12.0	4.2	1.3	22.286	BK7	SF5
30710	25.0	12.7	4.3	1.3	22.251	BK7	SF5
30711	30.0	12.7	4.0	1.3	27.360	BK7	SF5
30712	40.0	12.7	3.4	1.3	37.778	BK7	SF5
30713	50.0	12.7	3.1	1.3	47.992	BK7	SF5
30714	60.0	12.7	2.8	1.3	58.127	BK7	SF5
30715	75.0	12.7	2.6	1.3	73.227	BK7	SF5
30716	40.5	13.0	3.0	1.3	38.484	BK7	SF5
30717	44.0	14.0	3.3	1.3	41.834	BK7	SF5
30718	73.0	17.0	3.5	1.7	70.112	SK9	SF5
30719	40.0	18.0	5.4	1.5	36.513	BK7	SF5
30720	50.0	18.0	4.8	1.5	46.987	BK7	SF5

P/N	f	Φ	t_{c1}	t_{c2}	f_b	Lens A	Lens B
30721	60.0	18.0	4.1	1.5	57.299	BK7	SF5
30722	80.0	18.0	3.4	1.5	77.412	BaK1	SF8
30723	56.0	19.0	4.63	1.6	53.227	BaK4	SF4
30724	65.0	25.0	6.3	2.0	60.868	BK7	SF5
30725	50.0	25.4	7.8	2.0	44.522	BaF53	SF4
30726	60.0	25.4	7.0	2.0	55.565	BK7	SF5
30727	80.0	25.4	5.5	2.0	76.463	K7	SF1
30728	100.0	25.4	4.5	2.0	97.053	BK3	SF5
30729	120.0	25.4	4.2	2.0	117.103	BK7	SF5
30730	100.0	26.5	5.2	2.2	96.546	BK3	SF5
30731	100.0	30.0	6.8	2.5	95.261	BK3	SF5
30732	140.0	30.0	4.9	2.5	136.60	BK3	SF5

●Demension unit:mm

●Other sizes and coatings are available upon request.

Negative Achromatic Lens



Specifications:

Material BK7

Design Wavelength 480.0nm, 546.1nm, 634.8nm

Diameter Tolerance .....+0.0/-0.15mm

Paraxial Focal Length .....±2%(f<400mm);±5%(f>=400mm)

Centration .....<3 arc minutes

Clear Aperture .....>90%

Surface Quality 60-40

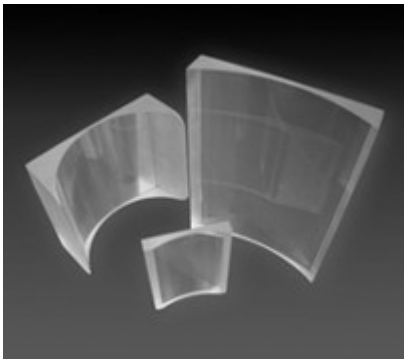
Bevel.....Protective

P/N	f	Φ	t_{c1}	t_{c2}	f_b	Lens A	Lens B
30801	-25.00	12.70	3.00	2.67	-27.50	BK7	F2
30802	-40.00	12.70	3.00	2.34	-42.50	BK7	F2
30803	-50	25.4	3.00	4.22	-53.3	BK7	F2

●Demension unit:mm

●Other sizes and coatings are available upon request.

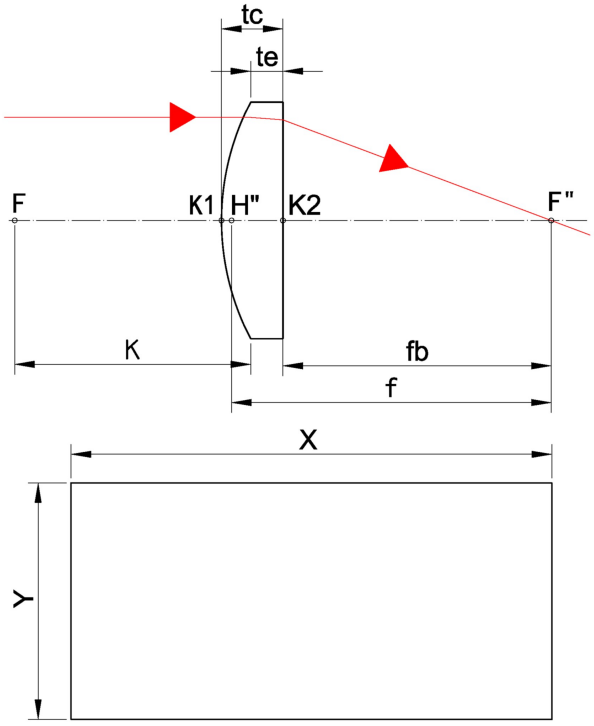
Cylindrical Lenses



A cylindrical lens is a lens which focuses light which passes through onto a line instead of onto a point,as a spherical lens would.The curved face or faces of a cylindrical lens are sections of a cylinder,and focus the image passing through it onto a line parallel to the intersection of the surface of the lens and a plane tangent to it.The lens compresses the image in the direction perpendicular to this line,and leaves it unaltered in the direction parallel to it (in the tangent plane).Lenses with cylindrical characteristics can be used to correct ocular astigmatism.

- Plano-Convex Cylindrical Lens
- Plano-Concave Cylindrical Lens

BK7 Plano-Convex Cylindrical Lens



Plano-convex cylindrical lenses are ideal for applications requiring magnification in one dimension. While spherical lenses act symmetrically in two dimensions on an incident ray, cylindrical lenses act in the same manner but only in one dimension. A typical application is to use a pair of cylindrical lenses to provide anamorphic shaping of a beam. A pair of positive cylindrical lenses can be used to collimate and circularize the output of a laser diode. Another application possibility would be to use a single lens to focus a diverging beam onto a detector array. To minimize the introduction of spherical aberrations, collimated light should be incident on the curved surface when focusing it to a line, and light from a line source should be incident on the plano surface when collimating.

Specification:

Material.....BK7,UVFS
Dimension Tolerance.....±0.1mm
Thickness Tolerance.....±0.2mm
Design Wavelength.....587.6nm
Centration.....<3 arc min.
Clear Aperture.....>90%
Surface Quality.....60-40
Paraxial Focal Length.....f±2%
Coating.....No Coating

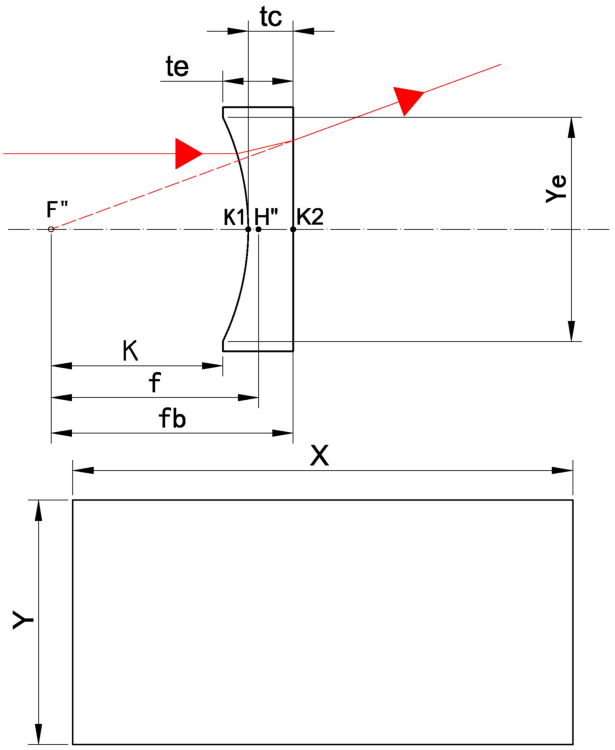
P/N	f	X	Y	t_c	t_e	K_2H''	f_b	K	Material
40101	4	12.5	3.2	1.8	1	41.2	2.8	4.8	BK7
40102	8	12.5	7	3.8	1.9	42.5	5.5	9.9	BK7
40103	10	12.5	9	3.8	1.2	42.5	7.5	12.6	BK7
40104	6.35	25	6	2.95	1	42	4.4	8.3	BK7
40105	12.7	25	11	4	1	42.6	10.1	15.7	BK7

P/N	f	X	Y	t_c	t_e	K_2H''	f_b	K	Material
40106	19	25	16	5.1	1	43.4	15.6	23.1	BK7
40107	22.2	20	12.5	5.75	3.9	43.8	18.4	24.1	BK7
40108	25.4	60	22	7	1	44.6	20.8	31.4	BK7
40109	38.1	60	26	6.9	2	44.6	33.5	43	BK7
40110	40	60	15	5.75	4.3	43.8	36.2	41.4	BK7
40111	50	60	26	5.5	2	43.6	46.4	53.5	BK7
40112	60	60	20	5.75	4.1	43.8	56.2	61.7	BK7
40113	76.2	60	26	4.2	2	42.8	73.4	78.4	BK7
40114	80	60	30	5.75	2.9	43.8	76.2	82.8	BK7
40115	100	60	50	8.89	2.4	45.9	94.1	106.4	BK7
40116	150	60	50	5.75	1.6	43.8	146.2	154.1	BK7
40117	200	60	50	6.35	3.3	44.2	195.8	203.1	BK7
40118	250	60	50	5.4	3	43.6	252.4	252.4	BK7
40119	300	60	50	6	4	44	296	302	BK7
40120	4	12.5	3.2	1.8	0.9	41.2	2.8	4.9	UVFS
40121	8	12.5	6.5	3.8	1.9	42.6	5.4	10	UVFS
40122	10	12.5	8	3.8	1.5	42.6	7.4	12.3	UVFS
40123	12.7	25	10	3.84	1	42.63	10	15.5	UVFS
40124	19	25	15	5.28	1	43.62	15.4	23.3	UVFS
40125	25	60	15	4.79	2	43.29	21.7	27.8	UVFS
40126	40	60	26	7.4	2	45.08	34.9	45.4	UVFS
40127	50	60	26	6.04	2	44.14	45.9	54	UVFS
40128	76.2	60	26	4.51	2	43.09	73.1	78.7	UVFS
40129	100	60	26	3.88	2	42.66	97.3	101.9	UVFS
40130	200	60	26	3.93	3	42.69	197.3	200	UVFS
40131	300	60	26	3.62	3	42.48	297.5	300.6	UVFS

●Demension unit:mm

●Other sizes and coatings are available upon request.

