

质量 / 诚信 / 敬业 / 效率 / 创新
Quality/integrity/dedication/efficiency/innovation



微信公众号

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上海京盛光电科技有限公司

SHANGHAI JINGSHENG OPTOELECTRONICS TECHNOLOGY CO., LTD.

PROFESSIONAL OPTICAL COMPONENT MANUFACTURER

专业的光学元件生产商

通用光学元件
UNIVERSAL OPTICAL ELEMENT



偏振光学元件
POLARIZING COMPONENTS

晶体元件
CRYSTALS



光机元件
OPTO-MECHANICAL ELEMENT



满足客户一站式的产品采购需求及提供光学解决方案

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关于我们 ABOUT US

上海京盛光电科技有限公司是专业从事精密光学元件、激光晶体材料、光通讯元器件的研发、生产和销售为一体的企业,产品主要应用光通讯、激光器、医疗器械、光学显示航空航天,汽车雷达和机器视觉等领域,服务于全球市场。公司主要经营光学产品包括:高精度透镜,棱镜,反射镜,分光片,窗口片,波片,PBS,滤光片等;激光晶体包括:BBO/LBO非线性晶体、YVO4晶体、ND:YVO4激光片、LN楔角片、KTP+ND:YVO4(DPM);器件有激光器,隔离器,环形器,准直器,衰减器等产品畅销国内外。

公司拥有一支优秀的管理团队,20多年从业经验技术队伍,和先进的生产检测设备,拥有主要设备包括Zygo GPI-XP干涉仪,分光光度计,Perkin-Elmer Lambda 750,球径仪,测厚仪等,满足不同用户的各种需求。公司还具备从小批量、多品种和高精度到大批量生产的能力,满足客户一站式的产品采购需求及提供光学解决方案。

Shanghai Jingsheng Optoelectronics Technology Co., Ltd. is a specialized enterprise engaged in the research, development, production, and sales of precision optical components, laser crystal materials, and optical communication devices. Our products are mainly used in optical communication, lasers, medical instruments, optical displays, aerospace, automotive radar, machine vision, and more, serving the global market. The company's optical products include high-precision lenses, prisms, mirrors, beamsplitters, windows, waveplates, PBS, filters, etc. Laser crystals comprise BBO/LBO nonlinear crystals, YVO₄ crystals, ND:YVO₄ laser crystals, LN wedge prisms, KTP+ND:YVO₄ (DPM). Devices such as lasers, isolators, ring resonators, collimators, attenuators, etc., are popular both domestically and internationally.

Our company has an excellent management team, a technical workforce with over 20 years of industry experience, and advanced production and testing equipment. Key equipment includes the Zygo GPI-XP interferometer, spectrophotometer, Perkin-Elmer Lambda 750, spherometer, thickness gauge, etc., meeting diverse user needs. With capabilities ranging from small batches, multiple varieties, and high precision to large-scale production, we fulfill customers' one-stop procurement needs and provide optical solutions.

使用范围 SCOPE OF USE

我们的产品主要应用于光通信、激光、医疗设备、光学显示、航空航天、汽车雷达和机器视觉等领域,服务于全球市场。

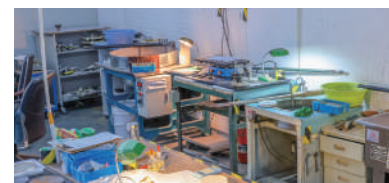
公司以客户为中心,以质量为本的经营理念。京盛光电追求卓越的技术,严格控制产品质量,为客户提供优质的产品和优良的售后服务。展望未来,我们将不断创新,与客户共同成长,携手合作共赢,为光电领域的辉煌未来而不懈努力。

Our products are mainly used in the fields of optical communication, laser, medical equipment, optical display, aerospace, automotive radar and machine vision, serving the global market.

The company takes the customer as the center, the quality as the fundamental business philosophy. Jingsheng Optoelectronics pursues excellent technology, strictly controls product quality, and provides customers with high-quality products and excellent after-sales service. Looking forward to the future, we will continue to innovate, grow together with customers, work together for win-win cooperation, and make unremitting efforts for the brilliant future of optoelectronics.



生产过程 PRODUCTION PROCESS



粗磨车间 Roughing shop



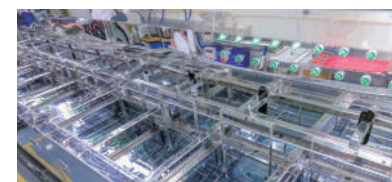
古典抛光 Classical polishing



环抛车间 Ring polishing shop



双面抛光车间 Double-side polishing shop



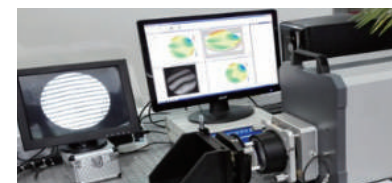
清洗车间 Cleaning shop



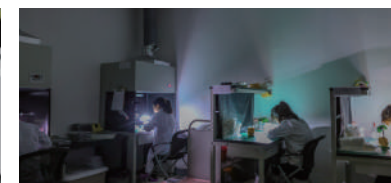
样板间 Demonstration room



镀膜车间 Coating workshop



检测设备 Testing equipment



检测车间 Inspection workshop

品质保证 QUALITY ASSURANCE



企业文化 CORPORATE CULTURE

企业使命:成为行业领先的光学产品制造商
Enterprise mission: To become the industry's leading optical products manufacturer

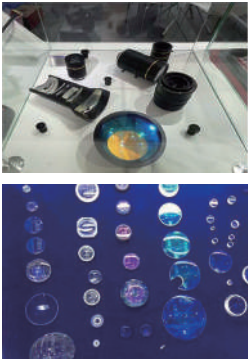
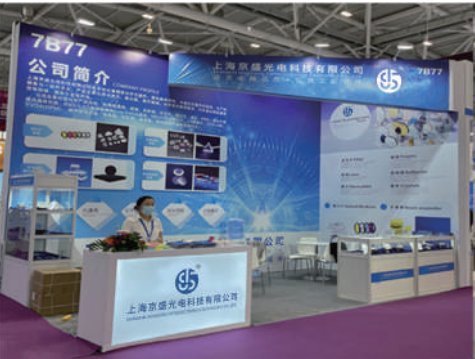
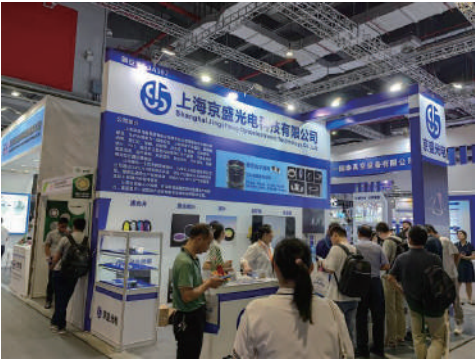
企业愿景:成为受人尊敬和最具创新能力的领先企业
Corporate vision: To become a respected and most innovative leading enterprise

价 值 观:质量 诚信 敬业 效率 创新
Value concept: quality, integrity, dedication, efficiency and innovation

质量政策:以质量求生存,以质量求发展
Quality policy: survival by quality, development by quality



展会 EXHIBITION



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UNIVERSAL OPTICAL ELEMENT

通用光学元件



光学透镜 Lens

透镜通过折射或反射光线，实现对光的聚焦或散射。其性能由曲率半径、折射率和光学直径等参数决定。京盛光电提供各种包括单透镜（平凸，双凸，平凹，双凹，弯月，柱面，球形），胶合透镜，组合透镜等。

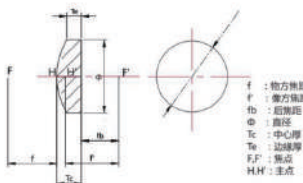
京盛可以提供用于各种波段的透镜，材料包括普通 K9，熔石英，氟化镁，氟化钙，硅，锗，硒化锌，使用波段覆盖从紫外到远红外整个波长范围。

A lens focuses or scatters light by refracting or reflecting it. Its properties are determined by the radius of curvature, refractive index and optical diameter. Jingsheng can supply a variety of lenses including single lens (plano-convex, bi-convex, plano-concave, bi-concave, meniscus, cylindrical, spherical). Glued lenses, combined lenses, etc.

Jingsheng can provide lenses for a variety of bands, including ordinary K9, fused quartz, magnesium fluoride, calcium fluoride, silicon, germanium, zinc selenide, using bands covering the entire wavelength range from ultraviolet to far infrared.

平凸透镜 Plano-convex Lens

平凸透镜的特点是焦距为正，其中一面为平面，另一面为凸面。使用时，将凸面向入射光，适用于单色光源的瞄准和聚焦。京盛科技标准库存透镜包括不镀膜产品以及双面镀宽带增透膜产品。



A plano-convex lens is characterized by a positive focal length, one of which is flat and the other is convex. When used, the convex surface faces the incident light, which is suitable for the aiming and focusing of monochromatic light source. Jingsheng Technology standard stock lenses include non-coated products and double-sided plated broadband anti-reflection coating products.

光学参数 Optical parameter

材料 Material	H-K9L, JGS1, CaF2, ZnSe, Si, Ge
尺寸 Size	Ø1mm-300mm(±0.1mm)
中心厚度公差 Size Tolerance	±0.1mm
焦距公差 Focal length tolerance	±2%
面形 Surface Shape	λ/10-λ/2

光洁度 Surface quality	10/5-80/50
中心偏差 Eccentricity	<3'
通光孔径 Clear Aperture	> 90%
镀膜 Coating	AR Coating or customer design
倒边 Bevel	0.2mmX45°

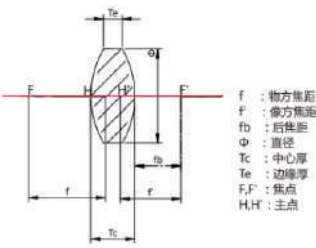
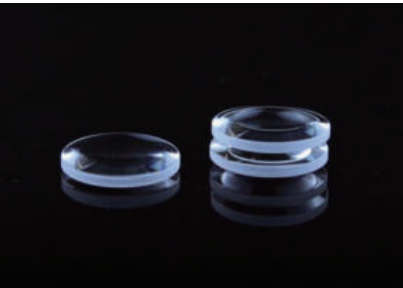
常见规格型号 Common specifications

材料 Material	直径 Diameter(mm)	中心厚度 Center thickness (mm)	焦距 Focus Distance (mm)	R1(mm)
K9	12.7	3.7	25.4	13.17
K9	12.7	3.2	35.0	18.14
K9	12.7	2.1	2000.0	1037
K9	12.7	2.1	5000.0	2591
K9	25.4	11.7	25.4	13.17
K9	25.4	7.2	35.0	18.14
K9	25.4	6.3	40.0	20.75
K9	25.4	5.3	50.0	25.92
K9	25.4	4.7	60.0	31.1
K9	25.4	4.1	75.0	38.87
K9	25.4	3.6	100.0	51.83
K9	25.4	3.3	125.0	64.79

双凸透镜 Bi-convex Lens

双凸透镜的特点是焦距为正，由两个相等半径的凸面组成。常用于成像中继系统以及在有限共轭距离下的物体成像。共轭比越大，产生的像差就越大。

Bi-convex Lens is characterized by a positive focal length and consists of two convex surfaces of equal radius. It is often used to image relay systems and to image objects at finite conjugate distances. The greater the conjugation ratio, the greater the aberration.



光学参数 Optical parameter

材料 Material	H-K9L,UV Fused quartz, CaF2, ZnSe, Si, Ge
尺寸 Size	Ø1mm-300mm(±0.1mm)
中心厚度公差 Size Tolerance	±0.1mm
焦距公差 Focal length tolerance	±2%
光圈 Aperture	N<3(0.5)@632.8nm
面形 Surface Shape	$\lambda/10\text{-}\lambda/2$

光洁度 Surface quality	10/5-80/50
中心偏差 Eccentricity	<3'
通光孔径 Clear Aperture	> 90%
设计波长 Design wavelength	587.6nm
镀膜 Coating	AR Coating or customer design
倒边 Bevel	0.2mmX45°

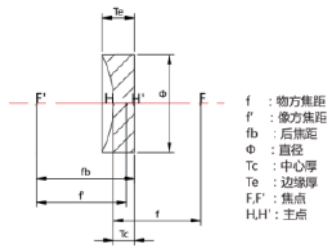
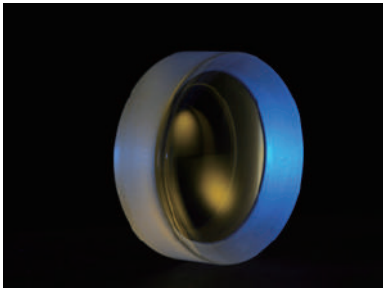
常见规格型号 Common specifications

材料 Material	直径 Diameter(mm)	中心厚度 Center thickness (mm)	焦距 Focus Distance (mm)	R1(mm)
K9	12.7	3.7	25.4	13.17
K9	12.7	3.2	35.0	18.14
K9	12.7	3	40.0	20.75
K9	12.7	2.8	50.0	25.92
K9	12.7	2.1	1000.0	518.3
K9	12.7	2.1	2000.0	1037
K9	12.7	2.1	5000.0	2591
K9	25.4	11.7	25.4	13.17
K9	25.4	7.2	35.0	18.14
K9	25.4	2.5	300.0	155.49
K9	25.4	2.3	500.0	259.15
K9	25.4	2.2	1000.0	518.3
K9	25.4	2.1	2000.0	1037
K9	25.4	2.1	5000.0	2591

平凹透镜 Plano-concave lens

平凹透镜其中一面为平面，另一面为凹面，常用于透镜的扩束、投影及扩大光学系统焦距。

Plano-concave lens has a plane on one side and a concave on the other. It is often used for beam expansion, projection and focal length of optical system.



光学参数 Optical parameter

材料 Material	H-K9L, UV Fused quartz, CaF2, ZnSe, Si, Ge
尺寸 Size	Ø1mm-300mm(±0.1mm)
中心厚度公差 Size Tolerance	±0.1mm
焦距公差 Focal length tolerance	±2%
光圈 Aperture	N<3(0.5)@632.8nm
面形 Surface Shape	$\lambda/10\text{-}\lambda/2$

光洁度 Surface quality	10/5-80/50
中心偏差 Eccentricity	<3'
通光孔径 Clear Aperture	> 90%
设计波长 Design wavelength	587.6nm
镀膜 Coating	AR Coating or customer design
倒边 Bevel	0.2mmX45°

常见规格型号 Common specifications

材料 Material	直径 Diameter(mm)	中心厚度 Center thickness (mm)	焦距 Focus Distance (mm)	R1(mm)
K9	12.7	2.3	125.0	64.79
K9	12.7	2.3	150.0	77.75
K9	12.7	2.2	200.0	103.66
K9	12.7	2.2	250.0	129.58
K9	12.7	2.1	300.0	155.49
K9	12.7	2.1	500.0	259.15
K9	12.7	2.1	5000.0	2591
K9	25.4	2.8	200.0	103.66
K9	25.4	2.6	250.0	129.58
K9	25.4	2.5	300.0	155.49
K9	25.4	2.3	500.0	259.15
K9	25.4	2.2	1000.0	518.3
K9	25.4	2.1	2000.0	1037
K9	25.4	2.1	5000.0	2591

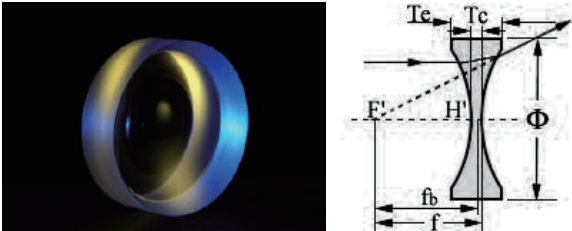
双凹透镜 Bi-concave Lens

双凹透镜是两个表面均呈现向内凹陷的曲率。透镜两侧的光线发散，形成实际或虚拟的焦点。常用于分散光谱、减小光线的焦距或产生虚拟像。双凹透镜的凹面特性使其具有负的透镜力，对于调整光线的色散和焦距非常有用。

主要应用在光学系统，成像设备、光谱仪和一些特殊光学测量。

Bi-concave Lens is an optical element with curvatures concave inward on both surfaces. The light rays on both sides of the lens diverge, forming a real or virtual focal point. It is commonly used for dispersing spectra, reducing the focal length of light, or generating virtual images. The concave characteristics of the biconcave lens give it a negative lens power, making it particularly useful for adjusting the dispersion and focal length of light.

Mainly applied in optical systems, imaging devices, spectrometers, and some specialized optical measurements.



光学参数 Optical parameter

材料 Material	H-K9L,UV Fused quartz, CaF2, ZnSe, Si, Ge	光洁度 Surface quality	10/5-80/50
尺寸 Size	Ø1mm-300mm(±0.1mm)	中心偏差 Eccentricity	<3'
中心厚度公差 Size Tolerance	±0.1mm	通光孔径 Clear Aperture	> 90%
焦距公差 Focal length tolerance	±2%	设计波长 Design wavelength	587.6nm
光圈 Aperture	N<3(0.5)@632.8nm	镀膜 Coating	AR Coating or customer design
面形 Surface Shape	λ/10-λ/2	倒边 Bevel	0.2mmX45°

常见规格型号 Common specifications

材料 Material	直径 Diameter(mm)	中心厚度 Center thickness (mm)	焦距 Focus Distance (mm)	R1(mm)
K9	12.7	2.2	250.0	129.58
K9	12.7	2.1	300.0	155.49
K9	12.7	2.1	500.0	259.15
K9	12.7	2.1	1000.0	518.3
K9	12.7	2.1	2000.0	1037
K9	12.7	2.1	5000.0	2591
K9	25.4	11.7	25.4	13.17
K9	25.4	7.2	35.0	18.14
K9	25.4	6.3	40.0	20.75
K9	25.4	5.3	50.0	25.92
K9	25.4	2.6	250.0	129.58
K9	25.4	2.5	300.0	155.49
K9	25.4	2.3	500.0	259.15
K9	25.4	2.2	1000.0	518.3
K9	25.4	2.1	2000.0	1037
K9	25.4	2.1	5000.0	2591

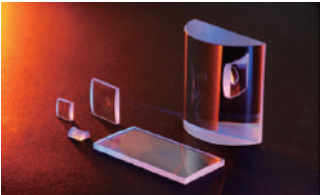
柱面透镜 Cylindrical Lens

平凸柱面透镜 Plano-convex Cylindrical Lens

平凸柱面透镜是具有单一曲率表面的光学透镜，其曲率沿一个方向变化。这种设计使得柱面镜在垂直方向上具有不同的光学焦点，而在水平方向上则呈现平坦形状。柱面镜常用于光学系统中，用于聚焦或改变光线的方向，特别适用于矫正横向像差或形成直线状的光学成像。

应用范围：激光器、成像设备和光学测量等

Plano-convex Cylindrical Lens is an optical lens with a single curved surface, with curvature varying along one direction. This design gives the cylindrical lens different optical focal points in the vertical direction, while presenting a flat shape in the horizontal direction. Cylindrical lenses are commonly used in optical systems for focusing or changing the direction of light, particularly suitable for correcting lateral aberrations or forming linear optical imaging.