Plano-Concave Cylindrical Lens



Plano-concave cylindrical lenses act as plano-concave spherical lenses, except on only one axis.Plano-concave cylindrical lenses are used in applications that require one dimensional shaping of a light source. A typical application is to use a single cylindrical lens to turn a collimated laser into a line generator. Pairs of cylindrical lenses may be used to anamorphically shape images. To minimize the introduction of aberration, the curved surface of the lens should face the source when used to diverge a beam.

Specification:

Material.....BK7,UVFS
Dimension Tolerance.....±0.1mm
Thickness Tolerance.....±0.2mm
Design Wavelength.....587.6nm
Centration.....<3 arc min.
Clear Aperture.....>90%
Surface Quality.....60-40
Paraxial Focal Length.....f±2%
Coating.....No Coating

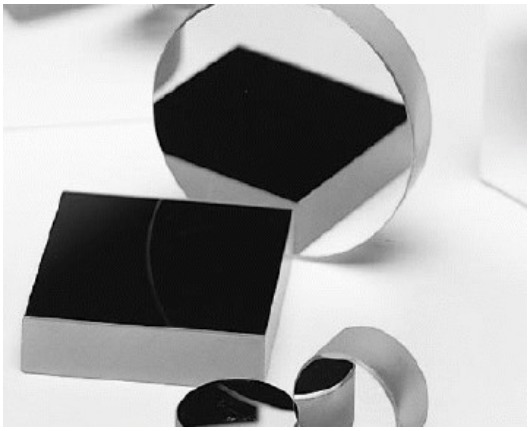
P/N	f	X	Y	Y_e	t_c	t_e	K_2H''	f_b	Material
40201	-6.35	25	6	5	6.2	-3.3	-9.7	3.49	BK7
40202	-12.7	25	11	5	7.3	-3.3	-16	8.68	BK7
40203	-19	25	16	5	8.5	-3.3	-22.3	13.81	BK7
40204	-25.4	60	16	5	7.4	-3.3	-28.7	21.34	BK7
40205	-38.1	60	26	5	9.5	-3.3	-41.4	31.92	BK7

P/N	f	X	Y	Y_e	t_c	t_e	K_2H''	f_b	Material
40206	-40	60	26	5	9.2	-3.3	-43.3	34.09	BK7
40207	-50	60	26	5	8.2	-3.3	-53.3	45.07	BK7
40208	-60	60	26	5	7.6	-3.3	-63.3	55.67	BK7
40209	-76.2	60	26	5	7	-3.3	-79.5	72.46	BK7
40210	-80	60	26	5	6.9	-3.3	-83.3	76.36	BK7
40211	-100	60	26	5	6.5	-3.3	-103.3	96.76	BK7
40212	-150	60	26	5	6	-3.3	-153.3	147.28	BK7
40213	-200	60	26	5	5.8	-3.3	-203.3	197.54	BK7
40214	-250	60	26	5	5.6	-3.3	-253.3	247.69	BK7
40215	-300	60	26	5	5.5	-3.3	-303.3	297.79	BK7
40216	-12.70	25.00	10.00	5.00	7.10	-3.40	-16.10	9.00	UVFS
40217	-19.00	25.00	15.00	5.00	8.50	-3.40	-22.40	13.90	UVFS
40218	-25.40	25.00	15.00	5.00	7.30	-3.40	-28.80	21.50	UVFS
40219	-40.00	60.00	26.00	5.00	9.90	-3.40	-43.40	33.50	UVFS
40220	-50.00	60.00	26.00	5.00	8.70	-3.40	-53.40	44.70	UVFS
40221	-76.20	60.00	26.00	5.00	7.30	-3.40	-79.60	72.30	UVFS
40222	-100.00	60.00	26.00	5.00	6.70	-3.40	-103.40	96.70	UVFS
40223	-200.00	60.00	26.00	5.00	5.90	-3.40	-203.40	107.60	UVFS
40224	-300.00	60.00	26.00	5.00	5.60	-3.40	-303.40	297.90	UVFS

●Demension unit:mm

●Other sizes and coatings are available upon request.

Mirrors

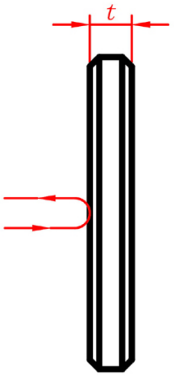


Metalic coatings are very broadband and relatively insensitive to incidence angle. The most commonly used coatings, they offer good performance at an economical price.

Dielectric coatings are multilayer coatings that offer excellent performance over a specific wavelength range and are relatively insensitive to small angle changes. As a rule, dielectric coatings offer superior durability and damage resistance.

- Dielectric Front Surface Mirror
- Protected Aluminum Mirror
- Enhanced Aluminum Mirror
- Protected Silver Mirror
- Protected Gold Mirror

Dielectric Front Surface Mirror



Specifications:

Material.....BK7 grade A optical glass

Dimension Tolerance.....±0.2mm

Clear Aperture.....> 85%

Surface Quality.....60-40

Flatness.....λ/8 per 25mm @632.8nm

Parallism.....<3'(S1//S2)

Bevel.....0.25mm x 45°

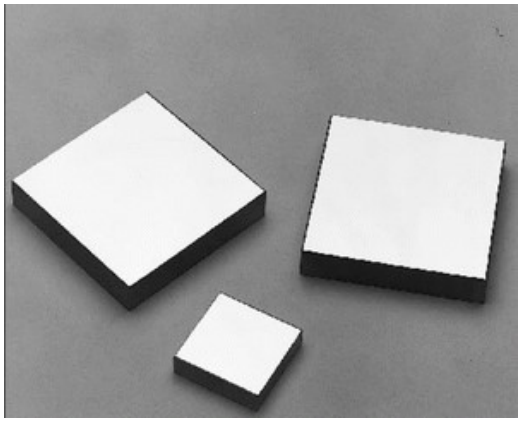
Coating.....R>98% on S1, R=(Rs+Rp)/2

P/N	Φ	t	AOI	λ
50101	25.40	6.00	0°	632.8nm
50102	25.40	6.00	45°	632.8nm
50103	25.40	6.00	0°	1064nm
50104	25.40	6.00	45°	1064nm

●Demension unit:mm

●Other sizes and coatings are available upon request.

Protected Aluminum Mirror

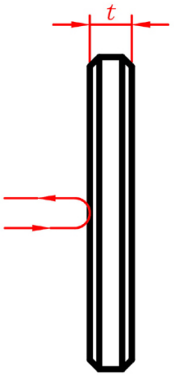


Material.....BK7,Fused Silica
Dimension Tolerance.....±0.20mm
Thickness Tolerance.....±0.20mm
Clear Aperture.....>90%
Flatness.....see table below
Parallelism.....<3 arc minutes
Surface Quality.....60–40
Coating.....Protected aluminum on S1,R_{avg}>87%@400~800nm

P/N	Size	Flatness	Substrate
50201	Φ12.7×5	λ/4	BK7
50202	Φ25.4×5	λ/4	BK7
50203	Φ12.7×6	λ/10	Fused Silica
50204	Φ25.4×6	λ/10	Fused Silica
50205	Φ12.7×6	λ/20	Fused Silica
50206	Φ25.4×6	λ/20	Fused Silica

●Demension unit:mm
●Other sizes and coatings are available upon request.

Enhanced Aluminum Mirror



Specifications:

Material.....see the table

Length or width tolerance.....±0.1mm

Diameter tolerance.....+0/-0.2mm

Thickness tolerance.....±0.20mm

Clear Aperture.....>90%

Parallelism.....<3 arc minutes

Surface Quality.....60–40 scratch and dig

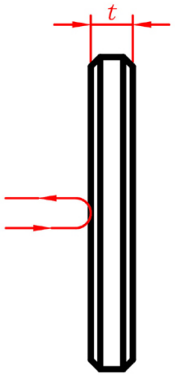
Coating.....Enhanced aluminum,R_{avg}≥93% (450~750nm)

P/N	Size	Flatness	Substrate
50321	Φ12.7×5	λ/4	BK7
50322	Φ25.4×5	λ/4	BK7
50334	Φ12.7×5	λ/10	Fused Silica
50335	Φ25.4×5	λ/10	Fused Silica
50345	Φ12.7×6	λ/20	Fused Silica
50346	Φ25.4×6	λ/20	Fused Silica

●Demension unit:mm

●Other sizes and coatings are available upon request.

Protected Silver Mirror



Specifications:

Material.....See table

Diameter.....+0/-0.10mm

Thickness.....±0.20mm

Clear Aperture.....80% of diameter

Parallelism.....<3 arc minutes

Surface Quality.....60–40 scratch and dig

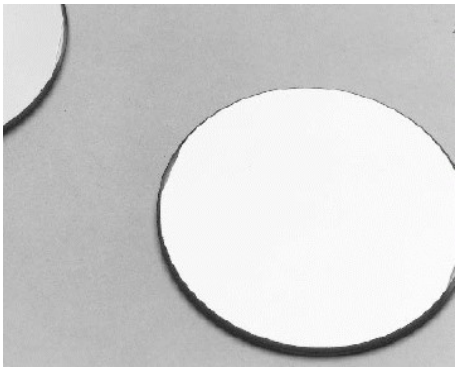
Coating.....Protected silver,Ravg≥95% (400nm~20mm)

P/N	Size	Flatness	Substrate
50401	Φ12.7×6	λ/4	BK7
50402	Φ25.4×6	λ/4	BK7
50403	Φ12.7×6	λ/10	Fused Silica
50404	Φ25.4×6	λ/10	Fused Silica

●Demension unit:mm

●Other sizes and coatings are available upon request.

Protected Gold Mirror



Specifications:

Material.....See table

Diameter.....+0/-0.10mm

Thickness.....±0.20mm

Clear Aperture.....90% of diameter

Parallelism.....<3 arc minutes

Surface Quality.....60–40 scratch and dig

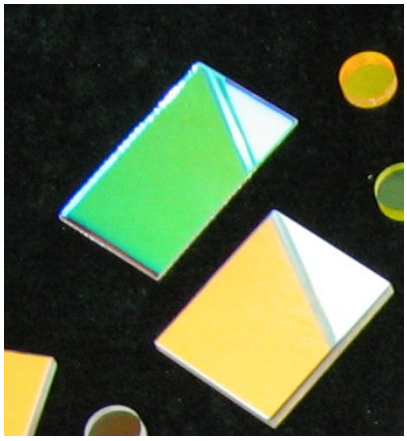
Coating.....Protected Gold coating,Ravg≥98%@650nm~16mm

P/N	Size	Flatness	Substrate
50501	Φ12.7×6	λ/4	BK7
50502	Φ25.4×6	λ/4	BK7
50503	Φ12.7×6	λ/10	Fused Silica
50504	Φ25.4×6	λ/10	Fused Silica

●Demension unit:mm

●Other sizes and coatings are available upon request.

Beamsplitters

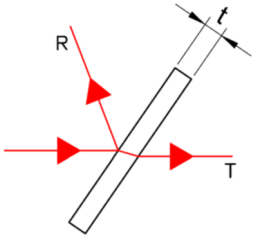


Beamsplitters are used to split or combine beam of light. The most common types provided by Eastoptics are: plates and cubes. Plates are used for most laser applications as they exhibit low absorption. Cubes are a convenient, proteced form for low power applications. The performance of beamsplitters are mainly dependent on the coating specifications. For the coating curves of each types of beamsplitters, please refer to “Coatings” chapter for more information.

In selecting beamsplitters, the type, coating, transmission range and damage threshold shold be considered.

- Beamsplitter Plate
- Beamsplitter Cube
- Non-polarization Beamsplitter Plate
- Non-polarization Beamsplitter Cube

Beamsplitter Plate



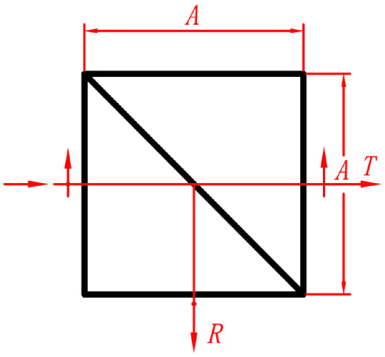
A plate type (mirror-type) beamsplitter is an optical window with semi-transparent mirrored coating to break a beam into two or more separate beams. A beamsplitter will reflect a portion of the incident energy (see reflection %), absorb a relatively small portion, and transmit the remaining energy (see transmission %). Beamsplitter plates have very neutral color characteristics and are often referred to as beam-splitters plate.

Specifications:
Material.....BK7
Dimension Tolerance.....±0.1mm
Thinkness Tolerance.....±0.2mm
Clear Aperture.....>90%
Parallelism.....< 1 arc minute
Flatness.....λ/8 per 25mm @632.8nm
Wavefront Distortion.....λ/4 @632.8nm
Surface Quality.....60-40
Bevel.....Protective
Coatings:
①Beamsplitter coating on S1,T/R=50/50±5%,T=(Ts+Tp)/2, R=(Rs+Rp)/2,AOI 45°
②Anti-reflecting coating on S2,R<0.5%,AOI 45°

P/N	Φ	t	λ
60101	10.0	3.0	532nm
60102	10.0	3.0	632.8nm
60103	12.7	3.0	532nm
60104	12.7	3.0	632.8nm
60105	25.4	3.0	532nm
60106	25.4	3.0	632.8nm
60107	10.0	3.0	450~650nm
60108	12.7	3.0	450~650nm
60109	25.4	3.0	450~650nm

●Demension unit:mm
●Other sizes and coatings are available upon request.

Beamsplitter Cube



Beamsplitter Cube is a more sophisticated type consisting of two right- angle prisms cemented together at their hypotenuse faces. The cemented face of one prism is coated. Before cementing, with a metallic or dielectric layer having the desired reflecting properties, both in the percentage of reflection and the desired color. The absorption loss to the coating is minimal and transmission and reflection approach 50%.

Specifications:

Material BK7

Dimension tolerance .....±0.2mm

Flatness .....λ/4 @632.8nm

Surface quality.....60-40

Beam Deviation.....<3'

Bevel.....Protective

Coatings:

①beamsplitter coating on one of hypotenuse faces,T/R=50/50(±5%),R=(Rs+Rp)/2,T=(Tp+Ts)/2,AOI 45°。

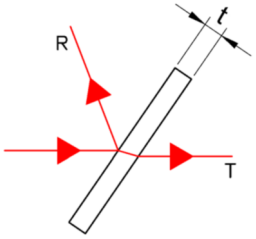
②V type anti-reflecting coating on other I/O faces,$R_{(avg)}$<0.5%,AOI 45°。

P/N	Size	λ
60201	10×10×10	532nm
60202	10×10×10	632.8nm
60203	15×15×15	532nm
60204	15×15×15	632.8nm
60205	20×20×20	532nm
60206	20×20×20	632.8nm
60207	25.4×25.4×25.4	532nm
60208	25.4×25.4×25.4	632.8nm
60209	10×10×10	450nm-650nm
60210	15×15×15	450nm-650nm
60211	20×20×20	450nm-650nm
60212	25.4×25.4×25.4	450nm-650nm

●Demension unit:mm

●Other sizes and coatings are available upon request.

Non-polarization Beamsplitter Plate



Non-polarization Beamsplitter Plate 's transmittance beam(or reflecting beam) consist of about 50% P light and about 50% S light,it is very suitable for polaization senstive receiver applications.

Specifications:

Material.....BK7

Dimension Tolercance.....±0.2mm

Clear Aperture.....>90%

Flatness.....λ/4@632.8nm

Beam Deviation.....<3'

Surface Quality.....60-40

Bevel.....Protective

Coatings:

①Non-polarization beamsplitter coating on S1,T/R=50/50(±5%),|Rs-Rp|<5%,AOI 45°。

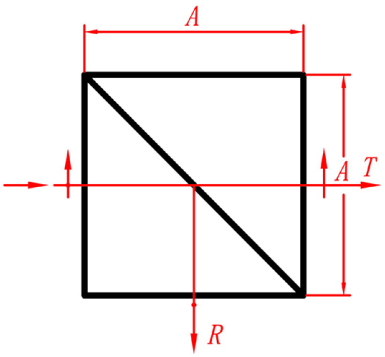
②V type anti-reflecting coating on S2,R<0.5%,AOI 45°。

P/N	Φ	t	λ
60301	12.7	3.0	532nm
60302	12.7	3.0	632.8nm
60303	25.4	3.0	532nm
60304	25.4	3.0	632.8nm

●Demension unit:mm

●Other sizes and coatings are available upon request.

Non-polarization Beamsplitter Cube



Non-polarization Beamsplitter cube is consist of two right angle prisms,one of right angle prism's hypotenuse face has the non-polarization beamsplitter coating,the transmittance beam(or the reflecting beam) consist of about 50% P light and about 50% S light,it is very suitable for polaization senstive receiver applications.

Specifications:

Material BK7

Dimension tolerance .....±0.2mm

Flatness .....λ/4 @632.8nm

Surface quality.....60-40

Beam Deviation.....<3'

Bevel.....Protective

Coatings:

①Non-polarization beamsplitter coating on one of hypotenuse faces,T/R=50/50(±5%), |Rs-Rp|<5%,AOI 45°。

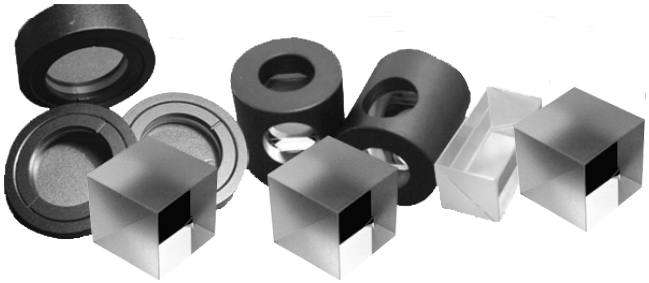
②V type anti-reflecting coating on other I/O surfaces,Ravg<0.5%,AOI 45°。

P/N	Size	λ
60401	10×10×10	532nm
60402	10×10×10	632.8nm
60403	15×15×15	532nm
60404	15×15×15	632.8nm
60405	25.4×25.4×25.4	532nm
60406	25.4×25.4×25.4	632.8nm

●Demension unit:mm

●Other sizes and coatings are available upon request.

Polarization Optics



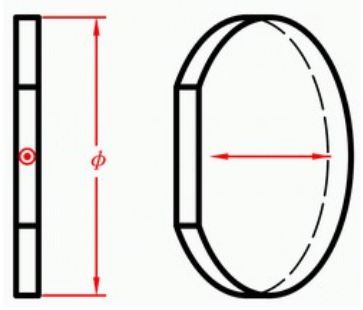
Polarized light carries valuable information about the various physical parameters that have been acting on it. Magnetic fields,chemical interactions, molecular structures, and mechanical stress all affect optical polarization.Applications relying on these polarization changes include astrophysics, agricultural production,electric power generation, and molecular biology.

Polarization states are linear, circular, or elliptical according to the paths traced by electric field vectors in a propagating wave train.Unpolarized light (such as from an incandescent bulb) is a combination of all linear, circular, and elliptical states. Randomly polarized light, in reference to laser output, is composed of two orthogonally linearly polarized collinear beams whose power randomly varies over time. Although random, this radiation is always linearly polarized.

Depolarized light is usually linearly polarized light that has been randomized by either temporal or spatial retardation variations across or along the beam. If the various retardations are integrated enough, the beam will appear to be depolarized. The randomization process usually varies the linear polarization in a fairly smooth and predictable manner.