光学参数 Optical parameter

材料 Material	H-K9L, UV Fused quartz, CaF2, ZnSe	光洁度 Surface quality	10/5-80/50
尺寸 Size	2-300mm-2-150mm(±0.1mm)	中心偏差 Eccentricity	<3'
中心厚度公差 Size Tolerance	±0.1mm	通光孔径 Clear Aperture	> 90%
焦距公差 Focal length tolerance	±2%	设计波长 Design wavelength	587.6nm
光圈 Aperture	N<3(0.5)@632.8nm	镀膜 Coating	AR Coating or customer design
面形 Surface Shape	λ/10-λ/2	倒边 Bevel	0.2mmX45°

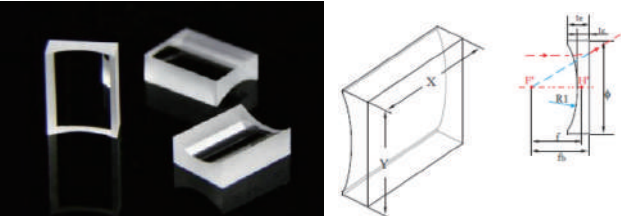
常见规格型号 Common specifications

材料 Material	直径 Diameter(mm)	中心厚度 Center thickness (mm)	焦距 Focus Distance (mm)	R1(mm)
K9	5x5	2.31	20	10.33
K9	6x4	3.6	4.0	2.07
K9	8x4	3.6	4.0	2.07
K9	8x6	4.0	6.40	3.30
K9	10x10	2.12	200.0	103.40
K9	12x6	4.0	6.4	3.3
K9	12x10	5.9	10.0	5.17
K9	12x10	4.31	12.7	6.56
K9	17x15	5.20	20.0	10.34
K9	20x10	3.8	15.0	7.76
K9	20x10	3.29	20.0	10.34
K9	40x20	6.7	25.0	12.93
K9	40x20	5.7	30.0	15.51
K9	40x20	4.6	40.0	20.68
K9	53x50.8	11.50	75.0	38.78
K9	60x30	3.5	400.0	206.80

平凹柱面透镜 Plano-Concave Cylindrical Lens

平凹柱面透镜是一种具有平面和凹曲柱面表面的光学透镜。其柱面曲率沿一个方向变化，而在另一个方向上呈现平坦形状。这种设计使得平凹柱面透镜在垂直方向上具有不同的光学焦点，而在水平方向上则为平面。常用于矫正或产生横向像差，用于调整光线的方向或形成特定形状的光学焦点。

Plano-Concave Cylindrical Lens is an optical lens with both a flat and a concave cylindrical surface. The cylindrical curvature varies along one direction, while in the other direction, it appears as a flat surface. This design gives the plano-concave cylindrical lens different optical focal points in the vertical direction, while in the horizontal direction, it remains flat. It is commonly used for correcting or generating lateral aberrations, adjusting the direction of light, or forming optical focal points with specific shapes.



光学参数 Optical parameter

材料 Material	H-K9L,UV Fused quartz, CaF2	光洁度 Surface quality	10/5-80/50
尺寸 Size	2-300mm-2-150mm(±0.1mm)	中心偏差 Eccentricity	<3'
中心厚度公差 Size Tolerance	±0.1mm	透光孔径 Clear Aperture	> 90%
焦距公差 Focal length tolerance	±2%	设计波长 Design wavelength	587.6nm
光圈 Aperture	N<3(0.5)@632.8nm	镀膜 Coating	AR Coating or customer design
面形 Surface Shape	λ/10-λ/2	倒边 Bevel	0.2mmX45°

常见规格型号 Common specifications

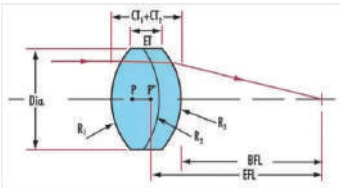
材料 Material	X*Y (mm)	中心厚度 Center thickness (mm)	焦距 Focus Distance (mm)	R1 (mm)
K9	5x5	2.31	20	10.33
K9	6x4	3.6	4.0	2.07
K9	6x4	2.8	5.8	3.00
K9	8x4	3.6	4.0	2.07
K9	8x4	2.8	5.8	3.00
K9	8x6	4.0	6.40	3.30
K9	9x7	4.1	7.7	4.00
K9	10x10	2.16	150.0	77.55
K9	10x10	2.12	200.0	103.40
K9	12x6	4.0	6.4	3.3
K9	12x10	5.9	10.0	5.17
K9	12x10	4.31	12.7	6.56
K9	12x10	3.80	15.0	7.76
K9	17x15	5.20	20.0	10.34

消色差透镜 Achromatic lens

双胶合消色差透镜 Double Cemented Achromatic Lens

消色差透镜是一种优化设计的光学透镜，旨在最小化不同波长光线通过透镜时引起的色差或色散现象。通过选择和组合适当的光学材料，以及采用复杂的曲面形状，消色差透镜能够在整个可见光谱范围内实现相对一致的焦距，减少或消除色差。常用于要求高色彩还原性能的光学系统，如高清摄像机、显微镜和光学仪器等。

Achromatic Lens is an optically designed lens aimed at minimizing chromatic aberration or dispersion that occurs when different wavelengths of light pass through the lens. By selecting and combining appropriate optical materials and employing complex curved surfaces, achromatic lenses can achieve relatively consistent focal lengths across the entire visible spectrum, reducing or eliminating chromatic aberration. They are commonly used in optical systems that require high color reproduction performance, such as high-definition cameras, microscopes, and optical instruments.



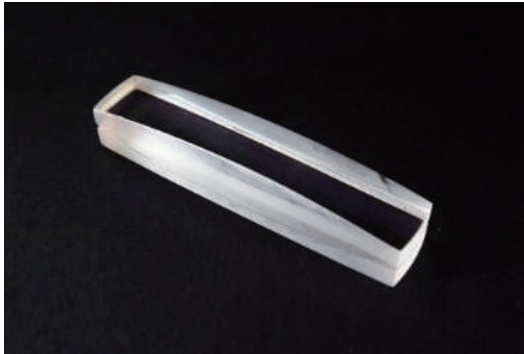
光学参数 Optical parameter

材料 Material	H-ZBAF52/H-ZF7LA	光洁度 Surface quality	10/5-80/50
尺寸 Size	Ø1mm-300mm(±0.1mm)	中心偏差 Eccentricity	<3'
中心厚度公差 Size Tolerance	±0.1mm	透光孔径 Clear Aperture	> 90%
焦距公差 Focal length tolerance	±2%	设计波长 Design wavelength	587.6nm
光圈 Aperture	N<3(0.5)@632.8nm	镀膜 Coating	AR Coating or customer design
面形 Surface Shape	λ/10-λ/2	倒边 Bevel	0.2mmX45°

常见规格型号 Common specifications

材料 Material	直径 Diameter(mm)	中心厚度 Center thickness (mm)	焦距 Focus Distance (mm)
H-ZBAF52/H-ZF7LA	12.7	6.3	25
H-ZBAF52/H-ZF7LA	12.7	5.0	30.0
H-ZBAF52/H-ZF7LA	12.7	5.1	40.0
H-ZBAF52/H-ZF7LA	12.7	5.0	50.0
H-ZBAF52/H-ZF7LA	12.7	5.0	60.0
H-ZBAF52/H-ZF7LA	12.7	4.0	75.0
H-ZBAF52/H-ZF7LA	25.4	11.5	50.0
H-ZBAF52/H-ZF7LA	25.4	9.5	75.0
H-ZBAF52/H-ZF7LA	25.4	8.5	100.0
H-ZBAF52/H-ZF7LA	25.4	8.4	125.0
H-ZBAF52/H-ZF7LA	25.4	7.9	150.0
H-ZBAF52/H-ZF7LA	12.7	4.6	-25.0
H-ZBAF52/H-ZF7LA	12.7	8.5	-40.0
H-ZBAF52/H-ZF7LA	25.4	6.6	-50.0

柱面消色差透镜 Cylindrical achromatic lens



光学参数 Optical parameter

材料 Material	H-K9L/H-ZF2	光洁度 Surface quality	10/5-80/50
尺寸 Size	Ø1mm-300mm(±0.1mm)	中心偏差 Eccentricity	<5'
中心厚度公差 Size Tolerance	±0.1mm	通光孔径 Clear Aperture	> 90%
焦距公差 Focal length tolerance	±2%	设计波长 Design wavelength	587.6nm
光圈 Aperture	N<3(0.5)@632.8nm	镀膜 Coating	AR Coating 镀膜 or customer design
面形 Surface Shape	λ/10-λ/2	倒边 Bevel	0.2mmX45°

常规规格 Conventional specification

材料 Material	直径 Diameter(mm)	中心厚度 Center thickness (mm)	焦距 Focus Distance (mm)	R1 (mm)
H-K9L/H-ZF2	12.7	2.8	50.0	25.92
H-K9L/H-ZF2	12.7	2.7	60.0	31.1
H-K9L/H-ZF2	12.7	2.5	75.0	38.87
H-K9L/H-ZF2	12.7	2.1	500.0	259.15
H-K9L/H-ZF2	12.7	2.1	1000.0	518.3
H-K9L/H-ZF2	12.7	2.1	2000.0	1037
H-K9L/H-ZF2	12.7	2.1	5000.0	2591
H-K9L/H-ZF2	25.4	11.7	25.4	13.17
H-K9L/H-ZF2	25.4	7.2	35.0	18.14
H-K9L/H-ZF2	25.4	6.3	40.0	20.75
H-K9L/H-ZF2	25.4	5.3	50.0	25.92
H-K9L/H-ZF2	25.4	4.7	60.0	31.1
H-K9L/H-ZF2	25.4	4.1	75.0	38.87

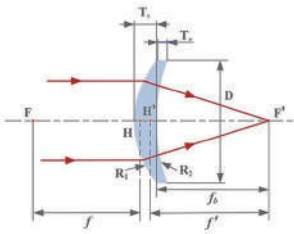
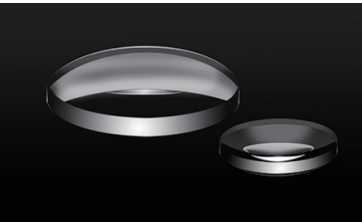
弯月透镜 Meniscus Lens

H-K9L 正弯月透镜 Positive Meniscus Lens

正弯月透镜是向外凸起的凸透镜，其曲率呈正值。透镜两侧的光线向外发散，产生实际或虚拟的焦点。

正弯月透镜在光学系统中常用于调整焦距、改变光线的传播方向或产生虚拟像。

Positive Meniscus Lens is a convex lens that bulges outward, and its curvature is positive. The light rays on both sides of the lens diverge outward, creating a real or virtual focal point. Positive meniscus lenses are commonly used in optical systems to adjust focal length, change the direction of light propagation, or generate virtual images.



光学参数 Optical parameter

材料 Material	H-K9L, UV Fused quartz, CaF2, ZnSe	中心偏差 Eccentricity	<3'
尺寸 Size	Ø1mm-300mm(±0.1mm)	通光孔径 Clear Aperture	> 90%
中心厚度公差 Size Tolerance	±0.1mm	设计波长 Design wavelength	587.6nm
焦距公差 Focal length tolerance	±2%	镀膜 Coating	AR Coating VIS 400~700nm、NIR 650~1050nm、SWIR 1000~1650nm
光圈 Aperture	N<3(0.5)@632.8nm	倒边 Bevel	0.2mmX45°
面形 Surface Shape	λ/10-λ/2	面型不规则 Face irregularity	Wave length/4@632.8nm
光洁度 Surface quality	10/5-80/50		

常见规格型号 Common specifications

材料 Material	直径 Diameter(mm)	中心厚度 Center thickness (mm)	焦距 Focus Distance (mm)	R1 (mm)
K9	12.7	2.2	200.0	103.66
K9	12.7	2.2	250.0	129.58
K9	12.7	2.1	300.0	155.49
K9	12.7	2.1	500.0	259.15
K9	12.7	2.1	1000.0	518.3
K9	12.7	2.1	2000.0	1037
K9	12.7	2.1	5000.0	2591
K9	25.4	3.6	100.0	51.83
K9	25.4	3.3	125.0	64.79
K9	25.4	3	150.0	77.75
K9	25.4	2.8	200.0	103.66
K9	25.4	2.6	250.0	129.58
K9	25.4	2.5	300.0	155.49

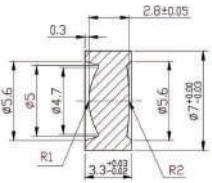
非球面透镜 Aspheric Lens

非球面透镜其曲面形状不是球面而是根据复杂的数学方程设计的。非球面透镜通过曲面的非球面形状，可以校正球面透镜的像差，提高光学系统的成像质量。

非球面透镜在高性能光学系统中广泛应用，如相机镜头、望远镜和激光系统，其设计需要考虑到曲率半径、曲率分布和透镜材料等多个因素，以满足特定应用的精密光学需求。

The surface shape of an aspherical lens is not a sphere but is designed according to complex mathematical equations. Through the aspherical shape of the surface, the aberration of the spherical lens can be corrected and the imaging quality of the optical system can be improved.

Aspherical lenses are widely used in high-performance optical systems, such as camera lenses, telescopes, and laser systems, and their design needs to take into account multiple factors such as curvature radius, curvature distribution, and lens material to meet the precision optics needs of specific applications.



光学参数 Optical parameter

材料 Material	H-K9L,UV Fused quartz, CaF2, ZnSe	中心偏差 Eccentricity	<3'
尺寸公差 Length tolerance	Ø1mm-300mm(±0.1mm)	通光孔径 Clear Aperture	> 90%
中心厚度公差 Size Tolerance	±0.1mm	设计波长 Design wavelength	587.6nm
焦距公差 Focal length tolerance	±2%	镀膜 Coating	AR Coating or customer design
光圈 Aperture	N<3(0.5)@632.8nm	倒边 Bevel	0.2mmX45°
面形 Surface Shape	λ/10-λ/2	非球面面形误差 Aspherical surface shape error	RMS 0.75μm
光洁度 Surface quality	10/5-80/50		

窗口片 Window Plate

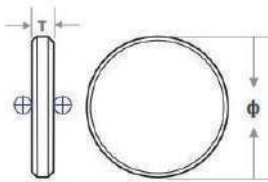
圆形窗口片 Circular Window Plate

窗口片是用于光学系统中的窗口或保护元件。其主要作用是传递光线，同时保护内部光学元件免受外部环境的影响。

玻璃窗口片的选择涉及折射率、透过率、耐磨性和光学质量等因素，以满足特定应用的要求。

Window plate is a component used in optical systems as a window or protective element. Its main function is to transmit light while protecting internal optical elements from external environmental influences.

The selection of glass window plates involves factors such as refractive index, transmittance, wear resistance, and optical quality to meet the requirements of specific applications.



光学参数 Optical parameter

材料 Material	K9,Quartz, Sapphire,CaF2,ZnSe,Si,Ge	面形 Surface Shape	λ/10-λ/2
尺寸公差 Length tolerance	+0.0/-0.2mm	平行度 Parallelism	10'' -3 '
厚度公差 Size Tolerance	±0.2mm	镀膜 Coating	protectiveness<0.5mmx45°
表面质量 Surface quality	10/5-80/50	倒边 Bevel	Single wavelength: R<0.25%,0° ; Broadband or dual wavelength: R<0.5%,0°
通光孔径 Clear Aperture	>90%	损伤阈值 Damage threshold	K9:>5J/cm,20ns,20Hz,1064nm Uv fused quartz: >10J/cm²,20ns,20Hz,1064nm
透过波前畸变 Wavefront distortion	<λ/8/25mm@633nm		

激光保护窗口片 Laser Protective Window

激光保护窗口主要用于在激光切割中阻挡杂物飞溅，防止飞溅物损伤镜头。两面镀上高损伤阈值(>15J/cm²)的增透膜来减少反射。广泛用于激光切割，激光打标等应用中。

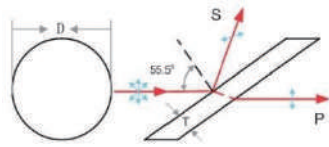
Laser protective windows are primarily used to block debris splatter during laser cutting, preventing damage to the lenses. Both sides are coated with high damage threshold (>15J/cm²) antireflection films to reduce reflections. Widely used in applications such as laser cutting and laser marking.



光学参数 Optical parameter

材料 Material	K9,Quartz, Sapphire,CaF2,ZnSe,Si,Ge	平行度 Parallelism	10'' -3 '
尺寸公差 Length tolerance	+0/-0.2mm	倒边 Bevel	<0.5mmx45°
厚度公差 Size Tolerance	±0.2mm	镀膜 Coating	两面镀高损伤阈值的增透膜 单面剩余反射率 Residual reflectance of one sideR<0.5%@1028-1064nm, 入射角 Angle of incidence0°
表面质量 Surface quality	10/5-80/50	损伤阈值 Damage threshold	>15J/cm²,20ns,20Hz,@1064nm
通光孔径 Clear Aperture	>80%		
面形 Surface Shape	λ/10-λ/2		
透过波前畸变 Wavefront distortion	<λ 每 25mm@633nm		

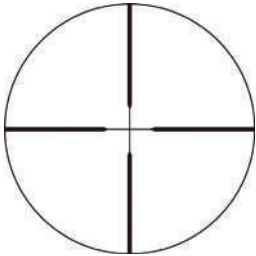
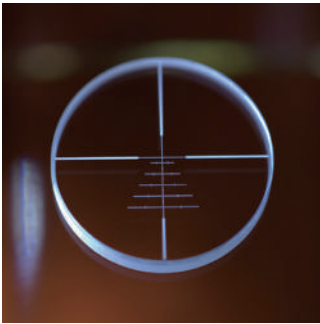
布儒斯特窗口片 Brewster Lens



光学参数 Optical parameter

材料 Material	K9,UV fused silica	波前畸变 Wavefront distortion	<λ/10@633nm
尺寸公差 Length tolerance	+0/-0.2mm	平行度 Parallelism	10'' -3 '
厚度公差 Size Tolerance	±0.2mm	倒角 chamfer	protectiveness<0.5mmx45°
表面质量 Surface quality	10/5-80/50	镀膜 Coating	None
通光孔径 Clear Aperture	>90%	损伤阈值 Damage threshold	>20J/cm²,20ns,20Hz,1064nm
面形 Surface Shape	λ/10-λ/2		

分化板 Reticles

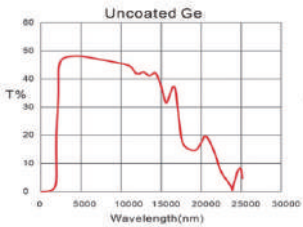


光学参数 Optical parameter

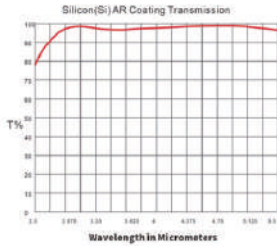
材料 Material	BK7, B270, K9
尺寸 Size	15 - 40 mm + 0.0 / - 0.1mm
厚度公差 Size Tolerance	± 0.1mm
面形 Surface Shape	λ/10 ~λ/2

光洁度 Surface quality	10/5-60/40
透光孔径 Clear Aperture	> 90%
倒边 Inverted	< 0.2mm*4.5°
镀膜 Coating	AR Coating or Customer Design

红外元件 IR Optics



1



光学参数 Optical parameter

材料 Material	Ge, Si, ZnSe, CaF2,BaF ,MgF
尺寸 Size	3mm-200mm
边厚范围 Edge thickness range	≥1mm
厚度公差 Size Tolerance	± 0.1mm
曲率半径 Radius	±10mm-±1000mm
面形 Surface Shape	λ/10 ~λ/2

中心偏差 Eccentricity	3 arc sec~3 arc min
光洁度 Surface quality	10/5-60/40
透光孔径 Clear Aperture	> 90%
倒边 Inverted	< 0.2mm*4.5°
镀膜 Coating	AR 1.8-3μm,3-5μm,8-14μm Customer Design

反射镜 Reflective Mirror

反射镜是通过在表面涂覆高反射率的金属或介质薄膜，使光线在镜面上发生反射。反射镜分为平面反射镜和曲面反射镜，如球面镜和抛物面镜。广泛应用于激光系统、光学通信和光学显微镜等领域。反射镜的设计和涂层技术关键，以确保高效反射和最小光能损失。

反射镜可分为金属反射镜和介质反射镜两种。

Reflective mirror works by coating the surface with a high-reflectivity metal or dielectric thin film, causing light to undergo reflection on the mirror surface. Reflective mirrors are divided into flat mirrors and curved mirrors, such as spherical mirrors and parabolic mirrors. They are widely used in laser systems, optical communication, optical microscopes, and other fields. The design and coating technology of reflective mirrors are crucial to ensure efficient reflection and minimal light energy loss.

Reflective mirrors can be categorized into metallic reflective mirrors and dielectric reflective mirrors.