- Singlet True Zero Order Waveplate
- Cemented True Zero Order Waveplate
- Cemented Zero Order Waveplate
- Optical Contact Zero Order Waveplate
- Air-Spaced Zero Order Waveplate
- Low Order Waveplate
- Multi-Order Waveplate
- Narrow Band Polarization Beamsplitter Cube
- Broadband Polarization Beamsplitter Cube
- Rotator
- Glan Taylor Polarizer
- Glan Laser Polarizer
- Glan Thompson Polarizer
- Glan Thompson Polarization Beamsplitter Cube
- Wollaston Polarizer
- Rochon Polarizer
- Broadband Polarization Beam Combiner
- Brewster Polarizer
- Brewster Window

Singlet True Zero Order Waveplate



- Broad Spectral Bandwidth
- Wide Temperature Bandwidth
- Wide Angle Bandwidth
- High Damage Threshold

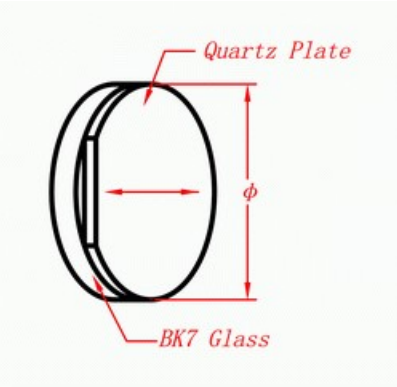
Specifications:

Material.....Crystal quartz
Dimension Tolerance.....+0.0, -0.2 mm
Wavefront Distortion.....λ/8 @632.8 nm
Retardation Tolerance.....<λ/ 500
Parallelism.....< 1"
Surface Quality.....20-10
Coating.....Anti-reflecting coating on both sides,R<0.25%@λ,AOI 0°
Damage Threshold.....>5J/cm2,10ns,10Hz
Recommended Wavelengths.....1310nm & 1550nm

P/N	Type	Φ	λ
70101	λ/2	12.7	1310nm
70102	λ/2	12.7	1550nm

●Demension unit:mm
●Other sizes and coatings are available upon request.

Cemented True Zero Order Waveplate



- Broad Spectral Bandwidth
- Wide Temperature Bandwidth
- Wide Angle Bandwidth
- Cemented By Epoxy

Recommend Wavelengths:
532nm,632.8nm,650nm,780nm,808nm,850nm,1064nm,1310nm & 1550nm.

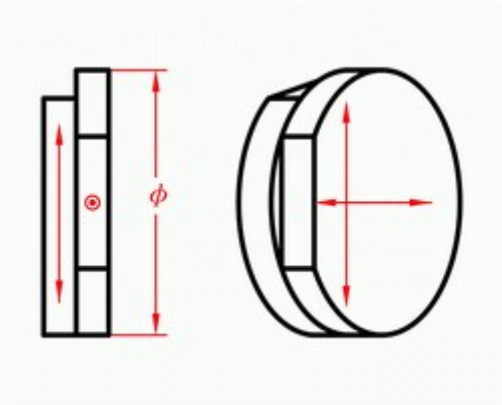
Specification;

Material.....Crystal quartz+BK7 optical glass
Dimension Tolerance.....+0.0, -0.2 mm
Wavefront Distortion.....λ/ 8 @ 632.8 nm
Retardation Tolerance.....<λ/500
Wavelength Range.....400~2100 nm
Parallelism.....< 1 arc second
Surface Quality.....40-20
Coating.....Anti-reflecting coatings on both sides,R<0.25%@λ,AOI 0°
Damage Threshold.....>0.25J/cm2,10ns,10Hz

P/N	Type	Φ	λ
70201	λ/4	12.70	532nm
70202	λ/4	25.40	532nm
70203	λ/4	12.70	632.8nm
70204	λ/4	25.40	632.8nm
70205	λ/2	12.70	532nm
70206	λ/2	25.40	532nm
70207	λ/2	12.70	632.8nm
70208	λ/2	25.40	632.8nm

●Demension unit:mm
●Other sizes and coatings are available upon request.

Cemented Zero Order Waveplate



A quarter–wave or half-wave retarder made from two plates of quartz with their fast axes crossed;the difference in thickness between the two plates determines the retardance.Zero-order retarders provide accurate retardance over a broad range of wavelengths and are more durable than single-element retarders.

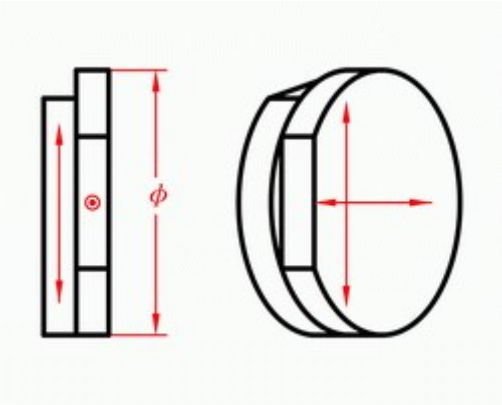
Specification:

Material.....Crystal Quartz
Dimension Tolerance.....+0.0, -0.2mm
Optical Angle Orientation Tolerance.....± 0.1°
Wavefront Distortion.....λ/8 @632.8nm
Retardation Tolerance.....<λ/300
Clear Aperture.....>90%
Surface Quality.....20-10
Parallelism.....<5"
Wavelength Range.....400~2100nm
Coating.....Anti-reflecting Coatings on both sides,R<0.2%@λ_d,AOI 0°
Damage Threshold.....>0.25J/cm^2,10ns,10Hz

P/N	Type	Φ	λ_d
70301	λ/4	12.70	532nm
70302	λ/4	25.40	532nm
70303	λ/4	12.70	632.8nm
70304	λ/4	25.40	632.8nm

●Demension unit:mm
●Other sizes and coatings are available upon request.

Optical Contact Zero Order Waveplate



be different from Cemented Zero Order Waveplates,Optical Contact Zero Order Waveplate does not use Epoxy bonding,a uncoated Optical Contact Zero Order Waveplate has a higher damage threshold.

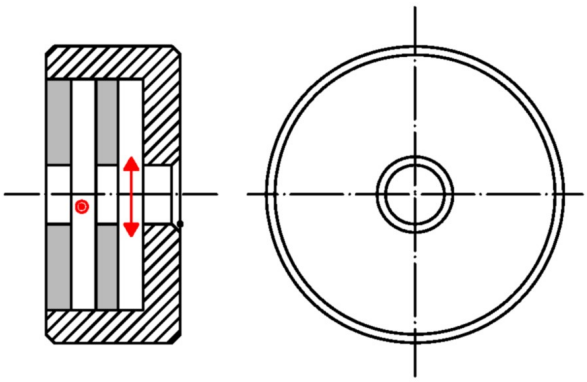
Specifications:

Material.....Crystal
Diameter Tolerance.....+0.0/-0.2mm
Wavefront Distortion.....λ/8 @632.8nm
Retardation Tolerance..... λ/300
Parallism.....<1"
Surface Quality.....20/10
Clear Apperture.....>90%
Coating.....Uncoated or Anti-reflecting coating on both sides,R<0.25%@λ,AOI 0°
Damage Threshold:
①Uncoated: >10J/cm^2,10ns,10Hz
②AR coating: >2.5J/cm2, 10ns, 10Hz

P/N	Type	Φ	λ_d	Coating
70401	λ/4	25.4	532nm	-
70402	λ/4	25.4	632.8nm	-
70403	λ/4	25.4	532nm	AR
70404	λ/4	25.4	632.8nm	AR
70405	λ/2	25.4	532nm	-
70406	λ/2	25.4	632.8nm	-
70407	λ/2	25.4	532nm	AR
70408	λ/2	25.4	632.8nm	AR

●Demension unit:mm
●Other sizes and coatings are available upon request.

Air-Spaced Zero Order Waveplate



Air spaced zero order waveplate is constructed by two quartz plates installed in a mount, to form a air gap between the two quartz plates. The difference in thickness between the two plates determines the retardance. Zero order waveplates offer a substantially lower dependence on temperature and wavelength change than multi-order waveplates.

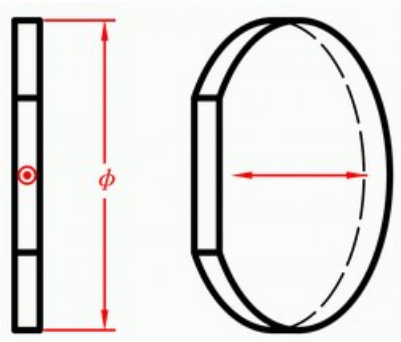
Specifications:

Material.....Crystal Quartz
Dimension Tolerance.....+0.0/-0.2mm
Wavefront Distortion.....λ/8@632.8nm
Retardation Tolerance.....λ/300
Parallelism(single plate).....<1 arc second
Surface Quality.....20/10 scratch and dig
Clear Aperture.....>90% central area
Coating.....AR coating on both sides,R<0.25%@λ
Damage Threshold.....5J/cm2,10ns,10Hz

P/N	Type	Φ	T	CA	λ
70501	λ/4	25.4	5.8	12.0	532nm
70502	λ/4	25.4	5.8	15.0	532nm
70503	λ/2	25.4	5.8	12.0	632.8nm
70504	λ/2	25.4	5.8	15.0	532nm

●Demension unit:mm
●Other sizes and coatings are available upon request.

Low Order Waveplate



Low Order Waveplates are much better than the multi-order wave-plates because of its thinner thickness(less than 0.5 mm). Better temperature (38ºC), Wavelength(1.5 nm) and incident angle (4.5º) bandwidth and high damage threshold make it widely used in common application. Also it is economical.

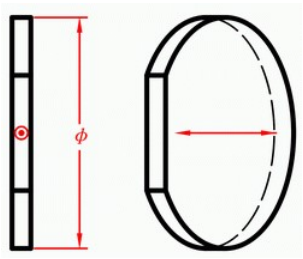
Specification:

Material.....Crystal Quartz
Dimension Tolerance.....+0.0, -0.2 mm
Wavefront Distortion.....λ/ 8 @ 632.8 nm
Retardation Tolerance.....<λ/300
Parallelism.....< 1 arc second
Surface Quality.....20-10
Coating.....AR coating on bpth sides,R<0.25%@λ,AOI 0°
Damage Threshold.....>2.5J/cm2,10ns,10Hz

P/N	Type	Φ	λ
70601	λ/4	12.70	532nm
70602	λ/4	25.40	532nm
70603	λ/4	12.70	632.8nm
70604	λ/4	12.70	632.8nm
70605	λ/2	12.70	532nm
70606	λ/2	25.40	532nm
70607	λ/2	12.70	632.8nm
70608	λ/2	25.40	632.8nm

●Demension unit:mm
●Other sizes and coatings are available upon request.

Multi-Order Waveplate



EastOptics offers both quarter- and half-wave multi-order wave plates. Compared to the zero-order waveplates（m=0）, the m of multi-order waveplates is between 6 and 12.It's retardation will be more sensitive to wavelength and temperature changes. Our multi-order wave plates are available for a number of discrete wavelengths ranging from 266 nm to 1550 nm.

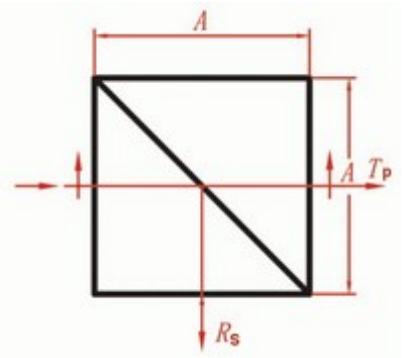
Specifications:

Material.....Crystal Quartz
Dimension Tolerance.....+0.0/-0.2mm
Wavefront Distortion.....λ/8@632.8nm
Retardation Tolerance.....λ/300
Parallelism.....<1 arc second
Surface Quality.....20-10
Clear Aperture.....>90% central area
AR Coating.....R<0.25%@central wavelength
Damage Threshold.....>5J/cm2,10ns,10Hz

P/N	Type	Φ	λ
70701	λ/4	12.70	532nm
70702	λ/4	25.40	532nm
70703	λ/4	12.70	632.8nm
70704	λ/4	25.40	632.8nm
70705	λ/2	12.70	532nm
70706	λ/2	25.40	532nm
70707	λ/2	12.70	632.8nm
70708	λ/2	25.40	632.8nm

●Demension unit:mm
●Other sizes and coatings are available upon request.

Narrow Band Polarization Beamsplitter Cube



Polarization Beamsplitter Cubes are constructed by cementing two precision right angle prisms together with the appropriate interference coating on the hypotenuse surface.The P-polarization of the input beam is transmitted, and S-polarization of the input beam is reflected.

Specification:

Material.....BK7 grade A optical glass

Dimension Tolerance.....± 0.2mm

Surface Quality.....60-40

Beam deviation.....< 3 arc minutes

Extinction Ratio.....>100:1

Bevel.....Protective

Coatings:

①Polarization beamsplitter coating on hypotenuse,Tp>95%,Ts<1%,Rs>99%,Rp<5%@λ,AOI 45°

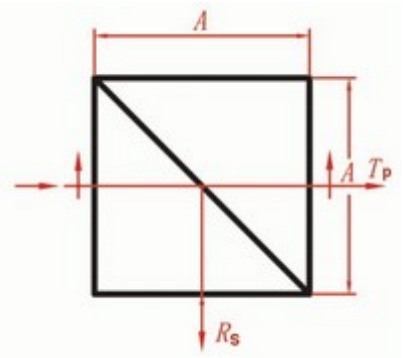
②AR coating on all input and output faces,R<0.25%@λ,AOI 0°

P/N	Size	λ
70801	10×10×10	532nm
70802	12.7×12.7×12.7	532nm
70803	15×15×15	532nm
70804	20×20×20	532nm
70805	25.4×25.4×25.4	532nm
70806	10×10×10	632.8nm
70807	12.7×12.7×12.7	632.8nm
70808	15×15×15	632.8nm
70809	20×20×20	632.8nm
70810	25.4×25.4×25.4	632.8nm

●Demension unit:mm

●Other sizes and coatings are available upon request.

Broadband Polarization Beamsplitter Cube



Polarization Beamsplitter Cubes are constructed by cementing two precision right angle prisms together with the appropriate interference coating on the hypotenuse surface.The P-polarization of the input beam is transmitted, and S-polarization of the input beam is reflected.

Specification:

Material.....BK7 or SF5 optical glass

Dimension Tolerance.....±0.2mm

Surface Quality.....60-40 scratch and dig

Beam Deviation.....<3 arc minutes

Clear Aperture.....>90%

Extinction Ratio.....>100:1

Bevel.....Protective

Coatings:

①Broadband polarization beamsplitter coating on hypotenuse,Tp>90%,Ts<1%,Rs>99%,Rp<10%,@450nm~650nm,AOI 45°

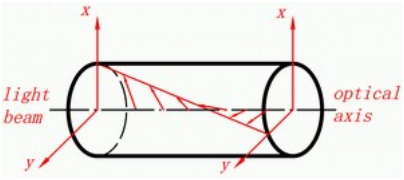
②BBAR coating on all input and output faces,R<0.5%@450nm~650nm,AOI 0°

P/N	Size	λ
70901	10×10×10	450~650nm
70902	12.7×12.7×12.7	450~650nm
70903	15×15×15	450~650nm
70904	20×20×20	450~650nm
70905	25.4×25.4×25.4	450~650nm

●Demension unit:mm

●Other sizes and coatings are available upon request.

Rotator



The plane of polarization of linearly polarized light will be rotated by Quartz Crystal due to the optical activity. Eastoptics's polarization rotators have very high temperature bandwidth and can be easily used in rotating the polarization of lasers.

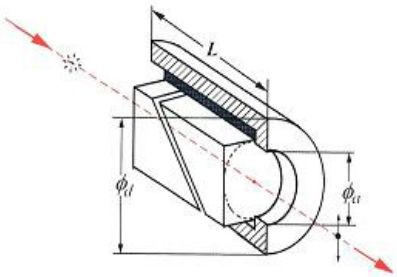
Specification:

Material.....Crystal Quartz
Dimension Tolerance.....+0.0, -0.1mm
Optical Angle Orientation Tolerance.....± 0.1°
Rotation Accuracy.....< 5 arc minutes
Wavefront Distortion.....λ/4 @632.8nm
Wavelength Range.....350-1300nm
Parallelism.....< 10 arc second
Surface Quality.....20-10 scratch and dig
Coating.....Uncoated or AR,R<0.2% at central wavelength
Rotation.....clockwise or counter-clockwise
Standard Wavelength.....532nm,632.8nm,808nm,1064nm

P/N	Φ	λ	θ	Coating
71001	12.70	532nm	45°	-
71002	20.00	532nm	45°	-
71003	12.70	532nm	90°	-
71004	20.00	532nm	90°	-
71005	12.70	532nm	45°	AR
71006	20.00	532nm	45°	AR
71007	12.70	532nm	90°	AR
71008	20.00	532nm	90°	AR
71009	12.70	632.8nm	45°	-
71010	20.00	632.8nm	45°	-
71011	12.70	632.8nm	90°	-
71012	20.00	632.8nm	90°	-
71013	12.70	632.8nm	45°	AR
71014	20.00	632.8nm	45°	AR
71015	12.70	632.8nm	90°	AR
71016	20.00	632.8nm	90°	AR

●Demension unit:mm
●Other sizes and coatings are available upon request.

Glan Taylor Polarizer



Glan Taylor prism polarizer is made of two same birefringent material prisms that are assembled with an air space. It has a length to aperture ratio less than 1.0 makes it a relatively thin polarizer. The polarizer with no side escape windows are suitable for low to medium power online_ordering where the side rejected beams are not required, which is suitable for a wide variety of online_orderings, particularly with collimated input beams. The angular field of different materials of polarizers listed below for comparison.

Features:
Air-spaced
Close to Brewster's Angle Cutting.
High Polarization Purity.
Short Length.
Suitable for low to medium power online_ordering where the rejected beam is not required.

***Specifications**:*

Material	*α-BBO*	*Calcite*	*YVO_4*
Wavelength Range	*200~3500nm*	*350~2300nm*	*400~4000nm*
Extinction Ratio	*$<5x10^{-6}$*	*$<5x10^{-5}$*	*$<5x10^{-5}$*
Parallelism	*<1 arc min.*		
Surface Quality	*20-10*		
Beam Deviation	*<3 arc minutes*		
Wavefornt Distortion	*λ/4@633nm*		
Damage Threshold	*>200MW/cm²*		
Coating	*Single Layer MgF_2*		
Mount	*Black Anodized Aluminium*		

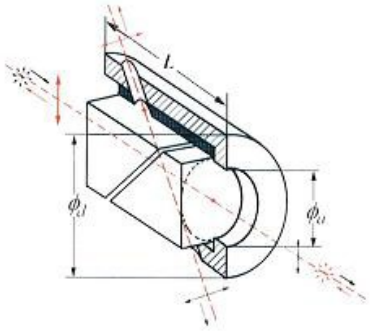
P/N	Material	λ	Extinction Ratio	Angular Field	C.A.	O.D.	L
71101	α-BBO	200~270nm	$<5x10^{-5}$	>6.0°	6.0	15.0	8.0
71102	α-BBO	200~270nm	$<5x10^{-5}$	>6.0°	8.0	25.4	10.0
71103	α-BBO	200~270nm	$<5x10^{-5}$	>6.0°	10.0	25.4	11.0
71104	α-BBO	200~270nm	$<5x10^{-5}$	>6.0°	15.0	30.0	15.0
71105	α-BBO	200~270nm	$<5x10^{-5}$	>6.0°	20.0	38.0	19.0

P/N	Material	λ	Extinction Ratio	Angular Field	C.A.	O.D.	L
71106	α-BBO	300~700nm	$<5x10^{-5}$	>6.0°	6.0	15.0	8.0
71107	α-BBO	300~700nm	$<5x10^{-5}$	>6.0°	8.0	25.4	10.0
71108	α-BBO	300~700nm	$<5x10^{-5}$	>6.0°	10.0	25.4	11.0
71109	α-BBO	300~700nm	$<5x10^{-5}$	>6.0°	15.0	30.0	15.0
71110	α-BBO	300~700nm	$<5x10^{-5}$	>6.0°	20.0	38.0	19.0
71111	α-BBO	700~3000nm	$<5x10^{-6}$	>6.0°	6.0	15.0	8.0
71112	α-BBO	700~3000nm	$<5x10^{-6}$	>6.0°	8.0	25.4	10.0
71113	α-BBO	700~3000nm	$<5x10^{-6}$	>6.0°	10.0	25.4	11.0
71114	α-BBO	700~3000nm	$<5x10^{-6}$	>6.0°	15.0	30.0	15.0
71115	α-BBO	700~3000nm	$<5x10^{-6}$	>6.0°	20.0	38.0	19.0
71116	Calcite	350~2300nm	$<5x10^{-5}$	>7.7°	6.0	15.0	8.0
71117	Calcite	350~2300nm	$<5x10^{-5}$	>7.7°	8.0	25.4	10.0
71118	Calcite	350~2300nm	$<5x10^{-5}$	>7.7°	10.0	25.4	11.0
71119	Calcite	350~2300nm	$<5x10^{-5}$	>7.7°	15.0	30.0	15.0
71120	Calcite	350~2300nm	$<5x10^{-5}$	>7.7°	20.0	38.0	19.0
71121	YVO_4	500~4000nm	$<5x10^{-6}$	>6.5°	6.0	15.0	7.0
71122	YVO_4	500~4000nm	$<5x10^{-6}$	>6.5°	8.0	25.4	9.0
71123	YVO_4	500~4000nm	$<5x10^{-6}$	>6.5°	10.0	25.4	10.0
71124	YVO_4	500~4000nm	$<5x10^{-6}$	>6.5°	15.0	30.0	12.0
71125	YVO_4	500~4000nm	$<5x10^{-6}$	>6.5°	20.0	38.0	15.0

●Demension unit:mm

●Other sizes and coatings are available upon request.