介质反射镜 Dielectric Reflective Mirror

高反射率 R>99.9%,High reflectivity R>99.9%
符合环保 ROHS,Compliant with environmental protection ROHS



光学参数 Optical parameter

材料 Material	BK7, K9, Fused quartz, germanium, silicon, sapphire, etc
尺寸公差 Length tolerance	+0.0/-0.2mm
厚度公差 Size Tolerance	±0.2mm
表面质量 Surface quality	10/5-80/50
面形 Surface Shape	λ/10-λ/2
倒角 chamfer	protectiveness <0.5mmx45°

透光孔径 Clear Aperture	>90% Incidence Angle: 45° Can be customized according to customer requirements
镀膜 Coating	One side coated medium with high reverse film, Ravg>99.9%
损伤阈值 Damage threshold	>5J/cm²,20ns,20Hz,@1064nm
常用波长 Wavelength	190nm-2000nm,Customized according to customer needs

激光高损伤阈值膜 Laser High Damage Threshold Film

高反射率 R>99.9% High reflectivity R>99.9%
符合环保 ROHS Compliant with environmental protection ROHS

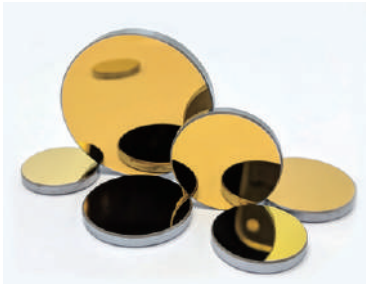
光学参数 Optical parameter

材料 Material	BK7, K9, Fused quartz, germanium, silicon, sapphire, etc
尺寸公差 Length tolerance	+0.0/-0.2mm
厚度公差 Size Tolerance	±0.2mm
表面质量 Surface quality	10/5-80/50
透光孔径 Clear Aperture	>90% Incidence Angle: 45° Can be customized according to customer requirements

面形 Surface Shape	λ/10-λ/2
倒角 chamfer	protectiveness <0.5mmx45°
镀膜 Coating	One side coated medium with high reverse film, Ravg>99.9%%
损伤阈值 Damage threshold	>5J/cm²,20ns,20Hz,@1064nm
常用波长 Wavelength	190nm-2000nm,Customized according to customer needs

金属反射镜 Metal mirror

镀金, 镀银, 镀铝 Gold plated, silver plated, aluminum plated
符合环保 ROHS Compliant with environmental protection ROHS



光学参数 Optical parameter

材料 Material	BK7, K9, Fused quartz, germanium, silicon, sapphire	增强铝 Reinforced aluminium: Ravg>90%@400-700nm
尺寸公差 Length tolerance	+0.0/-0.2mm	保护铝 Protective aluminum: Ravg>87%@400-1200nm
中心厚度公差 Size Tolerance	±0.2mm	紫外保护铝 UV protected aluminum: Ravg>80%@250-700nm
表面质量 Surface quality	10/5-80/50	保护银 Protective silver: Ravg>95%@400-12000nm
通光孔径 Clear Aperture	>90% Incidence Angle: 45° Can be customized according to customer requirements	增强银 Reinforced silver: Ravg>98.5%@700-1100nm
损伤阈值 Damage threshold	>1-10J/cm², 20ns, 20Hz, @1064nm	保护金 Protection money: Ravg>98%@2000-12000nm
镀膜 Coating		

介质反射镜与镀铝镀银的区别在于, 介质反射镜可根据使用角度来设计入射角度波长, 例如 45 度入射。
The difference between dielectric mirrors and aluminum-plated silver mirrors is that dielectric mirrors can be designed to have an incident Angle wavelength according to the Angle of use, such as 45 degrees incidence.

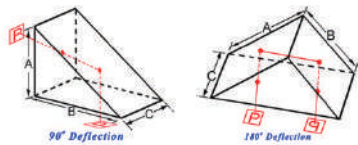
棱镜 prism

直角棱镜 Right angle prism

直角棱镜是具有两个垂直的平面, 被用作反射镜使光线偏离 90°, 也可用作回射器, 通过全内反射将光偏转 180°。

广泛用于光路调整、图像倒置和光学路径的折返, 在显微镜、激光测量和成像设备。

Right-angle prism is an optical element with two perpendicular planes, used as a reflector to deviate light by 90 degrees. It can also be used as a retroreflector, diverting light by 180 degrees through total internal reflection. Widely employed for optical path adjustments, image inversion, and folding optical paths, commonly found in applications such as microscopes, laser measurements, and imaging devices.

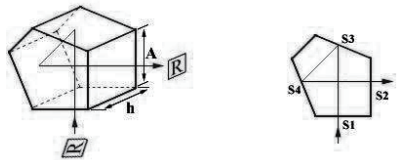


光学参数 Optical parameter

材料 Material	K9,UV fused quartz, Calcium fluoride, Zinc selenide	通光孔径 Clear Aperture	>90% <A/4@632.8nm/25mm
尺寸公差 Length tolerance	±0.2mm	塔差 Pyramid error	<3'
面形 Surface type	λ/10-λ/2	角度公差 Angle tolerance	See table
表面质量 Surface quality	10/5-60/40	倒角 Chamfer	Protectiveness 45° ×0.2mm
镀膜 Coating		镀膜 Coating	None, can be coated according to customer requirements

五角棱镜 Penta prism

五角棱镜是具有五个平面的棱镜, 光线由 90°角的任一垂直面入射, 然后经其 45°角的两个面反射, 从 90°角的另一面射出, 入射光线和出射光线等于 90°角, 五角棱镜可把光轴转过 90°。标准五棱镜反射面涂有铝或增强铝, 涂层表面可以漆成黑色。



Penta prism is a prism with five planes, where light enters perpendicular to any one of the 90-degree angles, reflects off two of its 45-degree angles, and exits from the other 90-degree angle. The incident and emergent light rays form a 90-degree angle, allowing the penta prism to deviate the light axis by 90 degrees. Standard penta prisms have aluminum or enhanced aluminum coatings on the reflecting surfaces, and the coating surfaces can be painted black.

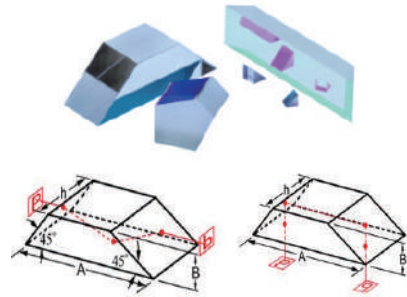
光学参数 Optical parameter

材料 Material	K9,UV fused quartz, Calcium fluoride, Zinc selenide	通光孔径 Clear Aperture	>90%
尺寸公差 Length tolerance	±0.2mm	面形 Surface type	<N4@632.8nm
面形 Surface type	λ/10-λ/2	90°综合角 Angle of combination	<30"
表面质量 Surface quality	10/5-60/40	倒角 Chamfer	0.2mm ×45°
平行度 Parallelism	±1"	镀膜 Coating	Protective aluminum film + single layer MgF, anti-reflection film protection
光洁度 Surface quality	20/10 or better		

道威棱镜 Dove prism

道威棱镜是一种反射棱镜, 用于反转图像。道威棱镜由截头直角棱镜制成。进入棱镜的一个斜面的光束从最长(底)面的内侧经历全内反射, 并从相反的斜面射出。常用来实现像的旋转, 也可以用来实现光束 180°的转向。

Dove Prism is a type of reflective prism used for inverting images. It is made from a truncated right-angle prism. A light beam entering one of the inclined faces of the prism undergoes total internal reflection from the inner side of the longest (base) face and exits from the opposite inclined face. Dove prisms are commonly used to achieve image rotation and can also be employed to redirect a light beam by 180 degrees.



光学参数 Optical parameter

材料 Material	K9	面型 Surface type	<N4@632.8nm
尺寸公差 size tolerance	±0.2mm	角度公差 Angle tolerance	<3'
面型 Surface type	λ/10-λ/2	倒角 Chamfer	protectiveness 45° ×0.2mm
表面质量 Surface quality	10/5-60/40	镀膜 Coating	None, can be coated according to customer requirements
通光孔径 Clear aperture	>90%		

屋脊棱镜 Roof prism

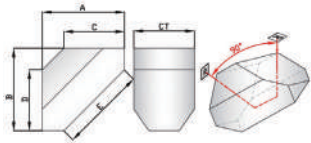
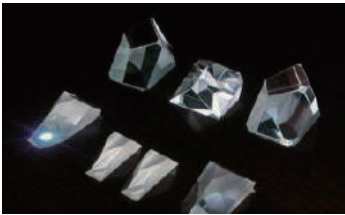
屋脊棱镜其表面呈蜿蜒形状，如同屋脊一般，屋脊结构可增加光程，提高光谱分辨率。通过光的反射和折射，实现波长的分离和调整。其设计涉及棱镜形状、反射涂层和材料选择。

广泛用于分光仪器，光谱分析，光学通信系统中。

The surface of the ridge prism is curved, like a ridge, and the ridge structure can increase the optical path and improve the spectral resolution. By reflection and refraction of light, the wavelength is separated and adjusted. Its design involves prism shape, reflective coating and material selection. It is widely used in spectroscopic instruments, spectral analysis and optical communication systems.

光学参数 Optical parameter

材料 Material	K9,Fused quartz
尺寸公差 size tolerance	+0/-0.2 mm
面型 Surface type	$\lambda/10\text{-}\lambda/2$
表面质量 Surface quality	10/5-60/40
通光孔径 Clear aperture	>90%

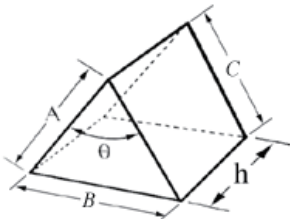
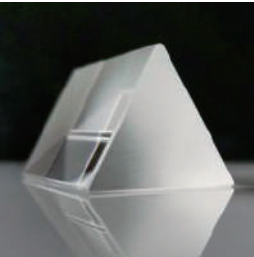


面型 Surface type	<N10@632.8nm
角精度 Angular accuracy	<10"
倒角 Chamfer	0.2mm×45°
屋脊角精度 Ridge Angle accuracy	<5"

等边棱镜 Equilateral prism

等边棱镜又称为色散棱镜，不同波长的光通过等边棱镜后，将按照波长的长短顺序分散开，因此等边棱镜可以用于做光谱分析。

Equilateral prism is also known as dispersion prism, different wavelengths of light through the equilateral prism, will be in accordance with the length of the wavelength order dispersed, so equilateral prism can be used for spectral analysis.



光学参数 Optical parameter

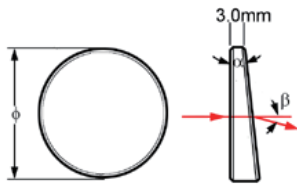
材料 Material	K9,UVfused quartz, ZF13
尺寸公差 size tolerance	+0/-0.2mm
面型 Surface type	$\lambda/10\text{-}\lambda/2$
表面质量 Surface quality	10/5-60/40
通光孔径 Clear aperture	>90%

面型 Surface type	<A/4@632.8nm
角度公差 Angle tolerance	60° ±3'
抛光面 Polished surface	Three side polishing
倒角 Chamfer	protectiveness 45° ×0.2mm
镀膜 Coating	None

楔形棱镜 Wedge prism

楔形棱镜其截面为楔形，通过其中一侧表面的倾斜使光线产生偏转。常用于调整或偏转光路，也可用于衍射、干涉和激光系统中。其设计考虑到楔形的角度、折射率以及光学涂层等因素，以确保对入射光的精准控制。

A wedge prism has a wedge in section and deflects light by tilting one side of the surface. It is often used to adjust or deflect optical paths, but can also be used in diffraction, interference and laser systems. The design takes into account factors such as the Angle of the wedge, the refractive index, and the optical coating to ensure precise control of the incident light.



光学参数 Optical parameter

材料 Material	K9 or UV fused quartz
设计波长 Design wavelength	K9632.8nm,n=1.515@632.8nm UV fused quartz: 355nm,n=1.476@355nm
尺寸公差 size tolerance	+0/-0.2mm
厚度 thickness	The thinnest 3mm
表面质量 Surface quality	10/5-60/40
面型 Surface type	$\lambda/10\text{-}\lambda/2$

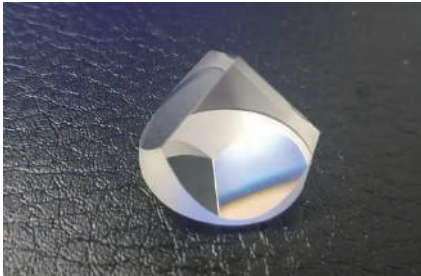
角度误差 Angle error	± 15"
通光孔径 Clear aperture	>90%
面形 Surface type	<N4@632.8nm
楔角公差 Wedge tolerance	<3'
倒角 Chamfer	Protective chamfer 0.2mm×45°
偏折角度	1° -10°
镀膜 Coating	None, according to customer requirements

材料 Material	直径 Diameter(mm)	楔角 Wedge Angle	偏离角 Angle of deviation	设计波长 Wavelength(nm)
K9	25.4	1° 57'	1°	632.8
K9	25.4	3° 53'	2°	632.8
K9	25.4	7° 41'	4°	632.8
K9	25.4	11° 21'	6°	632.8
UV fused quartz	25.4	2° 6'	1°	355
UV fused quartz	25.4	4° 11'	2°	355
UV fused quartz	25.4	8° 17'	4°	355
UV fused quartz	25.4	12° 25'	6°	355

角锥 Cone Prism

角锥其截面呈锥形，用于将光束反射回它来自的方向。 反射光束始终与入射光束平行，并沿与入射光束相反的方向传播。

Cone prism has a conical cross-section and is used to reflect a light beam back in the direction from which it came. The reflected beam always remains parallel to the incident beam and propagates in the opposite direction to the incident beam.



光学参数 Optical parameter

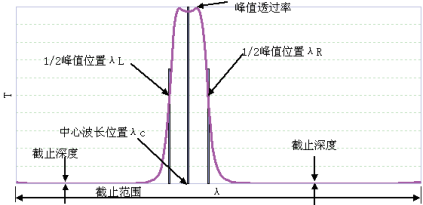
材料 Material	K9	面型 Surface type	Incident plane<N4@632.8nm,Reflecting surface</M10@632.8nm
尺寸公差 size tolerance	+0/-0.2mm	倒角 Chamfer	Protective chamfer 0.2mm×45°
面型 Surface type	$\lambda/10\text{-}\lambda/2$	综合角 Angle of combination	<5"
表面质量 Surface quality	60/40	镀膜 Coating	according to customer requirements
透光孔径 Clear aperture	>80%		
波前畸变 Wavefront distortion	<N2@632.8nm		

材料 Material	直径 * 高度 Diameter * Height(mm)	综合角 Angle of combination
K9	12.7*10.0	<30"
K9	15.0*11.0	<30"
K9	25.4*19.0	<10"
K9	50.8*38.0	<10"

滤光片 Filter

滤光片主要参数有：

- 中心波长：窄带滤光片的中心波长一般就是仪器或设备的工作波长，它是指通带中心位置的波长。
- 半高宽（带宽）：带宽是指通带中透过率为峰值透过率的一半的两个位置之间的距离，有时也叫半高宽（不叫半带宽），英文字母经常用 FWHM（Full Width at Half Maximum）表示。
- 峰值透过率：指带通滤光片在通带中最高的透过率大小。
- 截止范围：截止范围是指除了通带以外，要求截止的波长范围。对于窄带滤光片来说，有一段是前截止，就是截止波长小于中心波长的一段，还有一段长截止，截止波长高于中心波长的那一段。
- 截止深度（OD 值）：截止深度是指截止带中允许能透过光的最大透过率大小。对不同的应用系统对截止深度要求不同，比如对于使用在激发光荧光的场合，一般要求截止深度在 T<0.001% 以下，在普通的监控识别系统中，截止深度 T<0.5% 有时已经足够。为简便起见，经常用 OD 值来表示截止深度 OD=-lgT。



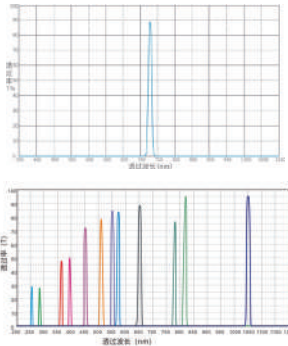
The main parameters of filter are:

- Central wavelength: The central wavelength of the narrowband filter is generally the working wavelength of the instrument or equipment, which refers to the wavelength of the central position of the passband.
- Half height Width (bandwidth) : Bandwidth refers to the distance between two positions in the passband transmittance is half of the peak transmittance, sometimes called half height width (not called half bandwidth), the English letter is often expressed by FWHM (Full Width at Half Maximum).
- Peak transmittance: refers to the highest transmittance size of the bandpass filter in the passband.
- Cut-off range: The cut-off range refers to the wavelength range that requires a cut-off in addition to the passband. For narrowband filters, there is a section of the front cutoff, that is, a section with a cutoff wavelength less than the central wavelength, and a section with a long cutoff wavelength higher than the central wavelength.
- Cutoff depth (OD value) : Cutoff depth refers to the maximum light transmittance allowed in the cutoff band. For different application systems, the cutoff depth requirements are different, such as for the use of excited light fluorescence occasions, the cutoff depth is generally required to be below T<0.001%, in ordinary monitoring and recognition systems, the cutoff depth T<0.5% is sometimes enough. For simplicity, OD values are often used to express cutoff depth OD=-lgT.

窄带滤光片 Narrowband filter

窄带滤光片，是从带通滤光片中细分出来的，其定义与带通滤光片相同，也就是这种滤光片在特定的波段允许光信号通过，而偏离这个波段以外的两侧光信号被阻止，窄带滤光片的通带相对来说比较窄，一般为中心波长值的 5% 以下。

Narrowband filter is subdivided from the bandpass filter, its definition is the same as the bandpass filter, that is, the filter allows the light signal to pass in a specific band, and the light signal is blocked on both sides outside this band, the passband of the narrowband filter is relatively narrow, generally less than 5% of the central wavelength value.



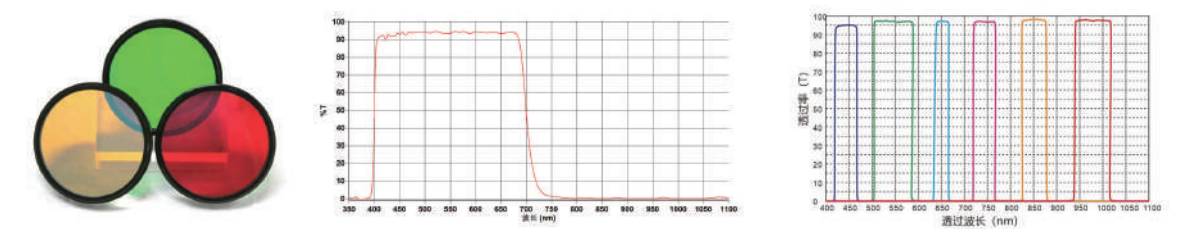
光学参数 Optical parameter

尺寸 Size	1-150mm	面型 Surface type	$\lambda/10\text{-}\lambda/2$
尺寸公差 size tolerance	尺 $\pm 0.1\text{mm}$	表面质量 Surface quality	10/5-60/40
厚度公差 Thickness tolerance	$\pm 0.1\text{mm}$	倒角 Chamfer	45° × 0.2mm
光洁度 Finish	10/5-80/50	镀膜 Coating	AR Coating or customer design
透光孔径 Clear aperture	>95%		

带通滤光片 Bandpass filter

带通滤光片是光谱特性曲线透射带两侧邻接截止带的滤光片。带通滤光片根据光谱特性大致分为宽带滤光片和窄带滤光片两种，两种滤光片通常都是组合而成的，应用了光波干涉原理制备带通滤光片。

A band-pass filter is a filter that is adjacent to a cut-off band on both sides of the transmission band of the spectral characteristic curve. Bandpass filters are roughly divided into broadband filters and narrow band filters according to spectral characteristics, and the two filters are usually combined, and the band-pass filter is prepared by the principle of light wave interference.