Glan Laser Polarizer



Glan Laser prism polarizer is made of two same birefringent material prisms that are assembled with an air space. The polarizer is a modification of the Glan Taylor type and is designed to have less reflection loss at the prism junction. The polarizer with two escape windows allow the rejected beam to escape out of the polarizer, which makes it more desirable for high energy lasers. The surface quality of these faces is relatively poor as compared to that of entrance and exit faces. No scratch dig surface quality specifications are assigned to these faces. The polarized field F1 and F2 of these is shown in the plot below.

Features:
Air-spaced
Close to Brewster's Angle Cutting.
High Polarization Purity.
Short Length.
Suitable for low to medium power online_ordering where the rejected beam is not required.

Specifications:
Material: α-BBO,Calcite or YVO_4
Wavelength Range: α-BBO:200-3500nm,Calcite:350-2300nm,YVO_4:400-4000nm
Extinction Ratio: α-BBO:<$5x10^{-6}$;Calcite:<$5x10^{-5}$;YVO4:<$5x10^{-6}$
Parallelism: <1 arc Min.
Surface Quality: 20-10
Beam Deviation: <3 arc minutes
Wavefornt Distortion: λ/4@633nm
Damage Threshold: >500MW/cm^2
Coating: Single layer MgF_2
Mount: Black Anodized Aluminium

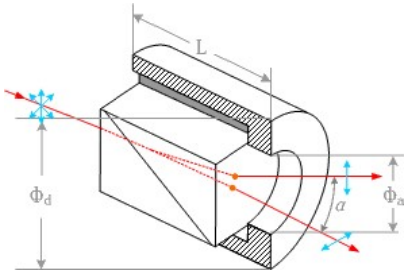
P/N	Material	Lambda(nm)	Extinction Ratio	Angular Field(°)	C.A.	O.D.	L
71201	α-BBO	200-300	<$5x10^{-6}$	>6.0	6	15	12
71202	α-BBO	200-300	<$5x10^{-6}$	>6.0	8	25.4	15
71203	α-BBO	200-300	<$5x10^{-6}$	>6.0	10	25.4	20
71204	α-BBO	200-300	<$5x10^{-6}$	>6.0	15	30	34
71205	α-BBO	200-300	<$5x10^{-6}$	>6.0	20	38	48.9
71206	α-BBO	300-700	<$5x10^{-6}$	>6.0	6	15	12
71207	α-BBO	300-700	<$5x10^{-6}$	>6.0	8	25.4	15
71208	α-BBO	300-700	<$5x10^{-6}$	>6.0	10	25.4	20

P/N	Material	Lambda(nm)	Extinction Ratio	Angular Field(°)	C.A.	O.D.	L
71209	α-BBO	300-700	$<5x10^{-6}$	>6.0	15	30	25
71210	α-BBO	300-700	$<5x10^{-6}$	>6.0	20	38	34
71211	α-BBO	700-3000	$<5x10^{-6}$	>6.0	6	15	12
71212	α-BBO	700-3000	$<5x10^{-6}$	>6.0	8	25.4	15
71213	α-BBO	700-3000	$<5x10^{-6}$	>6.0	10	25.4	20
71214	α-BBO	700-3000	$<5x10^{-6}$	>6.0	15	30	25
71215	α-BBO	700-3000	$<5x10^{-6}$	>6.0	20	38	34
71216	Calcite	350-2300	$<5x10^{-5}$	>7.7	6	15	12
71217	Calcite	350-2300	$<5x10^{-5}$	>7.7	8	25.4	15
71218	Calcite	350-2300	$<5x10^{-5}$	>7.7	10	25.4	20
71219	Calcite	350-2300	$<5x10^{-5}$	>7.7	15	30	25
71220	Calcite	350-2300	$<5x10^{-5}$	>7.7	20	38	34
71221	YVO4	500-4000	$<5x10^{-6}$	>6.5	6	15	15.5
71222	YVO4	500-4000	$<5x10^{-6}$	>6.5	8	25.4	19
71223	YVO4	500-4000	$<5x10^{-6}$	>6.5	10	25.4	22.5
71224	YVO4	500-4000	$<5x10^{-6}$	>6.5	15	30	31

●Demension unit:mm

●Other sizes and coatings are available upon request.

Glan Thompson Polarizer



Glan Thompson polarizer is made of two calcite prisms or a -BBO prisms cemented together. Two types of Glan Thompsons are available. One is the standard form and the other is the long form. Their length to aperture ratios are 2.5 : 1 and 3.0 : 1 respectively. Glan Thompsons tend to have higher extinction ratio than air spaced polarizers. In the ultra violet spectrum, their transmission is limited by absorption in birefriengent materials as well as the cement layer. a -BBO polarizers and Calcite polarizers can be used from about 220 to 900nm and 350 to 2300 nm respectively.

The polarizers have the widest field angle of any design. The standard form of this polarizer with 2.5:1 length to aperture ratio has a full acceptance cone angle of more than 15 ° @ 589nm, symmetric about the input axis, whilst the long form with 3:1 ratio has a field angle >26 ° . The polarized field F1 and F2 of all these is shown in the plot below.

***Specifications**:*

Material: α-BBO,Calcite

Wavelength Range: α-BBO:220-900nm,Calcite:350-2300nm

Extinction Ratio: α-BBO:<5x10^{-6};Calcite:<5x10^{-5}

Parallelism: <1 arc Min.

Surface Quality: 20-10

Beam Deviation: <3 arc minutes

Wavefornt Distortion: λ/3@633nm

Damage Threshold: >200MW/cm^2

Coating: Single layer MgF_2

Mount: Black Anodized Aluminium

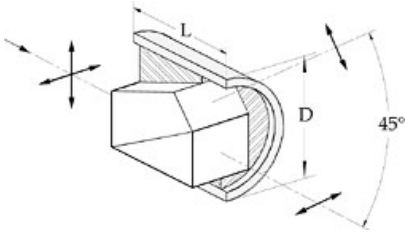
P/N	Material	L/CA	Extinction Ratio	Angular Field(°)	C.A.	O.D.	L
71301	α-BBO	1.6	<5x10^{-6}	>15	6	15	14
71302	α-BBO	1.6	<5x10^{-6}	>15	8	25.4	17
71303	α-BBO	1.6	<5x10^{-6}	>15	10	25.4	21
71304	α-BBO	1.6	<5x10^{-6}	>15	12.7	25.4	26
71305	α-BBO	1.6	<5x10^{-6}	>15	15	30	31
71306	α-BBO	1.6	<5x10^{-6}	>15	20	38	40
71307	Calcite	2.5	<5x10^{-6}	14-16	6	15	18
71308	Calcite	2.5	<5x10^{-6}	14-16	8	25.4	23
71309	Calcite	2.5	<5x10^{-6}	14-16	10	25.4	28
71310	Calcite	2.5	<5x10^{-6}	14-16	12.7	25.4	35

P/N	Material	L/CA	Extinction Ratio	Angular Field(°)	C.A.	O.D.	L
71311	Calcite	2.5	$<5x10^{-6}$	14-16	15	30	41
71312	Calcite	3	$<5x10^{-6}$	25-28	6	15	21
71313	Calcite	3	$<5x10^{-6}$	25-28	8	25.4	27
71314	Calcite	3	$<5x10^{-6}$	25-28	10	25.4	33
71315	Calcite	3	$<5x10^{-6}$	25-28	12.7	25.4	41
71316	Calcite	3	$<5x10^{-6}$	25-28	15	30	48

●Demension unit:mm

●Other sizes and coatings are available upon request.

Glan Thompson Polarization Beamsplitter Cube



These Glan Thompson polarizers have been arranged to permit ther output of the s-polarized beam at 45 ° from the straight through p-polarized beam. They provide high polarization purity and high transmission in the two emerging beams. These are useful if it is required to utilize both linear polarization states . They are mounted in a rectangular metal cell and surrounded with an absorbing compound.

***Specifications**:*

Material: Calcite(Grade A)

Wavelength Range: 350-2300nm

Extinction Ratio: $<5x10^{-5}$

Parallelism: <1 arc Min.