光学参数 Optical parameter

中心波长 Center wavelength	245-1064nm	透光孔径 Clear aperture	≥90%
半带宽 Half bandwidth	5nm；10nm; 20nm; 30nm, 50nm or customized	厚度公差 Thickness tolerance	0.3-50±0.02mm
截止范围 Cut-off range	200-1200nm	面形 Surface type	λ/10-λ/2
光密度 Optical density	OD3; OD4; OD5; OD6	表面质量 Surface quality:	10/5-60/40
尺寸公差 size tolerance	0.5-600±0.02mm	倒角 Chamfer	45° ×0.2mm
		镀膜 Coating	AR Coating or customer design

长波通滤光片 Long pass filter

长波通滤光片是用于透过较长波长的光。其工作原理基于光学材料的吸收和透过特性，选择性地允许长波长光通过，而阻挡其他波长的光。

广泛应用于光学系统中，用于调整光谱特性、消除杂散光或实现特定波段的光学测量。长波通滤光片的设计涉及到材料选择、波长范围和透过率等参数，以满足特定应用对光学性能的需求

Long wave pass filters are used to pass light of longer wavelengths. Its working principle is based on the absorption and transmission characteristics of the optical material, selectively allowing the passage of long wavelengths of light while blocking other wavelengths of light. It is widely used in optical systems to adjust spectral characteristics, eliminate stray light or achieve optical measurements in specific bands. The design of long wave pass filters involves parameters such as material selection, wavelength range and transmittance to meet the optical performance needs of specific applications

光学参数 Optical parameter

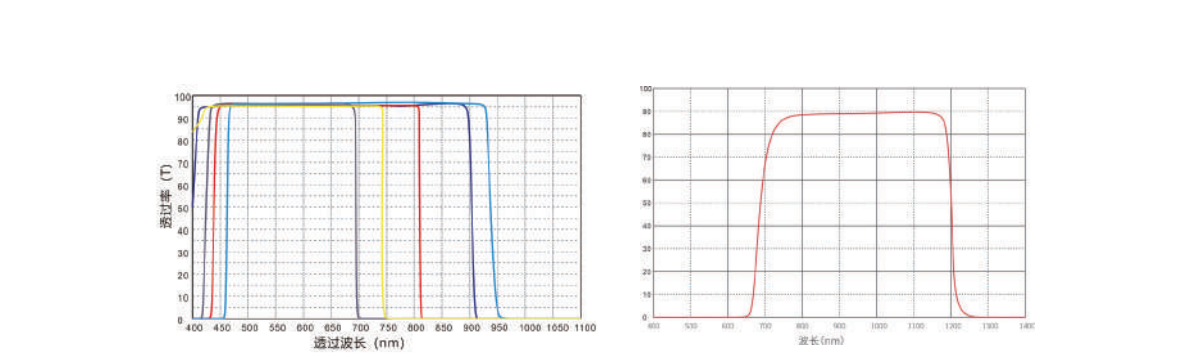
截止波长 Cut-off wavelength	325-1300nm	厚度公差 Thickness tolerance	0.3-50±0.02mm
截止范围 Cut-off range	200-1650	面型 Surface type	λ/10-λ/2
光密度 Optical density	OD3; OD4; OD5; OD6	表面质量 Surface quality:	10/5-60/40
尺寸公差 size tolerance	0.5-600±0.02mm	倒角 Chamfer	45° ×0.2mm
透光孔径 Clear aperture	≥90%	镀膜 Coating	AR Coating or customer design

短波通滤光片 Shortwave pass filter

短波通滤光片是用于透过较短波长的光。其工作原理基于光学材料的吸收和透过特性，有选择地允许短波长的光穿过，而阻挡其他波长的光。

广泛应用于调整光谱特性、消除杂散光或实现特定波段的光学测量。

Short-wave pass filters are used to pass light of shorter wavelengths. It works based on the absorption and transmission properties of the optical material, selectively allowing short-wavelength light to pass through while blocking other wavelengths. It is widely used to adjust spectral characteristics, eliminate stray light or realize optical measurement in specific bands.



短波通滤光片（又称为低通滤光片）：指短于选定波长的光通过，长于该波长的光截止。京盛光电采用真空镀膜方式制造形成，使用光学材料 TiO2 和 SiO2 循环蒸发形成。

Short-wave pass filter (also known as low-pass filter) : refers to the light passing shorter than the selected wavelength, and the light cutoff longer than the wavelength. Jingsheng Photoelectric adopts vacuum coating method to manufacture and form, and uses optical materials TiO2 and SiO2 to cycle evaporation.

光学参数 Optical parameter

截止波长 Cut-off wavelength	400-1300nm	厚度公差 Thickness tolerance	0.3-50±0.02mm
截止范围 Cut-off range	300-1650	面型 Surface type	λ/10-λ/2
光密度 Optical density	OD3; OD4; OD5; OD6	表面质量 Surface quality:	10/5-60/40
尺寸公差 size tolerance	0.5-600±0.02mm	倒角 Chamfer	45° ×0.2mm
透光孔径 Clear aperture	≥90%	镀膜 Coating	AR Coating or customer design

紫外滤光片 UV filter

紫外滤光片是用于阻挡紫外光波段的光线，只允许特定波长范围内的可见光透过。其工作原理基于材料对不同波长的光的吸收和透过特性。
 广泛用于调整光谱特性、消除紫外辐射或实现特定波段的光学测量。

UV filters are used to block light in the ultraviolet band, allowing only visible light in a specific wavelength range to pass through. Its working principle is based on the absorptiion and transmission characteristics of the material to different wavelengths of light. It is widely used to adjust spectral characteristics, eliminate ultraviolet radiation, or enable optical measurements in specific bands.

230nm 紫外滤光片 230nm UV filter

光学参数 Optical parameter

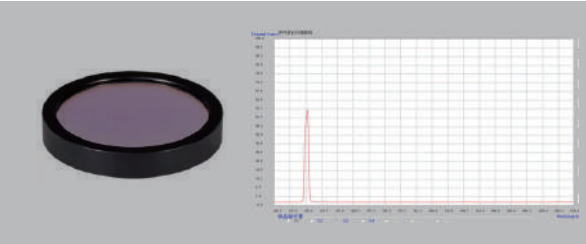
材质 Material	JGS1 (ompliance with environmental requirements ROHS)
截止波段 Cut-off band	240nm-280nm Tmax<1%, Tave<0.1% @240nm-280nm
中心波长 Central wavelength	230nm±2nm
峰值透过 Peak transmission	T>60%@230
外观 appearance	10/5-80/50



BPF290nm-10 紫外滤光片 BPF290nm-10 UV filter

光学参数 Optical parameter

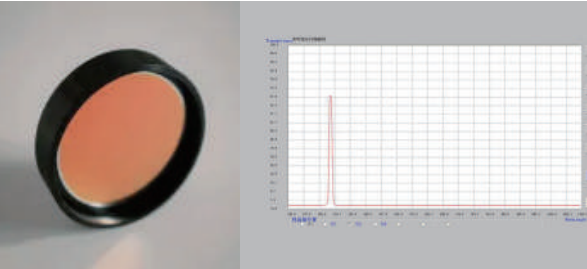
材质 Material	optical glass ZWB1(compliance with environmental requirements ROHS)
截止波段 Cut-off band	190nm-275nm ， 305nm-1100nm Tmax<1%, Tave<0.1% @190nm-275nm Tmax<1%, Tave<0.5%@305nm-1100nm Tmin>50%@290nm
中心波长 Central wavelength	290nm±2nm
峰值透过 Peak transmission	T>56%@289nm-291nm



BPF320nm-10 紫外滤光片 BPF320nm-10 UV filter

光学参数 Optical parameter

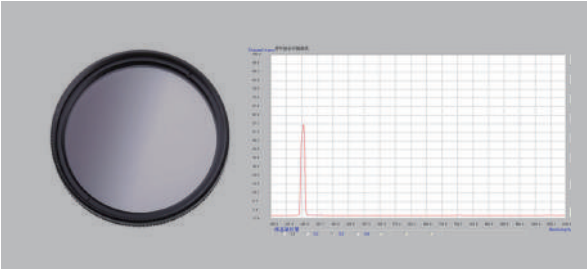
材质 Material	optical glass ZWB1(compliance with environmental requirements ROHS)
截止波段 Cut-off band	190nm-305nm ， 335nm-1100nm Tmax<1%, Tave<0.1% @190nm-305nm Tmax<1%, Tave<0.5%@335nm-1100nm Tmin>60%@320nm
中心波长 Central wavelength	320nm±2nm
峰值透过 Peak transmission	T>65%@319nm-321nm
半带宽 Half-band width	10nm
外观 appearance	80/50



BPF330nm-40 紫外滤光片 BPF330nm-40 UV filter

光学参数 Optical parameter

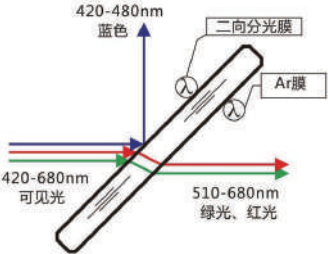
材质 Material	optical glass ZWB2(compliance with environmental requirements ROHS)
截止波段 Cut-off band	190nm-294nm ， 355nm-1100nm Tmax<1%, Tave<0.1% @190nm-294nm Tmax<1%, Tave<0.5%@355nm-1100nm Tmin>75%@330nm
中心波长 Central wavelength	330nm±3nm
峰值透过 Peak transmission	T>75%@325nm-335nm
半带宽 Half-band width	40nm
外观 appearance	80/50



二向色镜 Dichroic mirror

双色镜（Dichroic Mirrors）又称二向色镜，二向色镜常用于激光技术中其特点是对一定波长的光几乎完全透过，而对另一些波长的光几乎完全反射。大部分常规使用入射角度为 45°角。（入射角（incident angle）是入射光线与入射表面法线的夹角。

Dichroic Mirrors, also known as dichroic mirrors,Dichroic mirrors are often used in laser technology and are characterized by almost complete transmission of certain wavelengths of light and almost complete reflection of other wavelengths of light. Most conventionally used incidence angles are 45°. (The incident angle is the Angle between the incident light and the normal of the incident surface.



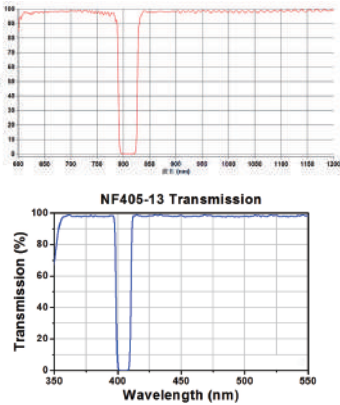
光学参数 Optical parameter

材质 Material	optical glass (ultra-white glass, K9, B270, BK7, etc.)	入射角 Incident angle	45°
形状 Shape	square, round, special shape, etc.	加工方法 Process method	Medium dura mater
尺寸 Size	1-150mm	透光孔径 Clear aperture	95%
厚度 Thickness	0.3-10mm	环境测试 Environmental test	MIL-STD-810F

陷波滤光片 Notch filter

陷波负性滤光片，通常也称之为带阻或者带抑制滤光片，或者国内很多厂商称之为负性滤光片，可以几乎无强度损耗或者低强度损耗透过大多数波长，而将特定波长范围内（阻带）的光衰减到非常低的水平。陷波滤光片与带通滤光片光谱曲线形式正好相反，带通滤光片在带通范围内具有高透射率，带通范围之外具有高抑制性，因此只透射很小波长范围内的光。

Notch negative filter, also known as band block or band suppression filter, or many domestic manufacturers call it negative filter, can pass through most wavelengths with almost no intensity loss or low intensity loss, and the specific wavelength range (stopband) of light attenuation to a very low level. The band-pass filter has a high transmittance in the band pass range and a high inhibition outside the band pass range, so it only transmits light in a small wavelength range.



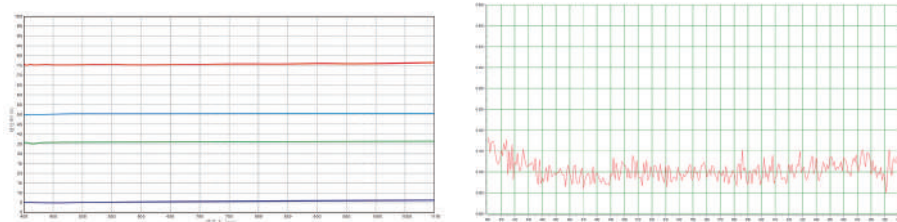
光学参数 Optical parameter

材质 Material	K9, D263T, B270, BK7,ultra-white glass etc.	面形 Surface type	$\lambda/10\text{-}\lambda/2$
尺寸公差 size tolerance	±0.1mm	透光孔径 Clear aperture	95%
厚度公差 Thickness tolerance	±0.1mm	倒角 Chamfer	0.1~0.5mm x 45°
		光洁度 Finish	10/5-80/50

中性密度滤光片 Neutral density filter

中性灰度镜（neutral density filter）又叫中灰密度镜，简称 ND 镜（衰减片），其作用是过滤光线。这种滤光作用是非选择性的，也就是说，ND 镜对各种不同波长的光线的减少能力是同等、均匀的，只起到减弱光线的作用，而对原物体的颜色不会产生任何影响，因此可以真实再现景物的反差；衰减片可分为两种，一种是反射型中性衰减片，另一种是吸收型中性衰减片。

neutral density filter (neutral density filter) is also called medium gray density mirror, referred to as ND mirror (attenuator), its role is to filter light. This filtering effect is non-selective, that is to say, the ND mirror on a variety of different wavelengths of light reduction ability is the same, uniform, only play a role in weakening the light, and the color of the original object will not have any effect, so you can truly reproduce the contrast of the scene; Attenuator can be divided into two kinds, one is reflective neutral attenuator, the other is absorption neutral attenuator.



光学参数 Optical parameter

材质 Material	B270, K9 etc.	透光孔径 Clear aperture	>90%
尺寸 Size	1-500mm	倒角 Chamfer	0.1~0.5mm x 45°
尺寸公差 size tolerance	±0.1mm	光洁度 Finish	10/5-80/50
厚度公差 Thickness tolerance	±0.1mm	光密度公差 Transmittance tolerance	OD±10%
面形 Surface type	$\lambda/10\text{-}\lambda/2$		

产品参数 Product parameter

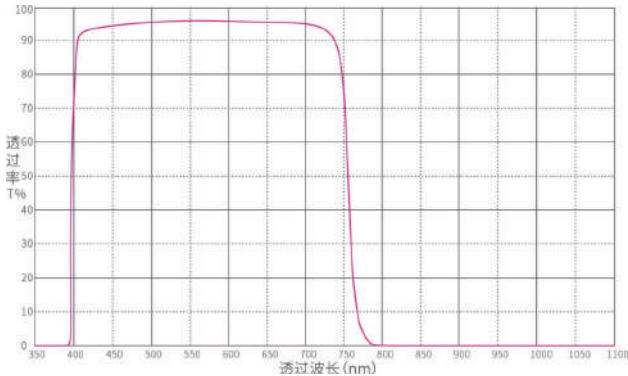
光密度 (OD)	透过率 (T)	光密度 (OD)	透过率 (T)
0.1	79%	0.8	15.8%
0.15	70%	0.9	12.5%
0.2	63%	1	10%
0.3	50%	2	1%
0.4	40%	3	0.1%
0.5	32%	4	0.01%
0.6	25%	5	0.001%
0.7	20%		

红外截止滤光片 IR blocking filter

红外波段包括的波长范围很宽广，从780nm~14um，其中又分近红外，中红外和远红外。近红外（代号IR-A，波长780～1500nm,NIR）、中红外（IR-B,1500～6000nm,MIR）、远红外（IR-C,6000～14000nm,FIR）3个波段



The infrared band includes a wide wavelength range, from 780nm to 14um, which is divided into near infrared, middle infrared and far infrared. There are three bands: near infrared (IR-A, wavelength 780～1500nm,NIR), middle infrared (IR-B,1500～6000nm,MIR) and far infrared (IR-C,6000～14000nm,FIR)



红外滤光片的应用
红外滤光片主要应用于安防监控领域，红外气体分析仪，夜视产品，红外探测器，红外接收机，红外感应，红外通讯产品。具体到产品比如：监控摄像机，遥控器，红外幕墙产品，红外感应马桶、水龙头、洗手液装置，红外测温器，红外打印机，交互式电子白板，红外触摸屏，指纹识别机，人脸识别系统等。

Application of infrared filter
Infrared filter is mainly used in the field of security monitoring, infrared gas analyzer, night vision products, infrared detector, infrared receiver, infrared induction, infrared communication products. Specific products such as: monitoring cameras, remote control, infrared curtain wall products, infrared sensor toilet, faucet, hand sanitizer device, infrared thermometer, infrared printer, interactive electronic whiteboard, infrared touch screen, fingerprint recognition machine, face recognition system.

光学参数 Optical parameter

材质 Material	K9, D263T, B270, BK7, ultra-white glass etc.	面形 Surface type	$\lambda/10\text{-}\lambda/2$
尺寸 Size	1-500mm	透光孔径 Clear aperture	95%
尺寸公差 size tolerance	$\pm 0.1\text{mm}$	倒角 Chamfer	$0.1\sim 0.5\text{mm} \times 45^\circ$
厚度公差 Thickness tolerance	$\pm 0.1\text{mm}$	光洁度 Finish	10/5-80/50

POLARIZING COMPONENTS
偏振光学元件



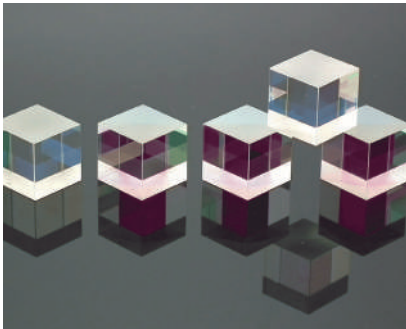
分光棱镜 Beamsplitter Prism

分光棱镜是通过精密的几何形状和高质量的光学表面，将入射光分散成其组成光谱。其主要应用在光谱学和光谱分析中，用于分离和测量不同波长的光。

分光棱镜的设计涉及到折射、色散和波长选择性，以实现精准的光谱分辨率。

Spectroscopic prisms are used to disperse incident light into its component spectrum through precise geometry and high-quality optical surfaces. It is mainly used in spectroscopy and spectral analysis to separate and measure light of different wavelengths.

The design of spectroscopic prisms involves refraction, dispersion and wavelength selectivity to achieve accurate spectral resolution.



C 系列宽带普通分光棱镜 C broadband normal beamsplitter prism

光学参数 Optical parameter

材料 Material	H-K9L, JGS1(200-280nm)
尺寸 Size	3mm-50mm(±0.2mm)
面型 Surface Shape	λ/8
光洁度 Surface quality	40-20
光线偏转 Deflection of light	3'
通光孔径 Clear Aperture	> 90%

波段范围 Band range	200-280nm, 400-700nm, 700-1100nm, 1100-1600nm, 16002000nm
分光比 T: R (%)	10:90; 30:70; 50:50; 70:30; 90:10
分光比精度 Spectral ratio accuracy	±3%
损伤阈值 Damage threshold	> 500mJ/cm²,20ns,20Hz,@1064nm
AR	Ravg<0.5%
胶合方式 Gluing mode	Norland 61

尺寸 Size (mm)	波段范围 Band range 400-700 (nm)	分光比 Splitting ratio (R/T)	价格 Price	波段范围 Band range 700-1100 (nm)	分光比 Splitting ratio (R/T)	价格 Price	波段范围 Band range 1100-1600 (nm)	分光比 Splitting ratio (R/T)	价格 Price
	产品编号 Product number			产品编号 Product number			产品编号 Product number		
3*3*3mm	C03-10-VIS	10:90	400	C03-10-NIR	10:90	400	C03-10-SWIR	10:90	400
3*3*3mm	C03-30-VIS	30:70	400	C03-30-NIR	30:70	400	C03-30-SWIR	30:70	400
3*3*3mm	C03-50-VIS	50:50	400	C03-50-NIR	50:50	400	C03-50-SWIR	50:50	400
3*3*3mm	C03-70-VIS	70:30	400	C03-70-NIR	70:30	400	C03-70-SWIR	70:30	400
3*3*3mm	C03-90-VIS	90:10	400	C03-90-NIR	90:10	400	C03-90-SWIR	90:10	400
5*5*5mm	C05-10-VIS	10:90	210	C05-10-NIR	10:90	310	C05-10-SWIR	10:90	390
5*5*5mm	C05-30-VIS	30:70	190	C05-30-NIR	30:70	310	C05-30-SWIR	30:70	370
5*5*5mm	C05-50-VIS	50:50	170	C05-50-NIR	50:50	270	C05-50-SWIR	50:50	310
5*5*5mm	C05-70-VIS	70:30	170	C05-70-NIR	70:30	270	C05-70-SWIR	70:30	310
5*5*5mm	C05-90-VIS	90:10	170	C05-90-NIR	90:10	270	C05-90-SWIR	90:10	310
10*10*10mm	C10-10-VIS	10:90	230	C10-10-NIR	10:90	330	C10-10-SWIR	10:90	430
10*10*10mm	C10-30-VIS	30:70	190	C10-30-NIR	30:70	330	C10-30-SWIR	30:70	390
10*10*10mm	C10-50-VIS	50:50	170	C10-50-NIR	50:50	290	C10-50-SWIR	50:50	330
10*10*10mm	C10-70-VIS	70:30	170	C10-70-NIR	70:30	290	C10-70-SWIR	70:30	330
10*10*10mm	C10-90-VIS	90:10	170	C10-90-NIR	90:10	290	C10-90-SWIR	90:10	330

尺寸 Size (mm)	波段范围 Band range 400-700 (nm)	分光比 Splitting ratio (R/T)	价格 Price	波段范围 Band range 700-1100 (nm)	分光比 Splitting ratio (R/T)	价格 Price	波段范围 Band range 1100-1600 (nm)	分光比 Splitting ratio (R/T)	价格 Price
12.5*12.5*12.5mm	C12.5-10-VIS	10:90	250	C12.5-10-NIR	10:90	370	C12.5-10-SWIR	10:90	450
12.5*12.5*12.5mm	C12.5-30-VIS	30:70	210	C12.5-30-NIR	30:70	370	C12.5-30-SWIR	30:70	410
12.5*12.5*12.5mm	C12.5-50-VIS	50:50	190	C12.5-50-NIR	50:50	330	C12.5-50-SWIR	50:50	370
12.5*12.5*12.5mm	C12.5-70-VIS	70:30	190	C12.5-70-NIR	70:30	330	C12.5-70-SWIR	70:30	370
12.5*12.5*12.5mm	C12.5-90-VIS	90:10	190	C12.5-90-NIR	90:10	330	C12.5-90-SWIR	90:10	370
12.7*12.7*12.7mm	C12.7-10-VIS	10:90	250	C12.7-10-NIR	10:90	370	C12.7-10-SWIR	10:90	450
12.7*12.7*12.7mm	C12.7-30-VIS	30:70	210	C12.7-30-NIR	30:70	370	C12.7-30-SWIR	30:70	410
12.7*12.7*12.7mm	C12.7-50-VIS	50:50	190	C12.7-50-NIR	50:50	330	C12.7-50-SWIR	50:50	370
12.7*12.7*12.7mm	C12.7-70-VIS	70:30	190	C12.7-70-NIR	70:30	330	C12.7-70-SWIR	70:30	370
12.7*12.7*12.7mm	C12.7-90-VIS	90:10	190	C12.7-90-NIR	90:10	330	C12.7-90-SWIR	90:10	370
15*15*15mm	C15-10-VIS	10:90	270	C15-10-NIR	10:90	410	C15-10-SWIR	10:90	510
15*15*15mm	C15-30-VIS	30:70	230	C15-30-NIR	30:70	410	C15-30-SWIR	30:70	470
15*15*15mm	C15-50-VIS	50:50	210	C15-50-NIR	50:50	370	C15-50-SWIR	50:50	410
15*15*15mm	C15-70-VIS	70:30	210	C15-70-NIR	70:30	370	C15-70-SWIR	70:30	410
15*15*15mm	C15-90-VIS	90:10	210	C15-90-NIR	90:10	370	C15-90-SWIR	90:10	410
18*18*18mm	C18-10-VIS	10:90	310	C18-10-NIR	10:90	450	C18-10-SWIR	10:90	530
18*18*18mm	C18-30-VIS	30:70	270	C18-30-NIR	30:70	450	C18-30-SWIR	30:70	510
18*18*18mm	C18-50-VIS	50:50	250	C18-50-NIR	50:50	410	C18-50-SWIR	50:50	450
18*18*18mm	C18-70-VIS	70:30	250	C18-70-NIR	70:30	410	C18-70-SWIR	70:30	450
18*18*18mm	C18-90-VIS	90:10	250	C18-90-NIR	90:10	410	C18-90-SWIR	90:10	450
20*20*20mm	C20-10-VIS	10:90	350	C20-10-NIR	10:90	470	C20-10-NIR	10:90	550
20*20*20mm	C20-30-VIS	30:70	330	C20-30-NIR	30:70	470	C20-30-SWIR	30:70	530
20*20*20mm	C20-50-VIS	50:50	270	C20-50-NIR	50:50	430	C20-50-SWIR	50:50	470
20*20*20mm	C20-70-VIS	70:30	270	C20-70-NIR	70:30	430	C20-70-SWIR	70:30	470
20*20*20mm	C20-90-VIS	90:10	270	C20-90-NIR	90:10	430	C20-90-SWIR	90:10	470
25*25*25mm	C25-10-VIS	10:90	390	C25-10-NIR	10:90	510	C25-10-SWIR	10:90	590
25*25*25mm	C25-30-VIS	30:70	370	C25-30-NIR	30:70	510	C25-30-SWIR	30:70	570
25*25*25mm	C25-50-VIS	50:50	350	C25-50-NIR	50:50	470	C25-50-SWIR	50:50	510
25*25*25mm	C25-70-VIS	70:30	350	C25-70-NIR	70:30	470	C25-70-SWIR	70:30	510
25*25*25mm	C25-90-VIS	90:10	350	C25-90-NIR	90:10	470	C25-90-SWIR	90:10	510
25.4*25.4*25.4mm	C25.4-10-VIS	10:90	390	C25.4-10-NIR	10:90	510	C25.4-10-SWIR	10:90	590
25.4*25.4*25.4mm	C25.4-30-VIS	30:70	370	C25.4-30-NIR	30:70	510	C25.4-30-SWIR	30:70	570
25.4*25.4*25.4mm	C25.4-50-VIS	50:50	350	C25.4-50-NIR	50:50	470	C25.4-50-SWIR	50:50	510
25.4*25.4*25.4mm	C25.4-70-VIS	70:30	350	C25.4-70-NIR	70:30	470	C25.4-70-SWIR	70:30	510
25.4*25.4*25.4mm	C25.4-90-VIS	90:10	350	C25.4-90-NIR	90:10	470	C25.4-90-SWIR	90:10	510
50*50*50mm	C50-10-VIS	10:90	1050	C50-10-NIR	10:90	1300	C50-10-SWIR	10:90	1500
50*50*50mm	C50-30-VIS	30:70	1050	C50-30-NIR	30:70	1300	C50-30-SWIR	30:70	1500
50*50*50mm	C50-50-VIS	50:50	990	C50-50-NIR	50:50	1130	C50-50-SWIR	50:50	1300
50*50*50mm	C50-70-VIS	70:30	990	C50-70-NIR	70:30	1130	C50-70-SWIR	70:30	1300
50*50*50mm	C50-90-VIS	90:10	990	C50-90-NIR	90:10	1130	C50-90-SWIR	90:10	1300

消偏振分光棱镜 Depolarizing beamsplitter prism

消偏振分光棱镜是通过特殊设计的偏振片组合，实现对入射光中特定偏振分量的选择性抑制。其能够消除或减弱光波的偏振成分，使输出光更趋于非偏振状态。

The depolarization splitter prism is a combination of specially designed polarizers to achieve selective suppression of specific polarization components in incident light. It can eliminate or weaken the polarization component of the light wave, so that the output light tends to be more unpolarized.

- N 系列金属宽带消偏振分光棱镜
- N series metal wideband depolarization splitting prism

光学参数 Optical parameter

材料 Material	H-K9L	波段范围 Band range	250-500nm, 400-700nm, 700-1100nm, 1100-1600nm, 1500-2000nm
尺寸 Size	3mm-50mm(±0.2mm)	损伤阈值 Damage threshold	> 100mJ/cm²,20ns,20Hz,@1064nm
面型 Surface Shape	λ/8	AR	Ravg<0.5%
光洁度 Surface quality	40-20	Tp-Ts	<3.5%
光线偏转 Deflection of light	3′	Rp-Rs	<3.5%
通光孔径 Clear Aperture	> 90%	胶合方式 Gluing mode	Norland 61 (250-500nm 为光胶)
分光比 T: R (%)	10:90; 30:70; 50:50; 70:30; 90:10		
分光比精度 Spectral ratio accuracy	±5%		

常备库存型号规格 Standing stock model specifications

尺寸 Size (mm)	波段范围 Band range (nm)	分光比 Splitting ratio (R/T)	价格 Price	波段范围 Band range (nm)	分光比 Splitting ratio (R/T)	价格 Price	波段范围 Band range (nm)	分光比 Splitting ratio (R/T)	价格 Price
	产品编号 Product number			产品编号 Product number			产品编号 Product number		
	250-500								
10*10*10mm	NU10-50-VIS	50:50	1000						
12.5*12.5*12.5mm	NU12.5-50-VIS	50:50	1500						
12.7*12.7*12.7mm	NU12.7-50-VIS	50:50	1500						
15*15*15mm	NU15-50-VIS	50:50	1900						
18*18*18mm	NU18-50-VIS	50:50	2300						
20*20*20mm	NU20-50-VIS	50:50	2300						
25*25*25mm	NU25-50-VIS	50:50	2500						
25.4*25.4*25.4mm	NU25.4-50-VIS	50:50	2500						
50*50*50mm	NU50-50-VIS	50:50	15000						
	400-700			700-1100			1100-1600		
3*3*3mm	N03-10-VIS	10:90	400	N03-10-NIR	10:90	400	N03-10-SWIR	10:90	400
3*3*3mm	N03-30-VIS	30:70	400	N03-30-NIR	30:70	400	N03-30-SWIR	30:70	400
3*3*3mm	N03-50-VIS	50:50	400	N03-50-NIR	50:50	400	N03-50-SWIR	50:50	600
3*3*3mm	N03-70-VIS	70:30	400	N03-70-NIR	70:30	450	N03-70-SWIR	70:30	600
3*3*3mm	N03-80-VIS	80:20	600	N03-90-NIR	90:10	550			
3*3*3mm	N03-90-VIS	90:10	600						

尺寸 Size (mm)	波段范围 Band range (nm)	分光比 Splitting ratio (R/T)	价格 Price	波段范围 Band range (nm)	分光比 Splitting ratio (R/T)	价格 Price	波段范围 Band range (nm)	分光比 Splitting ratio (R/T)	价格 Price
	1500-2000								
3*3*3mm	NR03-10-SWIR	10:90	730						
3*3*3mm	NR03-30-SWIR	30:70	730						
3*3*3mm	NR03-50-SWIR	50:50	730						
3*3*3mm	NR03-70-SWIR	70:30	1000						
	400-700			700-1100			1100-1600		
5*5*5mm	N05-10-VIS	10:90	250	N03-10-NIR	10:90	270	N05-10-SWIR	10:90	330
5*5*5mm	N05-30-VIS	30:70	250	N03-30-NIR	30:70	270	N05-30-SWIR	30:70	330
5*5*5mm	N05-50-VIS	50:50	250	N03-50-NIR	50:50	270	N05-50-SWIR	50:50	400
5*5*5mm	N05-70-VIS	70:30	330	N03-70-NIR	70:30	400	N05-70-SWIR	70:30	470
5*5*5mm	N05-80-VIS	80:20	400	N03-90-NIR	90:10	450			
5*5*5mm	N05-90-VIS	90:10	400						
	1500-2000								
5*5*5mm	NR05-10-SWIR	10:90	710						
5*5*5mm	NR05-30-SWIR	30:70	710						
5*5*5mm	NR05-50-SWIR	50:50	710						
5*5*5mm	NR05-70-SWIR	70:30	790						
	400-700			700-1000			1100-1600		
10*10*10mm	N10-10-VIS	10:90	270	N10-10-NIR	10:90	310	N10-10-SWIR	10:90	350
10*10*10mm	N10-30-VIS	30:70	270	N10-30-NIR	30:70	310	N10-30-SWIR	30:70	350
10*10*10mm	N10-50-VIS	50:50	270	N10-50-NIR	50:50	310	N10-50-SWIR	50:50	470
10*10*10mm	N10-70-VIS	70:30	350	N10-70-NIR	70:30	470	N10-70-SWIR	70:30	510
10*10*10mm	N10-80-VIS	80:20	470	N10-90-NIR	90:10	510			
10*10*10mm	N10-90-VIS	90:10	470						
	1500-2000								
10*10*10mm	NR10-10-SWIR	10:90	750						
10*10*10mm	NR10-30-SWIR	30:70	750						
10*10*10mm	NR10-50-SWIR	50:50	750						
10*10*10mm	NR10-70-SWIR	70:30	830						
	400-700			700-1000			1100-1600		
12.5*12.5*12.5mm	N12.5-10-VIS	10:90	330	N12.5-10-NIR	10:90	350	N12.5-10-SWIR	10:90	430
12.5*12.5*12.5mm	N12.5-30-VIS	30:70	330	N12.5-30-NIR	30:70	350	N12.5-30-SWIR	30:70	430
12.5*12.5*12.5mm	N12.5-50-VIS	50:50	330	N12.5-50-NIR	50:50	350	N12.5-50-SWIR	50:50	510
12.5*12.5*12.5mm	N12.5-70-VIS	70:30	390	N12.50-70-NIR	70:30	510	N12.50-70-SWIR	70:30	550
12.5*12.5*12.5mm	N12.5-80-VIS	80:20	510	N12.5-90-NIR	90:10	550			
12.5*12.5*12.5mm	N12.5-90-VIS	90:10	510						
	1500-2000								
12.5*12.5*12.5mm	NR12.5-10-SWIR	10:90	790						
12.5*12.5*12.5mm	NR12.5-30-SWIR	30:70	790						
12.5*12.5*12.5mm	NR12.5-50-SWIR	50:50	790						
12.5*12.5*12.5mm	NR12.5-70-SWIR	70:30	910						

尺寸 Size (mm)	波段范围 Band range (nm)	分光比 Splitting ratio (R/T)	价格 Price	波段范围 Band range (nm)	分光比 Splitting ratio (R/T)	价格 Price	波段范围 Band range (nm)	分光比 Splitting ratio (R/T)	价格 Price
	400-700			700-1100			1100-1600		
12.7*12.7*12.7mm	N12.7-10-VIS	10:90	330	N12.7-10-NIR	10:90	350	N12.7-10-SWIR	10:90	430
12.7*12.7*12.7mm	N12.7-30-VIS	30:70	330	N12.7-30-NIR	30:70	350	N12.7-30-SWIR	30:70	430
12.7*12.7*12.7mm	N12.7-50-VIS	50:50	330	N12.7-50-NIR	50:50	350	N12.7-50-SWIR	50:50	510
12.7*12.7*12.7mm	N12.7-70-VIS	70:30	390	N12.7-70-NIR	70:30	510	N12.7-70-SWIR	70:30	550
12.7*12.7*12.7mm	N12.7-80-VIS	80:20	510	N12.7-90-NIR	90:10	550			
12.7*12.7*12.7mm	N12.7-90-VIS	90:10	510						
	1500-2000								
12.7*12.7*12.7mm	NR12.7-10-SWIR	10:90	790						
12.7*12.7*12.7mm	NR12.7-30-SWIR	30:70	790						
12.7*12.7*12.7mm	NR12.7-50-SWIR	50:50	790						
12.7*12.7*12.7mm	NR12.7-70-SWIR	70:30	910						
	400-700			700-1100			1100-1600		
15*15*15mm	N15-10-VIS	10:90	390	N15-10-NIR	10:90	390	N15-10-SWIR	10:90	510
15*15*15mm	N15-30-VIS	30:70	390	N15-30-NIR	30:70	390	N15-30-SWIR	30:70	510
15*15*15mm	N15-50-VIS	50:50	390	N15-50-NIR	50:50	390	N15-50-SWIR	50:50	530
15*15*15mm	N15-70-VIS	70:30	510	N15-70-NIR	70:30	530	N15-70-SWIR	70:30	590
15*15*15mm	N15-80-VIS	80:20	530	N15-90-NIR	90:10	590			
15*15*15mm	N15-90-VIS	90:10	530						
	1500-2000								
15*15*15mm	NR15-10-SWIR	10:90	910						
15*15*15mm	NR15-30-SWIR	30:70	910						
15*15*15mm	NR15-50-SWIR	50:50	910						
15*15*15mm	NR15-70-SWIR	70:30	1010						
	400-700			700-1100			1100-1600		
18*18*18mm	N18-10-VIS	10:90	430	N18-10-NIR	10:90	430	N18-10-SWIR	10:90	550
18*18*18mm	N18-30-VIS	30:70	430	N18-30-NIR	30:70	430	N18-30-SWIR	30:70	550
18*18*18mm	N18-50-VIS	50:50	410	N18-50-NIR	50:50	430	N18-50-SWIR	50:50	550
18*18*18mm	N18-70-VIS	70:30	550	N18-70-NIR	70:30	550	N18-70-SWIR	70:30	670
18*18*18mm	N18-80-VIS	80:20	550	N18-90-NIR	90:10	670			
18*18*18mm	N18-90-VIS	90:10	550						
	1500-2000								
18*18*18mm	NR18-10-SWIR	10:90	990						
18*18*18mm	NR18-30-SWIR	30:70	990						
18*18*18mm	NR18-50-SWIR	50:50	990						
18*18*18mm	NR18-70-SWIR	70:30	1090						
	400-700			700-1100			1100-1600		
20*20*20mm	N20-10-VIS	10:90	430	N20-10-NIR	10:90	430	N20-10-SWIR	10:90	550
20*20*20mm	N20-30-VIS	30:70	430	N20-30-NIR	30:70	430	N20-30-SWIR	30:70	550
20*20*20mm	N20-50-VIS	50:50	430	N20-50-NIR	50:50	430	N20-50-SWIR	50:50	550
20*20*20mm	N20-70-VIS	70:30	510	N20-70-NIR	70:30	550	N20-70-SWIR	70:30	670
20*20*20mm	N20-80-VIS	80:20	550	N20-90-NIR	90:10	670			
20*20*20mm	N20-90-VIS	90:10	550						

尺寸 Size (mm)	波段范围 Band range (nm)	分光比 Splitting ratio (R/T)	价格 Price	波段范围 Band range (nm)	分光比 Splitting ratio (R/T)	价格 Price	波段范围 Band range (nm)	分光比 Splitting ratio (R/T)	价格 Price
	1500-2000								
20*20*20mm	NR20-10-SWIR	10:90	1050						
20*20*20mm	NR20-30-SWIR	30:70	1050						
20*20*20mm	NR20-50-SWIR	50:50	1050						
20*20*20mm	NR20-70-SWIR	70:30	1150						
	400-700			700-1100			1100-1600		
25*25*25mm	N25-10-VIS	10:90	470	N25-10-NIR	10:90	470	N25-10-SWIR	10:90	590
25*25*25mm	N25-30-VIS	30:70	470	N25-30-NIR	30:70	470	N25-30-SWIR	30:70	590
25*25*25mm	N25-50-VIS	50:50	450	N25-50-NIR	50:50	470	N25-50-SWIR	50:50	590
25*25*25mm	N25-70-VIS	70:30	550	N25-70-NIR	70:30	590	N25-70-SWIR	70:30	710
25*25*25mm	N25-80-VIS	80:20	590	N25-90-NIR	90:10	710			
25*25*25mm	N25-90-VIS	90:10	590						
	1500-2000								
25*25*25mm	NR25-10-SWIR	10:90	1150						
25*25*25mm	NR25-30-SWIR	30:70	1150						
25*25*25mm	NR25-50-SWIR	50:50	1150						
25*25*25mm	NR25-70-SWIR	70:30	1250						
	400-700			700-1100			1100-1600		
25.4*25.4*25.4mm	N25.4-10-VIS	10:90	470	N25.4-10-NIR	10:90	470	N25.4-10-SWIR	10:90	590
25.4*25.4*25.4mm	N25.4-30-VIS	30:70	470	N25.4-30-NIR	30:70	470	N25.4-30-SWIR	30:70	590
25.4*25.4*25.4mm	N25.4-50-VIS	50:50	450	N25.4-50-NIR	50:50	470	N25.4-50-SWIR	50:50	590
25.4*25.4*25.4mm	N25.4-70-VIS	70:30	550	N25.4-70-NIR	70:30	590	N25.4-70-SWIR	70:30	710
25.4*25.4*25.4mm	N25.4-80-VIS	80:20	590	N25.4-90-NIR	90:10	710			
25.4*25.4*25.4mm	N25.4-90-VIS	90:10	590						
	1500-2000								
25.4*25.4*25.4mm	NR25.4-10-SWIR	10:90	1150						
25.4*25.4*25.4mm	NR25.4-30-SWIR	30:70	1150						
25.4*25.4*25.4mm	NR25.4-50-SWIR	50:50	1150						
25.4*25.4*25.4mm	NR25.4-70-SWIR	70:30	1250						
	400-700			700-1100			1100-1600		
50*50*50mm	N50-10-VIS	10:90	990	N50-10-NIR	10:90	990	N50-10-SWIR	10:90	1100
50*50*50mm	N50-30-VIS	30:70	990	N50-30-NIR	30:70	990	N50-30-SWIR	30:70	1100
50*50*50mm	N50-50-VIS	50:50	990	N50-50-NIR	50:50	990	N50-50-SWIR	50:50	1500
50*50*50mm	N50-70-VIS	70:30	990	N50-70-NIR	70:30	1500	N50-70-SWIR	70:30	1500
50*50*50mm	N50-80-VIS	80:20	1500	N50-90-NIR	90:10	1500			
50*50*50mm	N50-90-VIS	90:10	1500						
	1500-2000								
50*50*50mm	NR50-10-SWIR	10:90	2500						
50*50*50mm	NR50-30-SWIR	30:70	2500						
50*50*50mm	NR50-50-SWIR	50:50	2500						
50*50*50mm	NR50-70-SWIR	70:30	3100						

偏振分光棱镜 Polarization beamsplitter prism

偏振分光棱镜是一种能够选择性地分离、旋转或调整光的偏振状态。通过精确的光学设计和特殊涂层，偏振分光棱镜可根据入射光的偏振方向实现光的分光、反射或透射。

Polarization splitting prism is a kind of selective separation, rotation or adjustment of the polarization state of light. Through precise optical design and special coating, polarization splitting prisms can achieve light splitting, reflection or transmission according to the polarization direction of the incident light.