Surface Quality: 20-10

Beam Deviation: <3 arc minutes

Wavefornt Distortion: λ/4@633nm

Damage Threshold: >500MW/cm^2(CW)

Coating: Single layer MgF_2

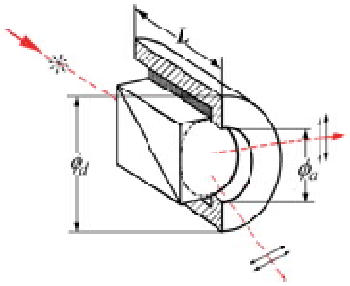
Mount: Black Anodized Aluminium

P/N	Extinction Ratio	Angular Field(°)	W	H	L	C.A.	O.D.
71401	$<5x10^{-5}$	14-16	-	-	33	6.0X6.0	50.8
71402	$<5x10^{-5}$	14-16	-	-	33	8.0X6.0	50.8
71403	$<5x10^{-5}$	14-16	-	-	33	10.0X10.0	50.8
71404	$<5x10^{-5}$	14-16	-	-	33	12.0X12.0	50.8
71405	$<5x10^{-5}$	14-16	-	-	38	15.0X15.0	50.8
71406	$<5x10^{-5}$	14-16	12	16	16	6	-
71407	$<5x10^{-5}$	14-16	16	20	22	8	-
71408	$<5x10^{-5}$	14-16	20	25	26	10	-
71409	$<5x10^{-5}$	14-16	20	30	34	12	-
71410	$<5x10^{-5}$	14-16	25	35	40	15	-
71411	$<5x10^{-5}$	14-16	12	16	16	6	-
71412	$<5x10^{-5}$	14-16	16	20	22	8	-
71413	$<5x10^{-5}$	14-16	20	25	26	10	-
71414	$<5x10^{-5}$	14-16	20	30	34	12	-
71415	$<5x10^{-5}$	14-16	25	35	40	15	-

●Demension unit:mm

●Other sizes and coatings are available upon request.

Wollaston Polarizer



Wollaston polarizer is made of two birefringent material prisms that are cemented together. The deviations of the ordinary and extraordinary beams are nearly symmetrical about the input beam axis, so that the Wollaston polarizing beam splitter has approximately twice the deviation of the Rochon. The separation angle exhibits chromatic dispersion, as shown in the blow. Any separation angle can be designed upon the requirement. The separation angle of standard products vs wavelength is shown in the plot below.

***Specifications**:*

Material: α-BBO,Calcite,YVO4,Quartz,MgF2

Wavelength Range:α-BBO:190-3500nm,Calcite:350-2300nm,YVO_4:400-4000nm,Quartz:20-2300nm, MgF_2:120-7500nm

Extinction Ratio: Calcite,Quartz:<$5x10^{-5}$;α-BBO,YVO4:<$5x10^{-6}$,MgF_2:<$5x10^{-6}$

Parallelism: <1 arc Min.

Surface Quality: 20-10

Beam Deviation: <3 arc minutes

Wavefornt Distortion: λ/4@633nm

Damage Threshold: >500MW/cm^2

Coating: Single layer MgF_2

Mount: Black Anodized Aluminium

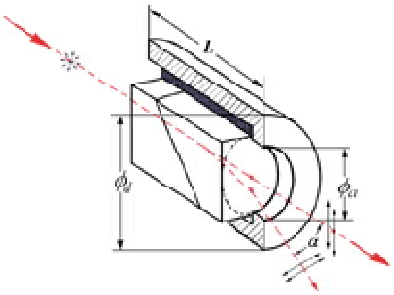
P/N	Material	Extinction Ratio	Separation Angle(°)	C.A.	O.D.	L
71501	α-BBO	<$5x10^{-6}$	15-27	6.00	15.00	9.00
71502	α-BBO	<$5x10^{-6}$	15-27	8.00	25.40	11.00
71503	α-BBO	<$5x10^{-6}$	15-27	10.00	25.40	13.00
71504	α-BBO	<$5x10^{-6}$	15-27	15.00	30.00	18.00
71505	α-BBO	<$5x10^{-6}$	15-27	20.00	38.00	24.00
71506	Calcite	<$5x10^{-6}$	16.7-22.5	6.00	15.00	9.00
71507	Calcite	<$5x10^{-6}$	16.7-22.5	8.00	25.40	11.00
71508	Calcite	<$5x10^{-6}$	16.7-22.5	10.00	25.40	13.00
71509	Calcite	<$5x10^{-6}$	16.7-22.5	15.00	30.00	18.00
71510	Calcite	<$5x10^{-6}$	16.7-22.5	20.00	38.00	24.00

P/N	Material	Extinction Ratio	Separation Angle(°)	C.A.	O.D.	L
71511	Quartz	$<5x10^{-6}$	2~3	6.00	15.00	14.00
71512	Quartz	$<5x10^{-6}$	2~3	8.00	25.40	18.00
71513	Quartz	$<5x10^{-6}$	2~3	10.00	25.40	22.00
71514	Quartz	$<5x10^{-6}$	2~3	15.00	30.00	32.00
71515	Quartz	$<5x10^{-6}$	2~3	20.00	38.00	44.00
71516	YVO4	$<5x10^{-6}$	19.6~23.3	6.00	15.00	8.00
71517	YVO4	$<5x10^{-6}$	19.6~23.3	8.00	25.40	10.00
71518	YVO4	$<5x10^{-6}$	19.6~23.3	10.00	25.40	12.00
71519	YVO4	$<5x10^{-6}$	19.6~23.3	15.00	30.00	16.00
71520	YVO4	$<5x10^{-6}$	19.6~23.3	20.00	38.00	21.00
71521	MgF2	$<5x10^{-6}$	1.70~3.24	6.00	15.00	14.00
71522	MgF2	$<5x10^{-6}$	1.70~3.24	8.00	25.40	18.00
71523	MgF2	$<5x10^{-6}$	1.70~3.24	10.00	25.40	22.00
71524	MgF2	$<5x10^{-6}$	1.70~3.24	15.00	30.00	32.00
71525	MgF2	$<5x10^{-6}$	1.70~3.24	20.00	38.00	44.00

●Demension unit:mm

●Other sizes and coatings are available upon request.

Rochon Polarizer



Rochon polarizer is one of the earliest designs, which is made of two birefringent material prisms cemented together. Both ordinary and extraordinary beams propagate collinearly down the optic axis in the first prism under the ordinary refractive index. Upon entering the second prism the ordinary beam experiences the same refractive index and continues undeviated. The extra-ordinary beam, however, now has a lower refractive index and is refracted at the interface. The angle of refraction is further increased at the birefringent material/air exit surface. Any separation angle can be designed for specific wavelength upon the requirement. The separation angle of standard products vs wavelength is shown in the plot below.

Specifications:

Material: α-BBO,YVO_4,Quartz,MgF_2

Wavelength Range:α-BBO:190-3500nm,YVO4:400-4000nm,Quartz:200-2300nm,MgF2:120-7500nm

Extinction Ratio: α-BBO,YVO_4:<$5x10^{-6}$;Quartz:<$4x10^{-6}$,MgF_2:<$5x10^{-5}$

Parallelism: <1 arc Min.

Surface Quality: 20-10

Beam Deviation: < 3 arc minutes

Wavefornt Distortion: λ/4@633nm

Damage Threshold: >500 MW/cm^2

Coating: Single layer MgF_2

Mount: Black Anodized Aluminium

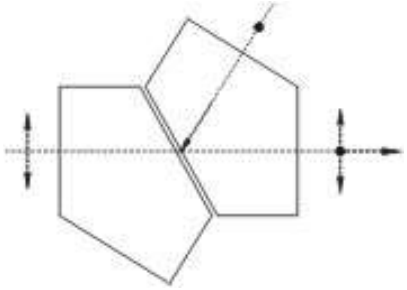
P/N	Material	Extinction Ratio	Separation Angle(°)	C.A.	O.D.	L
71601	α-BBO	<5x10~6	8.0°~14°	6	15	8
71602	α-BBO	<5x10~6	8.0°~14°	8	25.4	11
71603	α-BBO	<5x10~6	8.0°~14°	10	25.4	13
71604	α-BBO	<5x10~6	8.0°~14°	15	30	18
71605	α-BBO	<5x10~6	8.0°~14°	20	38	22
71606	Quartz	<4x10~6	1.0°~1.5°	6	15	16
71607	Quartz	<4x10~6	1.0°~1.5°	8	25.4	20
71608	Quartz	<4x10~6	1.0°~1.5°	10	25.4	25
71609	Quartz	<4x10~6	1.0°~1.5°	15	30	35
71610	Quartz	<4x10~6	1.0°~1.5°	20	38	45

P/N	Material	Extinction Ratio	Separation Angle(°)	C.A.	O.D.	L
71611	YVO4	<5x10^{-6}	9.8°~13.0°	6	15	8
71612	YVO4	<5x10^{-6}	9.8°~13.0°	8	25.4	11
71613	YVO4	<5x10^{-6}	9.8°~13.0°	10	25.4	13
71614	YVO4	<5x10^{-6}	9.8°~13.0°	15	30	18
71615	YVO4	<5x10^{-6}	9.8°~13.0°	20	38	22
71616	MgF2	<5x10^{-5}	1.35°@532nm	6	15	16
71617	MgF2	<5x10^{-5}	1.35°@532nm	8	25.4	20
71618	MgF2	<5x10^{-5}	1.35°@532nm	10	25.4	25
71619	MgF2	<5x10^{-5}	1.35°@532nm	15	30	35
71620	MgF2	<5x10^{-5}	1.35°@532nm	20	38	45
71620	MgF2	<5x10^{-5}	1.35°@532nm	20	38	45

●Demension unit:mm

●Other sizes and coatings are available upon request.

Broadband Polarization Beam Combiner



The Polarization Beam Combiner is made of two pcs YVO4 Prism or Calcite Prism. The Calcite Polarization combiner can be with 45° or 90° of two polarization Beam Input. Please refer to Glan Thompson Beamsplitter Cube, The Glan Thomposn Beamsplitter made of calcite can also wark as polarization Beam combiner. But since it is glue cemented, the damage threshold is lower. While we specially design the air spaced Polarization Beam combiner, which is made of YVO4. The Angle between two input polarization beam is 100.6 deg. All the input & output surfacces are optical polished and coated.

***Specifications**:*

Material: YVO4

Wavelength Range: 500-5000nm

Surface quality: 40-20

Beam Deviation: <3 arc minutes

Wavefornt Distortion: λ/4@633nm

Damage Threshold: >500MW/cm²(CW)

Coating: Single layer MgF_2

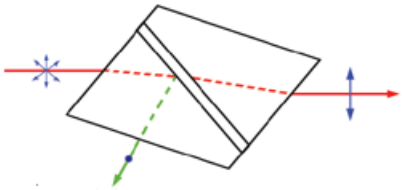
Mount: Black Anodized Aluminium

P/N	Wavelength(nm)	C.A.	W	H	L
71701	500-5000	6	15	15	15
71702	500-5000	15	15	20	18
71703	500-5000	10	20	25	22
71704	500-5000	12	20	30	25
71705	500-5000	15	25	35	30

●Demension unit:mm

●Other sizes and coatings are available upon request.