光学参数 Optical parameter

材料 Material	H-ZF3	Tp	>95%
尺寸 Size	3mm-50mm(±0.2mm)	Rs	>99.5%
面型 Surface Shape	λ/8	Tp:Ts	>1000:1
光洁度 Surface quality	40-20	损伤阈值 Damage threshold	> 500mJ/cm²,20ns,20Hz,@1064nm
光线偏转 Deflection of light	3'	AR	Ravg<0.5%
通光孔径 Clear Aperture	> 90%	胶合方式 Gluing mode	Norland 61
波段范围 Band range	420-680nm, 620-1000nm, 420-1000nm, 900-1300nm, 1100-1600nm, 1500-2000nm		

宽带偏振分光棱镜、Broadband polarizing beam splitter prisms

单波长偏振分光棱镜 single wavelength polarizing beam splitter prisms

常备库存型号规格 Standing stock model specifications

尺寸 /Size 价格 /price	波段范围 Band range 420-680 (nm)	波段范围 Band range 620-1000 (nm)	波段范围 Band range 420-1000 (nm)	波段范围 Band range 900-1300 (nm)	波段范围 Band range 1100-1600 (nm)	波段范围 Band range 1500-2000 (nm)
3*3*3mm	400	400	710	400	400	590
5*5*5mm	310	350	710	390	430	590
10*10*10mm	330	410	870	450	450	710
12.5*12.5*12.5mm	370	470	990	510	570	750
12.7*12.7*12.7mm	370	470	990	510	570	750
15*15*15mm	530	550	1190	570	590	850
18*18*18mm	570	610	1350	650	670	910
20*20*20mm	290	630	1390	690	710	930
25*25*25mm	670	710	1500	710	730	950
25.4*25.4*25.4mm	670	710	1500	710	730	950
50*50*50mm	3100	3100	5500	3300	3500	3900

单波长消偏振全介质分光棱镜

Single-wavelength depolarizing all-dielectric spectroscopic prisms

常备库存型号规格 Standing stock model specifications

尺寸 Size	波段 Band range 488nm (10:90)	波段 Band range 532nm (30:70)	波段 Band range 633nm (50:50)	波段 Band range 1064nm (70:30)	波段 Band range 1310nm (90:10)
3*3*3mm	√	√	√	√	√
5*5*5mm	√	√	√	√	√
10*10*10mm	√	√	√	√	√
12.5*12.5*12.5mm	√	√	√	√	√
12.7*12.7*12.7mm	√	√	√	√	√
15*15*15mm	√	√	√	√	√
18*18*18mm	√	√	√	√	√
20*20*20mm	√	√	√	√	√
25*25*25mm	√	√	√	√	√
25.4*25.4*25.4mm	√	√	√	√	√
50*50*50mm	√	√	√	√	√

侧向位移分光棱镜 Lateral Displacement Spectroscopic Prisms,

侧向位移偏振分光棱镜 Lateral Displacement Polarizing Spectroscopic Prisms

常备库存型号规格 Standing stock model specifications

尺寸 Size	波段 Band range 400-700nm (50:50)	波段 Band range 650-900nm (50:50)	波段 Band range 900-1200nm (50:50)
3*3*3mm	√	√	√
5*5*5mm	√	√	√
10*10*10mm	√	√	√
12.5*12.5*12.5mm	√	√	√
12.7*12.7*12.7mm	√	√	√
15*15*15mm	√	√	√
18*18*18mm	√	√	√
20*20*20mm	√	√	√
25*25*25mm	√	√	√
25.4*25.4*25.4mm	√	√	√
50*50*50mm	√	√	√

偏振镜 Polarizer

偏振镜 (Polarizer)，也叫偏光镜，简称 PL 镜，是一种滤色镜。偏振镜的除色功用是能有选择地让某个方向振动的光线通过，在彩色和黑白摄影中常用来消除或减弱非金属表面的强反光，从而消除或减轻光斑。根据过滤偏振光的机理不同，偏光镜可以分为 圆偏光镜 (Circular Polarizer, 简称 CPL) 和 线偏光镜 (Linear Polarizer, 简称 LPL) 两种。

Polarizer, also known as polarizer, or PL mirror, is a color filter. The color removal function of the polarizer is to selectively let the light of vibration in a certain direction pass through, which is often used to eliminate or weaken the strong reflection of the non-metallic surface in color and black and white photography, thereby eliminating or reducing the spot. According to the different mechanism of filtering polarized light, polarizers can be divided into Circular polarizers (CPL) and Linear polarizers (LPL).



光学参数 Optical parameter

材质 Material	B270	透射率（平均值） Transmittance (average)	T=37%
直径 diameter	25mm,37mm,40.5mm,43mm,49mm	消光比 Extinction Ratio	>90:1 (400 - 700 nm)
厚度 Thickness	2mm	光洁度 Finish	10/5-80/50
工作频带 Working band	400~700nm		

波片 Wave plate

波片（延迟片或移相器）由表现出双折射的材料制成，通过双折射材料的异常光线和普通光线的速度与其折射率成反比，当两个光束重新组合时，这种速度差异会产生相位差。

主要用来改变激光的偏振态或者偏振方向，最常用的是二分之一波片和四分之一波片。波片分成很多类型，京盛提供零级波片，真零级波片，多级波片，双波长波片，空气隙波片等。

A wave plate (delay plate or phase shifter) is made of a material that exhibits birefringence, and the speed of abnormal and ordinary light passing through the birefringent material is inversely proportional to its refractive index, and when the two beams are recombined, this speed difference creates a phase difference.

It is mainly used to change the polarization state or polarization direction of the laser, and the most commonly used are half wave plates and quarter wave plates. Wave plates are divided into many types, Jingsheng provides zero order wave plates, true zero order wave plates, multistage wave plates, dual wavelength wave plates, air gap wave plates and so on.

产品参数 Product parameter

参数 parameter	消色差零级波片 Achromatic zero order wave plate	零级 zero-order			真零级 True zero		多级 Multi-stage	双波长 dual-wavelength
		胶合 Glue	光胶 Photoglue	空气隙 Air	胶合 Glue	单片 single		
材质 Material	Quartz crystal	Quartz crystal	Quartz crystal	Quartz crystal	Quartz crystal	Quartz crystal	Quartz crystal	Quartz crystal
直径公差 Diameter tolerancemm	0.01-0.2	0.01-0.2	0.01-0.2	0.01-0.2	0.01-0.2	0.01-0.2	0.01-0.2	0.01-0.2
表面质量 Surface quality	20/10	20/10	20/10	20/10	20/10	20/10	20/10	20/10
波前畸变 Wavefront distortion	λ/10	λ/10	λ/10	λ/10	λ/10	λ/10	λ/10	λ/10
延迟量 Retardation	λ/300	λ/300	λ/300	λ/300	λ/300	λ/300	λ/300	λ/300
平行度 Parallelism	1”	1”	1”	1”	1”	1”	1”	1”
标准波长 Standard wavelength	266,355,532,633,780,808,850,980,1064,1310,1480,1550, 465-650nm,700-1000nm,1200-1650nm, 1030&515nm, 1064&532nm							

单波长波片 Single wavelength wave plate

光学参数 Optical parameter

材质 Material	Crystal Quartz or MgF2	延迟精度 Phase delay accuracy	$\lambda/500$
直径范围 diameter	5-100 mm	平行度 Parallelism	$< 3''$
通光孔径 Light aperture	$\geq 90\%$ Central area	光洁度 Finish	10/5 S/D
透射波前 Transmitted wavefront	$\lambda/10$ @632.8 nm		

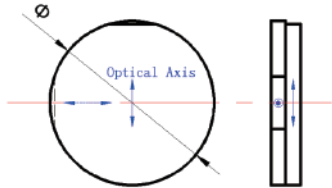
可定制形状和尺寸，提供标准膜系或根据客户需求定制膜系，高激光损伤阈值，可选择是否安装支架

The shape and size can be customized, the membrane system is standard or customized according to the customer's needs, the laser damage threshold is high, and the support can be installed or not

胶合零级波片 Glued zero-order wave plate

光胶零级波片采用光学胶封装工艺的零级波片。其制作过程中，将波片与特定材料的光学胶精密封装，形成紧凑、耐用的结构。

Optical glue zero stage wave plate using optical glue packaging process zero stage wave plate. In the production process, the wave plate is precisely packaged with an optical adhesive of a specific material to form a compact and durable structure.

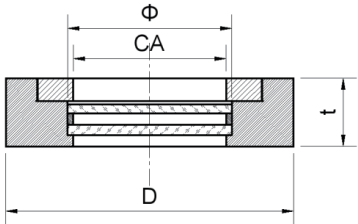


光学参数 Optical parameter

材质 Material	Crystal Quartz	增透膜 Antireflection film	$R < 0.25\%$ @ design wavelength
直径公差 Diameter tolerance	+0.0, -0.25mm	损伤阈值 Damage threshold	2MW/cm2,2J/cm2, 10ns
面形 Surface shape	$\lambda/8$ @ 632.8nm	平行度 Parallelism	$\leq 3''$
相位延迟精度 Phase delay accuracy	$\lambda/300$	光洁度 Finish	10/5-80/50
		有效孔径 Effective aperture	$> 90\%$
波前畸变 Wavefront distortion	$\lambda/10$ @ 632.8nm (Clear apertu)	镀膜 Coating	$R < 0.2\%$ @ wavelength

空气隙零级波片 Air zero order wave plate

空气隙零级波片是一种通过在波片表面引入微小空气隙而实现的光学器件。这种设计改变了波片的局部光学路径，导致特定波长的光子经过相位差 180 度的变化。通过精确控制空气隙的尺寸，实现对特定波长的相位调制。空气隙零级波片在高分辨率成像、激光调制、光学通信等领域中具有独特的应用，为光学系统提供卓越的偏振控制和性能优化



Air gap zero order wave plate is an optical device realized by introducing a small air gap on the surface of the wave plate. This design alters the local optical path of the wave plate, causing photons of a particular wavelength to pass through a 180-degree change in phase difference. By precisely controlling the size of the air gap, the phase modulation for a specific wavelength is realized. Air gap zero-order wave plates have unique applications in high resolution imaging, laser modulation, optical communication and other fields, providing excellent polarization control and performance optimization for optical systems

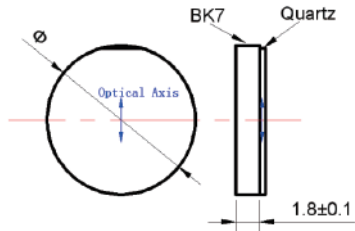
光学参数 Optical parameter

材料 Material	Quartz crystal	波前畸变 Wavefront distortion	$\lambda/10$ @ 632.8nm (Clear apertu)
尺寸公差 Size Tolerance	+0/-0.25mm	平行度 Parallelism	$\leq 3''$
有效通光孔径 Clear aperture	$> 90\%$ Central area	增透膜 Antireflection film	$R < 0.25\%$ Each side @ design wavelength
相位延迟精度 Phase delay accuracy	$< \lambda/300$	损伤阈值 Damage threshold	2MW/cm2,2J/cm2, 10ns
光洁度 Surface quality	20/10		

胶合真零级波片 Glue True zero-order wave plate

胶合真零级波片采用精密胶合技术，通过胶合多层具有特定相位延迟的光学材料，形成具有精确波片厚度的结构。这种设计可实现对不同波长的光子引入相位差，使其符合零级波片的要求。

Glue-true zero-order wave plates use precision gluing technology to form a structure with an accurate wave plate thickness by gluing multiple layers of optical material with a specific phase delay. This design can introduce phase difference to photons of different wavelengths and make them meet the requirements of zero-order wave plates.



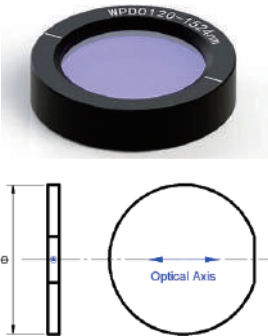
光学参数 Optical parameter

材料 Materials	Quartz crystal	光洁度 Surface quality	20/10
基底材料 Base material	BK7	损伤阈值 Damage threshold	$\lambda/8$ @ 632.8nm (Clear apertu)
尺寸公差 Size Tolerance	+0/-0.2mm	平行度 Parallelism	$\leq 10''$
有效光孔径 Clear apertu	$> 90\%$ Central area	增透膜 Antireflection film	$R < 0.25\%$ @ Design wavelength
相位延迟精度 Phase delay accuracy	$< \lambda/300$	损伤阈值 Damage threshold	500W/cm2,4J/cm2, 20ns

真零级波片 True zero-order wave plate

真零级波片是一种光学元件，用于调整或转换光的偏振状态。其工作原理基于特殊的波片设计，引入相位差使得波片对特定波长的光实现相位变化，达到 180 度的相位差，从而实现光的偏振调制。真零级波片在激光系统、光通信、光学传感等领域得到广泛应用，提供高度精准的偏振控制，为光学系统中的各种应用提供优异性能

A true zero-order wave plate is an optical element used to adjust or convert the polarization state of light. Its working principle is based on the special design of the wave plate, the introduction of phase difference makes the wave plate realize the phase change of the specific wavelength of light, to achieve the phase difference of 180 degrees, so as to realize the polarization modulation of light. True zero wave plates are widely used in laser systems, optical communication, optical sensing and other fields, providing highly accurate polarization control and excellent performance for various applications in optical systems

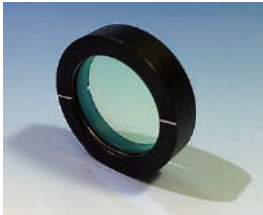


光学参数 Optical parameter

材料 Material	Crystal Quartz
尺寸公差 Size Tolerance	+0/-0.2mm
相位延迟精度 Phase delay accuracy	$\lambda/60\text{-}\lambda/200$ ($\lambda < 400\text{nm}$) $\lambda/200\text{-}\lambda/500$ ($400\text{nm} < \lambda < 700\text{nm}$) $\lambda/500\text{-}\lambda/6000$ ($\lambda > 700\text{nm}$)
有效通光孔径 Clear aperture	$\geq 90\%$ Central area
光洁度 Surface quality	10/5-80/50
波前畸变 Wavefront distortion	$\lambda/8$ @ 632.8nm (Clear apertu)
平行度 Parallelism	$\leq 10''$

镀膜 Coating	$R < 0.25\%$ Each side @ design wavelength
损伤阈值 Damage threshold	$> 500\text{MW}/\text{cm}^2$ @ 1064nm, 20ns, 20Hz (monolithic)
使用波段 Use band	2100-2000nm (quartz) 190-000nm (MgF2)
面形 Surface shape	AR Coating
镀膜 Coating	+0/-0.25mm
支架 Bracket	Anodized aluminum bracket

多级波片 Multi-stage wave plate



光学参数 Optical parameter

材料 Material	Crystal Quartz
尺寸公差 Size Tolerance	+0/-0.25mm
有效通光孔径 Clear aperture	$> 90\%$ Central area
相位延迟精度 Phase delay accuracy	$< \lambda/300$
光洁度 Surface quality	20/10
波前畸变 Wavefront distortion	$\lambda/10$ @ 632.8nm (Clear apertu)
平行度 Parallelism	$\leq 3''$
增透膜 Antireflection film	$R < 0.25\%$
损伤阈值 Damage threshold	$2\text{MW}/\text{cm}^2, 2\text{J}/\text{cm}^2, 10\text{ns}$

表面质量 Surface quality	$< 10 / 5$
面形 Surface shape	$< \lambda / 10$ @ 633 nm
直径 Diameter	$< 25.4 = 0.00 / - 0.20$ mm
厚度 Thickness	$t = 1.0$ mm
偏振态纯度 Polarization state purity	98%
延迟 Delay@ λ_1	$\lambda / 2$
延迟 Delay@ λ_2	λ
通光孔径 Clear aperture	20.0 mm
外径 OD	38.1 mm
AR 涂层 coating	$R < 0.25\%$ per surface

消色差零级波片 Achromatic zero order wave plate

消色差零级波片是由两种不同的基地材料制成，例如石英晶体和氟化镁。对于由一种材料制成的波片由于材料的色散使得其工作波长受到局限。由于消色差波片是由两种不同的材料制成其材料的双折射色散也不同，从而使得消色差波片对波长不敏感。

Achromatic zero-order wave plates are made of two different base materials, such as quartz crystals and magnesium fluoride. For a wave plate made of one material, its operating wavelength is limited due to the dispersion of the material. Because the achromatic wave plate is made of two different materials with different birefringent dispersion, the achromatic wave plate is insensitive to wavelength.



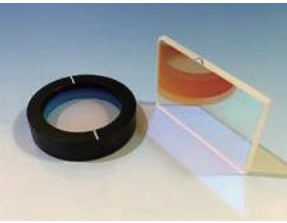
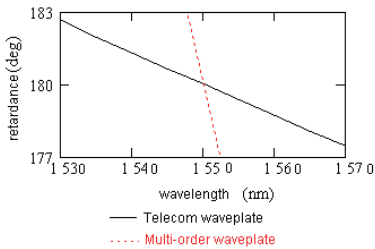
光学参数 Optical parameter

材质 Material	Quartz crystal or MgF2
直径范围 diameter	5-100 mm
通光孔径 Clear aperture	90% of the diameter of the center
透射波前 Transmitted wavefront	$\lambda/10$ @ 632.8 nm

光洁度 Surface quality	20/10 S/D
平行度 Parallelism	$< 1'$
波长范围 Wavelength range	High delay accuracy $\lambda/100$

可定制形状和尺寸，提供多种波长范围，高激光损伤阈值，可选择是否安装支架
Customizable shapes and sizes, multiple wavelength ranges, high laser damage thresholds, and optionally mounted mounts

光通讯波片 Telecom wave plate

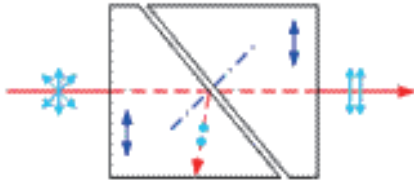
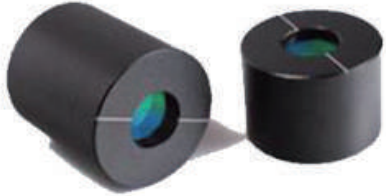


材质 Material	Quartz crystal
尺寸公差 Size Tolerance	+0/-0.1mm
设计波长 Design wavelength	1550nm
相位延迟精度 Phase delay accuracy	$< \lambda/300$ @ 1550nm
光洁度 Surface quality	40/20

波前畸变 Wavefront distortion	$\lambda/4$ @ 632.8nm Effective pass light inside aperture
平行度 Parallelism	$\leq 3''$
增透膜 Antireflection film	Two sides $R < 0.25\%$ @ 1525-1565nm
损伤阈值 Damage threshold	$500\text{W}/\text{cm}^2, 4\text{J}/\text{cm}^2, 20\text{ns}$

偏振器 Polarizing

格兰偏振棱镜 Glan polarizing prism



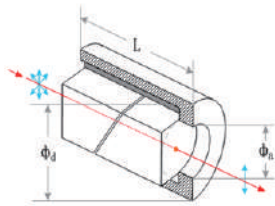
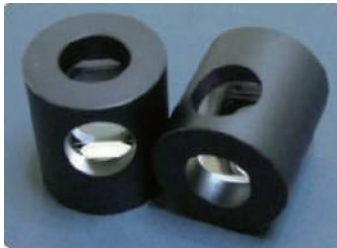
光学参数 Optical parameter

直径 Diameter	15mm 25.4mm 30mm
波长范围 Wavelength	a-BBO:220-3000nm; 冰洲石: 350-2300nm; YVO:500-4000nm
材料 Material	a-BBO, 冰洲石, YVO
消光比 Extinction ratio	100000:1
平行度 Parallelism	< 1 arc min
表面质量 Surface quality	20/10
光束偏移 Beam deviation	< 3arc min

波前畸变 Wavefront distortion	$\lambda/4@632.8\text{nm}$
损伤阈值 Damage threshold	$> 5\text{J}/\text{cm}^2, 20\text{ns}, 20\text{Hz}$ @1064nm
镀膜 Coating	Single MgF2
支架 Mount	硬铝, 氧化发黑 Black anodized aluminum
通光孔径 Clear aperture	5.0mm
透射 transmission	> 95%

格兰泰勒偏振器 Glan polarizing prism

格兰 - 泰勒偏振器是一款双折射偏光器件，当一束无偏光的光束输入时，可以得到一束线偏振光。该偏振器带宽能够覆盖紫外，可见和中红外波段，且具有高偏振度，长度短，紧凑等特点。该款偏振器属于空气隙设计，无逃逸窗口，反射的光线可被吸收，适用于低功率激光。



The Gran-Taylor polarizer is a birefringent polarizing device that produces a beam of linearly polarized light when an unpolarized beam is input. The bandwidth of the polarizer can cover the ultraviolet, visible and mid-infrared bands, and has the characteristics of high polarization degree, short length and compact. The polarizer has an air gap design, no escape window, and the reflected light can be absorbed, which is suitable for low power lasers.

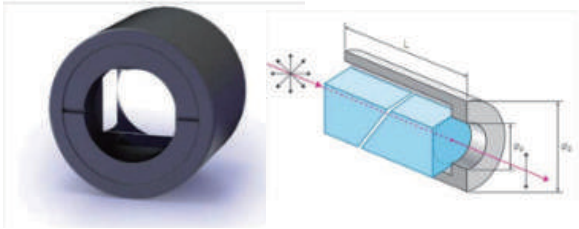
光学参数 Optical parameter

直径 Diameter	15mm 25.4mm 30mm
波长范围 Wavelength	a-BBO:220-3000nm; Iceland spar: 350-2300nm; YVO:500-4000nm
材料 Material	a-BBO,Iceland spar, YVO
消光比 Extinction ratio	100000:1
平行度 Parallelism	< 1 arc min
表面质量 Surface quality	20/10

光束偏移 Beam deviation	< 3arc min
波前畸变 Wavefront distortion	$\lambda/4@632.8\text{nm}$
损伤阈值 Damage threshold	$> 1\text{J}/\text{cm}^2, 20\text{ns}, 20\text{Hz}$ @1064nm
镀膜 Coating	Single MgF2
支架 Mount	Black anodized aluminum
通光孔径 Clear aperture	5.0mm
透射 transmission	> 95%

格兰汤普森偏振器 Glan-Thompson Polarizer

格兰汤普森方解石偏振器可为宽带源提供高纯度线性偏振，或为较低功率应用提供多个激光波长。其 14° - 16°接受角，适用于高度会聚或发散光束。外壳安装在我们的标准 25.4 mm 调整架中，偏振片带有宽带增透膜，可用于可见光和近红外区域。



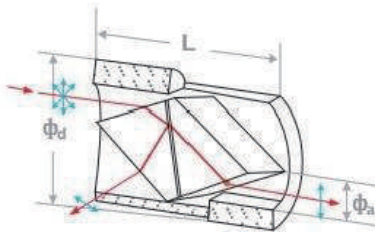
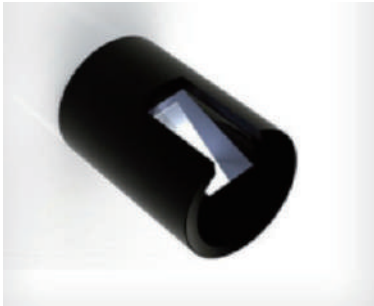
Gran Thompson calcite polarizers provide high-purity linear polarization for wideband sources or multiple laser wavelengths for lower power applications. Its 14°-16° acceptance Angle is suitable for highly convergent or divergent beams. The housing is mounted in our standard 25.4mm adjustment frame and the polarizer comes with a wide-band anti-reflection film for use in the visible and near infrared regions.

光学参数 Optical parameter

直径 Diameter	15mm 25.4mm 30mm
波长范围 Wavelength	a-BBO(220-900nm) Calcite(350-2300nm)
材料 Material	Calcite
消光比 Extinction ratio	a-BBO 1000000:1 Calcite 100000:1
平行度 Parallelism	< 1 arc min
表面质量 Surface quality	20/10
光束偏移 Beam deviation	< 3arc min

波前畸变 Wavefront distortion	$\lambda/4@632.8\text{nm}$
损伤阈值 Damage threshold	$> 500\text{MW}/\text{cm}^2$
镀膜 Coating	Single MgF2
支架 Mount	硬铝, 氧化发黑 Black anodized aluminum
通光孔径 Clear aperture	5.0mm
透射 transmission	> 95%

布儒斯特偏振器 Brewster Polarizer

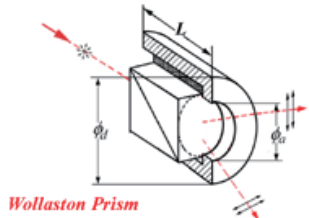


光学参数 Optical parameter

直径 Diameter	15mm 18mm 25.4mm 32mm
波长范围 Wavelength	Iceland spar: 350- 2300nm; Y VO:500-4000nm
材料 Material	Iceland spar , Y V O
消光比 Extinction ratio	100000:1
平行度 Parallelism	< 1 arc min
表面质量 Surface quality	20/10
光束偏移 Beam deviation	< 3arc min

波前畸变 Wavefront distortion	$\lambda/4@632.8\text{nm}$
损伤阈值 Damage threshold	$> >1000 \text{ MW}/\text{cm}^2$
镀膜 Coating	No coating
支架 Mount	Black anodized aluminum
通光孔径 Clear aperture	5.0mm
透射 transmission	> 95%

渥拉斯顿偏振器 Wollaston Polarizer

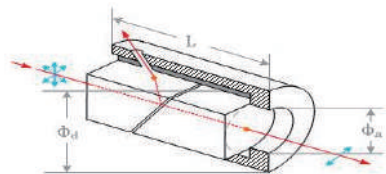
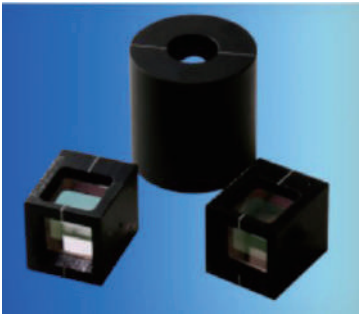


光学参数 Optical parameter

直径 Diameter	15mm 25.4mm 30mm
波长范围 Wavelength	a-BBO(220-900nm) Calcite(350-2300nm))
材料 Material	Calcite
消光比 Extinction ratio	a-BBO 1000000:1 Calcite 100000:1
平行度 Parallelism	< 1 arc min
表面质量 Surface quality	20/10
光束偏移 Beam deviation	< 3arc min

波前畸变 Wavefront distortion	λ/4@632.8nm
损伤阈值 Damage threshold	> 500MW/cm²
镀膜 Coating	Single MgF2
支架 Mount	Black anodized aluminum
通光孔径 Clear aperture	5.0mm
透射 transmission	> 95%

高透格兰激光偏振器 High Transmission Glan Laser Polarizers

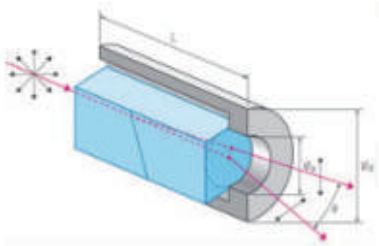
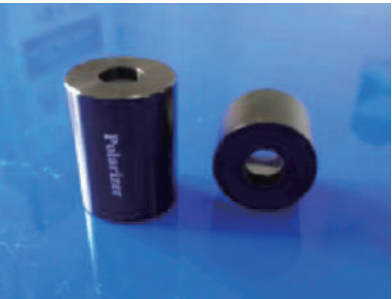


光学参数 Optical parameter

直径 Diameter	15mm 25.4mm 30mm
波长范围 Wavelength	a-BBO(220-900nm) Calcite(350-2300nm)
材料 Material	Calcite
消光比 Extinction ratio	a-BBO 1000000:1 Calcite 100000:1
平行度 Parallelism	< 1 arc min
表面质量 Surface quality	20/10
光束偏移 Beam deviation	< 3arc min

波前畸变 Wavefront distortion	λ/4@632.8nm
损伤阈值 Damage threshold	> 500MW/cm²
镀膜 Coating	Single MgF2
安装 Mount	Black anodized aluminum
通光孔径 Clear aperture	5.0mm
透射 transmission	> 95%

洛匈偏振器 Rochon Polarizers



光学参数 Optical parameter

直径 Diameter	25.4mm 30mm 38mm
长度 Length	17mm-48mm
波长范围 Wavelength	YVO:500-4000nm Quartz crystal: 400-2300nm
材料 Material	YVO,Quartz crystal
消光比 Extinction ratio	YVO:<5x10; Quartz crystal: <5x10
平行度 Parallelism	< 1 arc min
表面质量 Surface quality	20/10

光束偏移 Beam deviation	< 3arc min
波前畸变 Wavefront distortion	λ/4@632.8nm
损伤阈值 Damage threshold	5W/cm²CW,1064nm
镀膜 Coating	Single MgF2
支架 Mount	Black anodized aluminum
通光孔径 Clear aperture	5.0mm
透射 transmission	> 95%

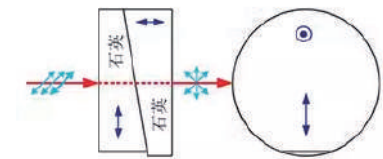
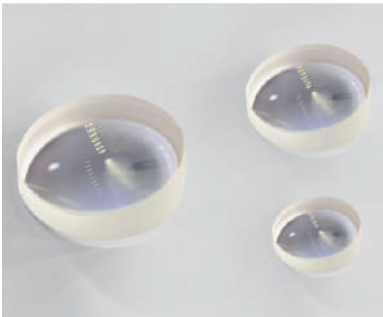
退偏器 Depolarizer

光楔型退偏器 Wedge Depolarizer

退偏器就是用来将偏振光转化成非偏振光的，它广泛用于对偏振敏感的系统 and 仪器中。京盛光电的光楔型退偏器由两片晶体石英光楔组成，和普通光楔型退偏器不同的是我们不用熔石英来做补偿，我们用石英晶体来做光路偏振补偿。通常的光楔型退偏器由于受到光束偏离角的限制只能用于比较窄的光谱范围内，京盛光电设计制作的光楔型退偏器可以用于很宽的光谱范围同时将光束偏离角控制在一个可以接受的范围内。

当线偏振光入射到光楔型退偏器上的光楔面时，其偏振态将发生空间上的变化，从而产生随机偏振。光楔型退偏器对于单色光源和宽带光源都有着很好的退偏效果。当我们将入射线偏振光和光楔型退偏器的光轴成 45 度放置时可以得到最好的退偏效果。当然，入射光斑越大，退偏效果越理想。

Depolarizers are used to convert polarized light into unpolarized light and are widely used in polarization-sensitive systems and instruments. The optical wedge depolarizer of Jingsheng Optoelectronics is composed of two crystal quartz optical wedges, and the ordinary optical wedge depolarizer is different that we do not use fused quartz to compensate, we use quartz crystal to compensate the optical path polarization. The usual optical wedge depolarizer can only be used in a relatively narrow spectral range due to the limitation of the beam deviation Angle. The optical wedge depolarizer designed by Jingsheng Optoelectronics can be used in a wide spectral range and control the beam deviation Angle in an acceptable range. When linearly polarized light incident on the wedge plane of optical wedge depolarizer, its polarization state will change in space, resulting in random polarization. Optical wedge depolarizer has good depolarizing effect for both monochromatic and broadband light sources. The best depolarizing effect can be obtained when the optical axis of the in-ray polarized light and the wedge depolarizer is placed at 45 degrees. Of course, the larger the incident light spot, the better the depolarization effect.



消色差退偏器 Achromatic depolarizer

消色差退偏器主要用于将偏振光束转化为随机偏振光束。单色光源的线偏振光经过消色差退偏器后，其偏振态将发生空间变化；而宽带光源的线偏振光经过消色差退偏器后，其偏振态会随着波长的不同发生空间上的变化。消色差退偏器由两个晶体石英光楔胶合或者光胶组成，其中一个厚度是另一个的两倍。每个光楔的光轴平行于通光面，两个晶体石英光楔光轴间的夹角为 45 度。这种特殊的设计不需要将消色差退偏器的光轴置于某个特定角度，该特性在光的初始偏振态未知或 随时间变化的应用中尤为有用。

对于单色光，入射光斑直径要大于 6mm 才能取得较好的退偏效果，必须要达到这个最小光束直径是因为输出光偏振态 的随机性是通过产生光束偏振态的空间变化而实现的。但是对于宽光谱光源就没有光斑直径的要求，因为除了出射光束偏 振态的空间变化，跟波长相关的相位延迟也会使透射光的偏振态产生随机变化。



Achromatic depolarizers are mainly used to convert polarized beams into randomly polarized beams. After the linear polarized light of monochromatic source passes through the achromatic depolarizer, its polarization state will change in space. After the wideband light source passes through the achromatic depolarizer, its polarization state will change spatially with the different wavelength. An achromatic depolarizer consists of two crystal quartz optical wedges glued or photoglue, one of which is twice as thick as the other. The optical axis of each optical wedge is parallel to the smooth surface, and the Angle between the optical axes of the two crystal quartz optical wedges is 45 degrees. This special design does not require the optical axis of the achromatic depolarizer to be positioned at a particular Angle, a feature that is particularly useful in applications where the initial polarization state of the light is unknown or varies with time. For monochromatic light, the incident spot diameter must be greater than 6mm to achieve a better depolarization effect, and this minimum beam diameter must be achieved because the randomness of the polarization state of the output light is achieved by generating a spatial change in the polarization state of the beam. However, for a wide spectrum light source, there is no requirement of spot diameter, because in addition to the spatial change of the outgoing beam bias state, the phase delay related to the wavelength will also cause random changes in the polarization state of the transmitted light.

光学参数 Optical parameter

直径 Diameter	25.4mm
尺寸公差 Length tolerance	+0/-0.2mm
厚度 thickness	5mm
厚度公差 Size Tolerance	±0.2mm
波长范围 Wavelength	Gluing (400-2500nm)
光胶 (220-2500nm)	< 1 arc min
材料 Material	Quartz crystal

平行度 Parallelism	< 1 arc min
表面质量 Surface quality	60/40
光束偏移 Beam deviation	< 3arc min
波前畸变 Wavefront distortion	<A/8@632.8nm
损伤阈值 Damage threshold	> 500MW/cm²
通光孔径 Clear aperture	>90%
透射 transmission	> 95%

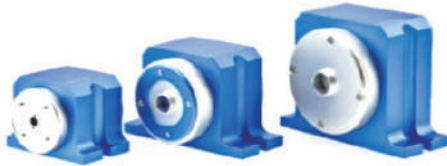
光学参数 Optical parameter

直径 Diameter	25.4mm
尺寸公差 Length tolerance	+0/-0.2mm
厚度 thickness	7.5mm
厚度公差 Size Tolerance	±0.2mm
波长范围 Wavelength	Gluing (400-2500nm) Photoadhesive (220-2500nm)
材料 Material	Quartz crystal
平行度 Parallelism	< 1 arc min
表面质量 Surface quality	60/40

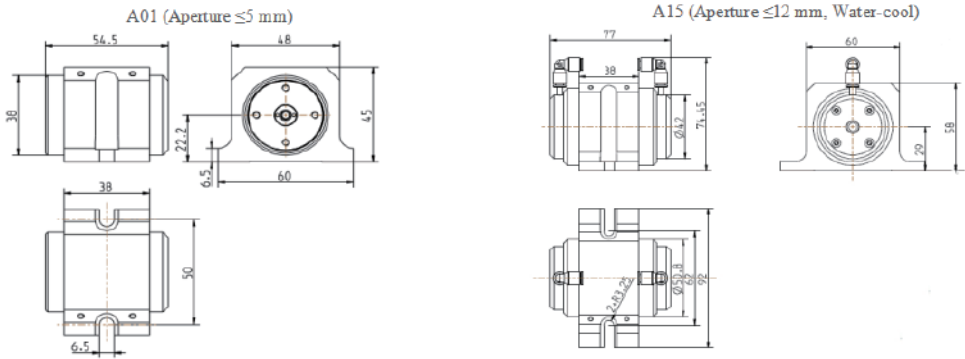
光束偏移 Beam deviation	< 3arc min
面形 Surface accuracy	<λ/8@632.8nm
损伤阈值 Damage threshold	Gluing: >500mJ/cm²,20ns,20Hz @1064nm Photoadhesive: >5J/cm²,20ns,20Hz @1064nm
通光孔径 Clear aperture	>90%
镀膜 Coating	The standard is not coated, Can be coated according to customer requirements

法拉第旋转器 Faraday rotator

法拉第旋转器（Faraday rotators）在保持光束线性极化的同时提供非互易性旋转，当光以某一方向通过法拉第旋转器时，偏振态将旋转 45°；当光束反方向通过法拉第旋转器时，偏振态将相对于磁场以相同方向再次旋转 45°，在此原理基础上配合偏振器，可阻挡光路中的回返光。我们提供的法拉第旋转器由高维尔德常数和低吸收系数的磁光晶体制成，可靠性强，M2 劣化小。结合高损伤阈值工艺，产品的平均功率最大可达 500W，波长范围 355 nm-4500nm。



Faraday rotators provide non-reciprocal rotation while maintaining the linear polarization of the beam, and when light passes through the Faraday rotators in a certain direction, the polarization state will rotate by 45°; When the beam passes through the Faraday rotator in the opposite direction, the polarization state will rotate again 45° in the same direction as the magnetic field. On the basis of this principle, the return light in the optical path can be blocked by combining with the polarizer. The Faraday rotators we provide are made of magneto-optical crystals with high Wild constant and low absorption coefficient, with high reliability and low M2 degradation. Combined with the high damage threshold process, the average power of the product is up to 500W and the wavelength range is 355 nm-4500nm.



光学参数 Optical parameter

功率 Power	1-500w	消光比 Extinction ratio	> 30dB
中心波长 Central wavelength	2050 nm	旋转角度 Rotation Angle	45±0.5°
光谱范围 Spectral range	2000-2100 nm	通光孔径 Clear aperture	2-15mm
波长范围 Wavelength	1310-4500nm	通光孔径 Clear aperture	2-10mm
波长范围 Wavelength	355-4500nm	通光孔径 Clear aperture	15-20mm
波长范围 Wavelength	1310-4500nm	透射 transmission	> 98%
波长范围 Wavelength	600-1080nm	隔离 Isolate	30dB

CRYSTALS

晶体



BBO 非线性晶体 BBO Nonlinear crystal

BBO 是一种非线性光学晶体，其非线性系数高，透过范围广，具有优异的光学性能，可实现紫外至红外波段的非线性光学转换。主要应用于光学频率转换、次谐波产生和光学参量振荡等应用中。特别适用于激光系统中的频率倍增和混频过程。在激光器、光通信和光学测量中，BBO 非线性晶体作为重要的非线性光学材料，用于实现高效的频率变换和波长调制。

BBO is a kind of nonlinear optical crystal with high nonlinear coefficient, wide transmission range and excellent optical properties, which can realize nonlinear optical conversion from ultraviolet to infrared band. It is mainly used in optical frequency conversion, subharmonic generation and optical parametric oscillation. In laser, optical communication and optical measurement, BBO nonlinear crystal is an important nonlinear optical material, which is used to realize efficient frequency conversion and wavelength modulation.



光学参数 Optical parameter

材料 Material	BBO crystal	平行度 Parallelism	<20"
尺寸公差 Dimensional toleran	± 0.1mm	垂直度误差 Verticality error	<5 arcmin
厚度公差 Size Tolerance	± 0.1mm	透明孔径 Transparent aperture	>90%
表面质量 Surface quality	10/5-60/40 S-D	定位精度 Positioning accuracy	<30 arcmin
面型 Surface Shape	<λ/8@6328nm	倒角 Chamfer)	<0.1 mm at 45°

LBO 非线性晶体 LBO Nonlinear crystal

LBO（Nonlinear crystal）是一种非线性晶体，用于激光技术中的频率倍增和光学参数振荡。由于其高非线性系数和广泛的透明度范围，LBO 被用于产生绿光、蓝光等次谐波频率。在光学器件中，LBO 非线性晶体用于产生新的频率、调制激光脉冲以及实现光学混频程。

LBO (Nonlinear crystal) is a nonlinear crystal used for frequency multiplication and optical parameter oscillation in laser technology. Due to its high nonlinear coefficient and wide transparency range, LBO is used to generate sub-harmonic frequencies such as green light and blue light. In optical devices, LBO nonlinear crystals are used to generate new frequencies, modulate laser pulses, and achieve optical mixing ranges.