Brewster Polarizer



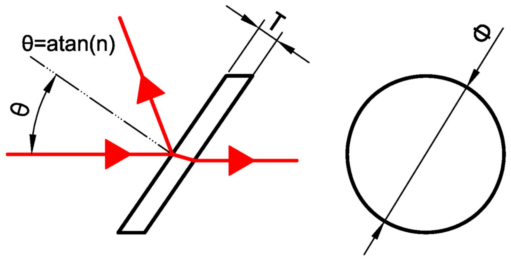
specially designed a high transmission Glan Laser Polarizer for online_ordering which requires high transmission. The specially designed polarizer is based on the Brewster Cut crystal, which can improve the transmission from normally >85% to 95%. This polarizer can be made from both Calcite and YVO4.

Specifications:
Material: Calcite or YVO_4
Wavelength Range: Calcite:350-2300nm,YVO_4:400-4000nm
Extinction Ratio: Calcite:<$5x10^{-5}$;YVO_4:<$5x10^{-6}$
Parallelism: <1 arc Min.
Surface Quality: 20-10
Beam Deviation: <3 arc minutes
Wavefront Distortion: λ/4@633nm
Damage Threshold: >500MW/cm^2
Coating: Uncoated
Transmission: >95%
Mount: Black Anodized Aluminium

P/N	Material	Wavelength	Extinction Ratio	C.A.	O.D.	L
71801	Calcite	350nm~2300nm	<$5x10^{-5}$	6	25.4	11.3
71802	Calcite	350nm~2300nm	<$5x10^{-5}$	8	25.4	14.8
71803	Calcite	350nm~2300nm	<$5x10^{-5}$	10	25.4	18.4
71804	YVO4	500nm~4000nm	<$5x10^{-6}$	6	25.4	13.2
71805	YVO4	500nm~4000nm	<$5x10^{-6}$	8	25.4	17.6
71806	YVO4	500nm~4000nm	<$5x10^{-6}$	10	25.4	22

●Demension unit:mm
●Other sizes and coatings are available upon request.

Brewster Window



Brewster Windows are designed to present a circular profile when oriented at Brewster's angle (55.57°). Brewster Windows feature laser grade surface quality and parallelism, in addition to limiting transmitted wavefront distortion to λ/10. When used at 55.57°, these windows minimize the loss of P-polarized light, ideal for use within laser cavities and for producing linearly polarized light.

Features:

Reduce Loss of P-Polarized Light

Circular Profile When Oriented at 55.57°

Great for Use in Laser Cavities

Specifications:

Material.....BK7 Grade A,UV Grade Fused Silica

Dimension Tolerance.....+0.0/-0.2mm

Thickness Tolerance.....±0.2mm

Clear Aperture.....>90%

Parallelism.....<10 arc seconds

Surface Quality.....20/10(S/D)

Wavefront Distortion.....<λ/10@633nm

Chamfer Protected.....<0.5mm×45°

Coating.....No Coating

P/N	Φ	T	Material
71901	6.35	2.0	BK7
71902	12.7	2.0	BK7
71903	15.0	3.0	BK7
71904	20.0	3.0	BK7
71905	25.4	4.0	BK7
71906	6.35	2.0	UVFS
71907	12.7	2.0	UVFS
71908	15.0	3.0	UVFS
71909	20.0	3.0	UVFS
71910	25.4	4.0	UVFS

●Demension unit:mm

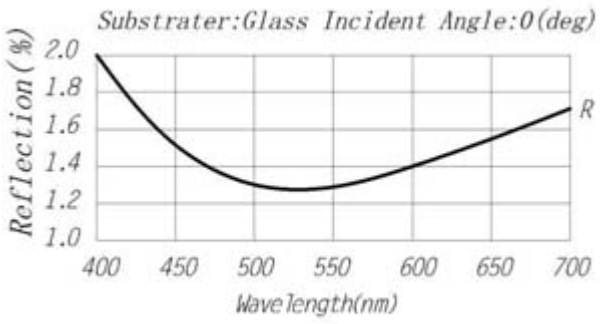
●Other sizes and coatings are available upon request.

Coatings

As light passes through an uncoated glass substrate,approximately 4% will be reflected at each surface.This result in a total transmission of only 92% of the incident light.Anti-Reflection coatings are especially important if the system contains many transmitting optical elements.Coationg each component will increase the throughput of the system and reduce hazards caused by reflections traveling backwards through the system(ghost images).Many low-light system incorporate AR coated optics to allow for an efficient use of the light.We now can provide many kinds of antireflective,high reflective and partial reflective coatings.

- Single Layer MgF2 AR Coating
- Narrow Band AR Coating
- Broadband AR Coating
- Dielectric High Reflection Coating
- Metal Reflection Coating

Single Layer MgF2 AR Coating(SLAR)



Specification

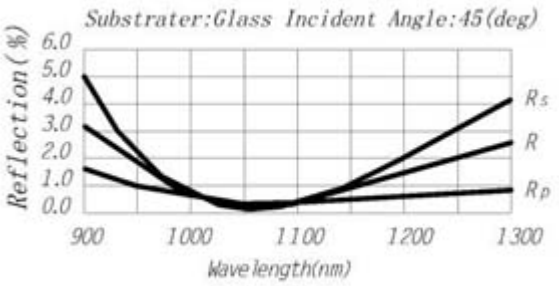
Single layer MgF2@540nm

R<1.5% @Center Wavelength,R<3% @ 400-700nm

Application:

Economic,Lens & Prism,Input & output surface

Narrow Band AR Coating(NBAR)



Specification

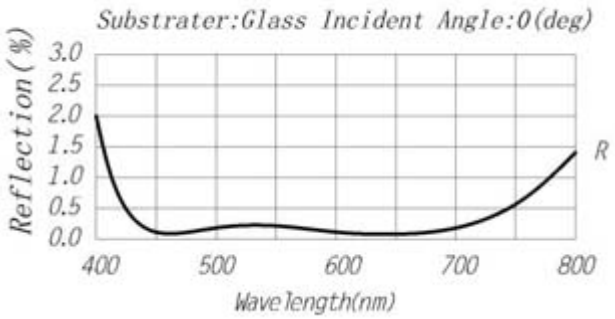
0°:R<0.2%@Center Wavelength

45°:R<0.5%@Center Wavelength

Application

High performance,Element in laser system

Broadband AR Coating(BBAR)



Specification

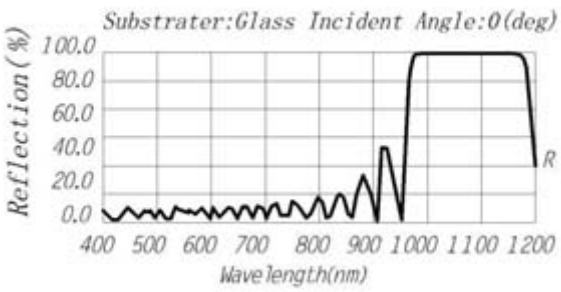
0°:R<0.5% @ 450-650nm

45°:R<1.0% @ 450-650nm

Application

High performance,Lens & Prism,I/O surface

Dielectric High Reflection Coating(DHR)



Specification

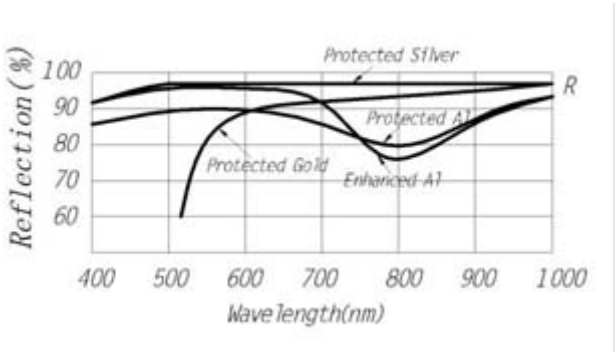
0°:R<99.8%@Center Wavelength

45°:R<99.5%@Center Wavelength

Application

Laser cavity mirror,laser system folder

Metal Reflection Coating



Specification:

Protected aluminum.....Ravg≥87%@400~800nm

Enhanced aluminum.....Ravg≥93%@450~750nm

Protected silver.....Ravg≥95%@400~20000nm

Au(Bare).....Ravg≥99%@700~20000nm

Au(Protected).....Ravg≥98%@650~16000nm

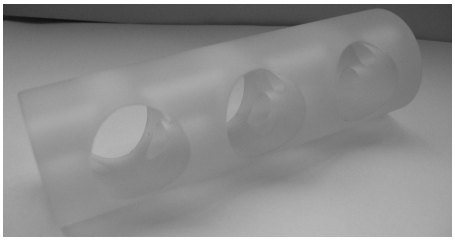
Application:

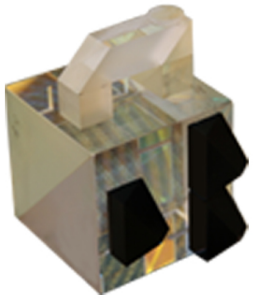
Sphere mirror,Broadband,Economic

Custom Optics

The skilful engineers and technicians in EastOptics are developing specialized fabrication techniques for optical components to meet a wide range of requirements up to the highest international standards.

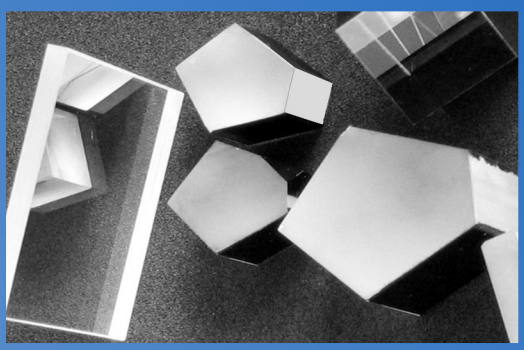
In addition to standards optical components described in the previous pages of this catalog,EastOptics designs and provides a wide range of custom optics.EastOptics is not only capable of serving high volume order but also in a position to provide as few as a single piece,customized products.Customized products are normally a quite expensive.However,EastOptics will work to meet your budget requirements.





Optical Design Services

EastOptics offer optical design services,if you have the requirements,please contact us.



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