光学参数 Optical parameter

材料 Material	LBO crystal	垂直度误差 Verticality error	<10 arcmin
尺寸公差 Dimensional toleran	+0/-0.1mm	倒角 Chamfer	<0.1 mm at 45°
厚度公差 Size Tolerance	± 0.1mm		
表面质量 Surface quality	10/5-60/40 S-D		
面型 Surface Shape	<λ/10-λ/2@6328 nm	镀膜（常规） Coating	Double frequency AR1064(R<0.2%)&532(R<0.5%) Frequency tripling AR1064(R<0.2%)&532(R<0.5%)&355 (R<1%) Can be customized according to customer requirements
平行度 Parallelism	<10"		
定位精度 Positioning accuracy	<30 arcmin		
透明孔径 Transparent aperture	>90%		
长度公差 Length tolerance	±0.1mm	损伤阈值（膜层） Damage threshold	>2GW 10ns 10Hz 1064nm
平行度误差 Parallelism error	<20 arcsec		

YAG 激光棒 YAG laser stick

YAG 激光棒指 YAG（钇铝石榴石）晶体的激光放大材料。这种激光材料在固体激光器中常用作放大介质。激光棒的工作原理是在 YAG 晶体中实现光学放大，通过光泵浦激发激光材料的活性离子，产生激光放大效应。主要应用于医疗、通信和材料加工等领域，提供高功率、高能量和稳定的激光输出。其特性取决于晶体质量、激发源和冷却系统等因素，以满足不同激光应用的需求。



YAG laser rod refers to the laser amplification material of YAG (Yttrium aluminum garnet) crystals. This laser material is often used as an amplification medium in solid-state lasers. The working principle of the laser rod is to achieve optical amplification in the YAG crystal, by optical pumping the active ions excited by the laser material, resulting in laser amplification effect.

It is mainly used in the fields of medical treatment, communication and material processing to provide high power, high energy and stable laser output. Its characteristics depend on factors such as crystal quality, excitation source and cooling system to meet the needs of different laser applications.

光学参数 Optical parameter

材料 Material	YAG crystal		AR1064(R<0.2%) HR1064,HT808 PR1064
尺寸公差 Dimensional tolerance	± 0.1mm	镀膜（常规） Coating	Can be customized according to customer requirements
厚度公差 Size Tolerance	± 0.1mm		
表面质量 Surface quality	20/10		
面型 Surface Shape	<λ/10@633nm	损伤阈值（膜层） Damage threshold	>1GW 10ns 10Hz 1064nm
平行度 Parallelism	<10"		

YVO₄ 晶体 YVO4 crystal

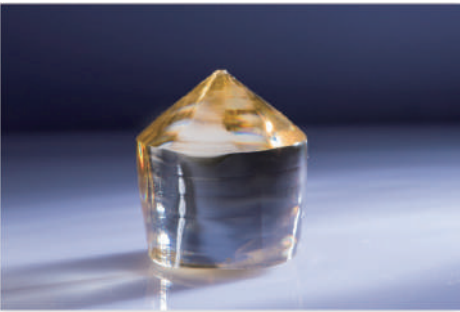
YVO₄ 晶体在实现高效的光学转换和频率调谐方面具有重要的作用。其性能受晶体质量、温度控制和光学涂层等因素的影响，以满足不同光学应用的需求。

YVO₄ crystals play an important role in enabling efficient optical conversion and frequency tuning. Its performance is influenced by factors such as crystal quality, temperature control and optical coating to meet the needs of different optical applications.

光学参数 Optical parameter

材料 Material	YVO ₄ crysta
尺寸公差 Dimensional tolerance	± 0.1mm
厚度公差 Size Tolerance	± 0.1mm
表面质量 Surface quality	10/5
面型 Surface Shape	<λ/10@633nm

平行度 Parallelism	<10 秒
定向 Orientation	<111>±30arc
垂直度 Verticality	<5 minute
Nd 掺杂浓度 Nd Doping concentration	0.1%-3%(atm%)
损伤阈值（膜层） Damage threshold	>1GW 10ns 10Hz 1064nm



KTP 晶体 KTP crystal

KTP（Potassium Titanyl Phosphate）晶体是一种非线性光学晶体，可以用以从可见光到中红外波段。它具有非线性系数大，接收角大，走离角小、倍频效率高的特点，其性能受晶体质量、温度控制和激发源等因素影响，用于满足不同光学应用的高要求。

广泛应用于商业和军事激光领域，包括实验室和医学系统，探测器，激光雷达，光通信和工业激光系统。

Potassium Titanyl Phosphate (KTP) crystals are nonlinear optical crystals that can be used in visible to mid-infrared wavelengths. It has the characteristics of large nonlinear coefficient, large receiving Angle, small departure Angle and high frequency doubling efficiency. Its performance is affected by crystal quality, temperature control and excitation source, and it is used to meet the high requirements of different optical applications.

It is widely used in commercial and military laser fields, including laboratory and medical systems, detectors, liDAR, optical communications and industrial laser systems.

光学参数 Optical parameter

材料 Material	KTP crysta
尺寸公差 Dimensional tolerance	± 0.1mm
厚度公差 Size Tolerance	± 0.1mm
表面质量 Surface quality	20/10
面型 Surface Shape	<λ/10@633nm
平行度 Parallelism	<10 秒

	Frequency doubling AR1064(R<0.2%)&532(R<0.5%) HR1064,HT532 OPO
镀膜（常规） Coating	AR1064(R<0.2%)&1570(R<0.2%) HR1064, HT1570 HR1064,PR1570 Can be customized according to customer requirements
损伤阈值（膜层） Damage threshold	>1GW 10ns 10Hz 1064nm



LENS, DEVICE
镜头、器件



光学镜头 Optical lens

扩束镜 Type A Beam expander

扩束镜是能够改变激光光束直径和发散角的透镜组件。从激光器发出的激光束具有一定的发散角，对于激光加工来说，只有通过扩束镜的调节使激光光束变为准直（平行）光束，才能利用聚焦镜获得细小的高功率密度光斑在激光测距中，必须通过扩束镜最大限度地改善激光的准直度才能得到理想的远距离测量效果，通过扩束镜能改变光束直径以便用于不同的光学仪器设备，扩束镜配合空间滤光片使用则可以使非对称光束分布变为对称分布，并使光能量分布更加均匀。

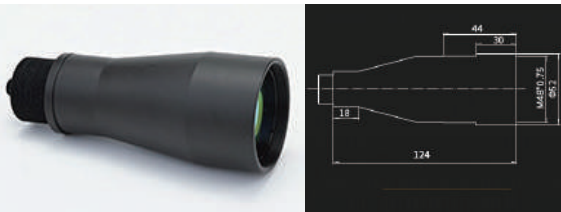
The beam expander is a lens assembly that can change the diameter and divergence Angle of the laser beam. The laser beam emitted from the laser has a certain divergence Angle, for laser processing, only through the adjustment of the beam expanding mirror to make the laser beam into a collimation (parallel) beam, in order to use the focusing mirror to obtain a small high-power density spot in laser ranging, it is necessary to maximize the improvement of the collimation of the laser through the beam expanding mirror to obtain the ideal long-distance measurement effect. The beam diameter can be changed by the beam expanding mirror for different optical instruments, and the asymmetric beam distribution can be changed into symmetrical distribution when the beam expanding mirror is used with the spatial filter, and the light energy distribution is more uniform.



A 型 扩束镜
Type A Beam expander



B 型 扩束镜
Type B Beam expander



C 型 扩束镜
Type C Beam expander



D 型 扩束镜
Type D Beam expander

光学参数 Optical parameter

材质 Material	石英 Quartz
波长 Wavelength	355nm-1550nm
放大倍数 Magnification	1.5X-50X
入射口径 In. Aperture	10mm

出射口径 Out. Aperture	33mm
最大镜筒外径 Max Lens- Φ	54-68mm
镜头长度 Lens Length	74.5-108mm
连接方式 Thread	M22x0.75 Φ42

常规规格 Conventional specification

波长 Wave length (nm)	放大倍数 magnification	出瞳 D (mm)	总长 L (mm)	接口 port
1064	1.5	30	80	M22X0.75
1064	2	30	80	M22X0.75
1064	2.5	30	80	M22X0.75
1064	3	30	80	M22X0.75
1064	4	30	80	M22X0.75
1064	5	30	80	M22X0.75
1064	6	30	80	M22X0.75
1064	8	40	109	M22X0.75
1064	10	48	127	M22X0.75
1064	15	48	127	M22X0.75
1064	20	48	127	M22X0.75
633	1.5	30	80	M22X0.75
633	2	30	80	M22X0.75
633	2.5	30	80	M22X0.75
633	3	30	80	M22X0.75
633	4	30	80	M22X0.75
633	5	30	80	M22X0.75
633	8	40	109	M22X0.75
633	10	48	127	M22X0.75
633	15	48	127	M22X0.75
633	20	48	127	M22X0.75
532	1.5	30	80	M22X0.75
532	2	30	80	M22X0.75
532	2.5	30	80	M22X0.75
532	3	30	80	M22X0.75
532	4	30	80	M22X0.75
532	5	30	80	M22X0.75
532	8	40	109	M22X0.75
532	10	48	127	M22X0.75
532	15	48	127	M22X0.75
532	20	48	127	M22X0.75

场镜 Field Lens

工作在物镜焦平面附近，可以有效减小探测器尺寸的透镜，被称为场镜。

准确来说，场镜应该工作在物镜的像平面。一方面场镜的物平面和主平面重合，由主平面的特性可知其放大率为 1，因此对系统的放大率无贡献另一方面，场镜应该将物镜的光阑面投影在目镜的入瞳上，对于单透镜而言，光阑面也就是出瞳，这样可以保证物镜的出射光能够最大限度的通过目镜。如果用在扫描系统中，则探测器替代了目镜的入瞳。

A lens that works near the focal plane of the objective lens and can effectively reduce the size of the detector is called a field mirror.

To be precise, the field should work in the image plane of the objective lens. On the one hand, the object plane of the field mirror coincides with the main plane, and the magnification of the main plane is 1, so it does not contribute to the magnification of the system. On the other hand, the field mirror should project the diaphragm of the objective lens onto the entry pupil of the eyepiece. For a single lens, the diaphragm surface is also the exit pupil, which can ensure that the outgoing light of the objective lens can pass through the eyepiece to the maximum extent. If used in a scanning system, the detector replaces the entry pupil of the eyepiece.



场镜的主要作用

1. 提高边缘光束入射到探测器的能力；
2. 在相同的主光学系统中，附加场镜将减少探测器的面积。如果使用同样的探测器的面积，可扩大视场，增加入射的通量；
3. 可让出像面位置放置调制盘，以解决无处放置调制器的问题；
4. 使探测器光敏面上的非均匀光照得以均匀化；
5. 当使用平像场镜时，可获得平场像面；
6. 在像差校正方面，可以补偿系统的场曲和畸变。

The main role of the field mirror

1. Improve the ability of the edge beam incident on the detector;
2. In the same main optical system, additional field mirrors will reduce the area of the detector. If the same detector area is used, the field of view can be expanded to increase the incident flux;
3. The modulation disk can be placed in the position of the image plane to solve the problem of nowhere to place the modulator;
4. The non-uniform illumination on the photosensitive surface of the detector is homogenized;
5. When using a flat field mirror, a flat field image surface can be obtained;
6. In terms of aberration correction, the field curvature and distortion of the system can be compensated.

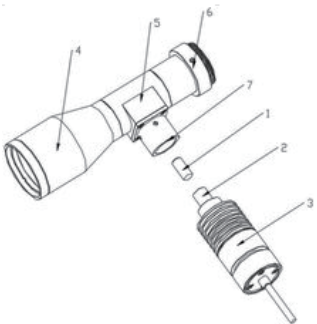
光学参数 Optical parameter

材质 Material	Quartz、 optical glass、 ZnSe				
型号 Model	JS-163	JS-254	JS-300	JS-430	JS-750
波长 Wave length/nm	355nm, 405nm, 532nm, 915nm, 1064nm, 1940nm				
焦距 Focus Distance/mm	163	254	300	430	750
扫描角度 Scanning Angle/°	±28	±28	±28	±28	±28
打标范围 Marking range/mm	112x112	175x175	200x200	300x300	500x500
XY 振镜距离 XY Galvanometer distance/mm	13	13	13	13	13
Y 振镜离透镜距离 Y Distance of galvanometer from lens/mm	24	24	24	24	24
螺纹接口 Screw joint	M85x1	M85x1	M85x1	M85x1	M85x1
入射光斑直径 /mm	14	16	16	20	20
聚焦点直径 /mm	0.025	0.03	0.03	0.035	0.04

远心镜头 Telecentric lens

远心镜头，主要是为纠正传统工业镜头视差而设计，它可以在一定的物距范围内，使得到的图像放大倍率不会变化，这对被测物不在同一物面上的情况是非常重要的应用。远心镜头由于其特有的平行光路设计一直为对镜头畸变要求很高的机器视觉应用场合所青睐。

Telecentric lens, mainly designed to correct the parallax of traditional industrial lenses, it can be within a certain distance range, so that the obtained image magnification will not change, which is a very important application for the case that the measured object is not on the same surface. Because of its unique parallel optical path design, telecentric lenses have been favored by machine vision applications that require high lens distortion.



常规规格 Conventional specification

光学倍数 Optical multiple	工作距离 Working distance	畸变 Distortion
0.5X	65mm	< 0.1%
0.8X	90mm	< 0.1%
1.0X	65mm	< 0.1%
1.6X	40mm	< 0.1%
2.0X	50mm	< 0.1%
2.0X	65mm	< 0.1%
2.5X	50mm	< 0.1%
4X	65mm	< 0.1%
6X	46mm	< 0.1%
8X	50mm	< 0.1%

器件 Device

光纤 - 自由空间型隔离器 Fiber-Free Space Isolator

光纤 - 自由空间型隔离器 (Fiber-free space isolators) 可分为非扩束型隔离器和扩束型隔离器两类。

非扩束型隔离器由双折射晶体、法拉第旋转器、半波片 (或旋光片) 和准直器组成，通常被用于光纤激光系统中，能有效地保持光学系统的稳定性。

扩束型隔离器由准直器、双折射晶体、法拉第旋转器、半波片 (或旋光片) 和扩束镜组成，输出光束具有光束质量好和发散角小等特点。功率范围从 1W-500W，系列产品具有高隔离度 (单、双级隔离器的峰值隔离度分别可达 33dB 和 50 dB、低插入损耗、高稳定性及低热透镜效应等特点，设计的扩束装置便于客户快速更换不同的扩束倍率，从而获得优质光束质量输出。

Fiber-Free Space Isolators can be classified into non-collimated isolators and collimated isolators.

Non-collimated isolators consist of birefringent crystals, Faraday rotators, half-wave plates (or quarter-wave plates), and collimators. They are commonly used in fiber laser systems to effectively maintain the stability of the optical system.

Collimated isolators are composed of collimators, birefringent crystals, Faraday rotators, half-wave plates (or quarter-wave plates), and beam expanders. The output beam exhibits excellent beam quality and small divergence angles.Ranging from 1W to 500W. The series features high isolation (peak isolation of 33 dB and 50 dB for single and dual-stage isolators, respectively), low insertion loss, high stability, and low thermal lensing effects. The designed beam expander allows customers to quickly replace different expansion ratios for optimal beam quality output.



典型指标参考 Typical index reference

承受功率 Bearing power	波长 Wave length	光斑直径 Spot diamete	透过率 Transmittance	峰值隔离度 Peak isolation
1-50 W	980-2000 nm	0.4-10 mm	> 93 % *, > 90 % **	> 33 dB*, > 45 dB**
50-120 W	980-2000 nm	0.4-10 mm	> 93 %	> 33 dB
200-350 W	1064 nm	1-10 mm	> 93 %	> 33 dB
产品使用温度范围为 10℃ -30℃； * 仅适用于单级隔离器 ** 仅适用于双级隔离器 The product use temperature range is 10℃ -30℃ ; * Only for single stage isolators ** Only for two stage isolators				

环形器 Circulator

环形器是包括环形波导和与之相连的耦合部件。环形器通过在波导中形成封闭的环路，使光在环形波导内多次传播。当光波遇到耦合结构时，一部分能耦合到相邻波导，形成干涉效应。通过监测环形器的透射或反射谱，可以实现对环境参数的高灵敏度测量。

主要应用于：光学传感、光子学器件和通信。



The ring resonator comprises a circular waveguide and coupled components connected to it. By forming a closed loop in the waveguide, the ring resonator allows light to propagate multiple times within the circular waveguide. When the light wave encounters the coupling structure, a portion of it can couple to the adjacent waveguide, creating interference effects. Monitoring the transmission or reflection spectra of the ring resonator enables highly sensitive measurements of environmental parameters. It is primarily applied in optical sensing, photonic devices, and communication.

3 端口偏振无关环形器 (1310/1550nm)	3 端口偏振无关环形器 (1060nm)
低插入损耗	低插入损耗
低偏振相关损耗	低偏振相关损耗
宽频带，高隔离	宽频带，高隔离
主要应用于城域网，光分插复用，色散补偿，双向通讯等	主要应用于城域网，光分插复用，色散补偿，双向通讯等

3 端口偏振无关环形器 (850/980nm)	4 端口偏振无关环形器
低插入损耗	低插入损耗
低偏振相关损耗	低偏振相关损耗
宽频带，高隔离	宽频带，高隔离
主要应用于城域网，光分插复用，色散补偿，双向通讯等	主要应用于城域网，光分插复用，色散补偿，双向通讯等

3-port polarization independent circulator (1310/1550nm)	3-port polarization independent circulator (1060nm)
Low insertion loss	Low insertion loss
Low polarization dependent loss	Low polarization dependent loss
Wide band, high isolation	Wide band, high isolation
Mainly used in MAN, optical diFF multiplexing, dispersion compensation, bidirectional communication and so on	Mainly used in MAN, optical diFF multiplexing, dispersion compensation, bidirectional communication and so on
3-port polarization independent circulator (850/980nm)	4-port polarization independent circulatorLow insertion loss
Low insertion loss	Low polarization dependent loss
Low polarization dependent loss	Wide band, high isolation
Wide band, high isolation	Mainly used in MAN, optical diFF multiplexing, dispersion compensation, bidirectional communication and so on
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光纤准直器 Fiber Collimator

光纤准直器是一种用于调整和聚焦光纤输出光束的光学器件。设计包括透镜、折射元件和调焦机制，以实现光纤输出光束的调整和准直。

它的作用是使光最大效率的耦合进入所需的器件中或易如接受光信号最大效率的接受。

广泛应用光通信、激光系统和成像设备。

The fiber collimator is an optical device used to adjust and focus the output beam from a fiber optic. The design includes lenses, refractive elements, and a focusing mechanism to achieve the adjustment and collimation of the fiber's output beam. Its purpose is to maximize the efficient coupling of light into the desired device or facilitate the most efficient reception of light signals. It finds extensive applications in optical communication, laser systems, and imaging devices.



典型指标参考 Typical index reference

承受功率 Bearing power	波长 Wave length	输出光斑直径 Output spot diameter	发散角 Angle of divergence	回波损耗 Return loss
20 W	1064 nm	0.3-0.4 mm	3.5 mrad	≥50 dB
50 W	1064 nm	1 mm	3.5 mrad	≥50 dB
100 W	1080 nm	3.5 mm	3.5 mrad	≥50 dB

光纤跳线 Fiber Optic Patch Cables

光纤跳线是一种用于连接光纤设备的光学传输线缆，通常用于在光通信系统中传递光信号。光纤跳线的两端配有光连接器，方便插拔并确保最小的光损耗。京盛设计考虑了光纤类型、连接器类型和连接质量，以确保高性能的光学连接。

广泛应用：光纤通信系统、光纤入户、光纤数据传输、光纤 CATV、局域网 (LAN)、光学测试设备、光纤传感器。

Fiber optic patch cable is an optical transmission cable used to connect fiber optic devices, commonly employed in transmitting optical signals within optical communication systems. The two ends of the fiber optic patch cable are equipped with optical connectors, facilitating plug-and-play and ensuring minimal optical loss. JingSheng's design takes into account fiber types, connector types, and connection quality to ensure high-performance optical connections. Widely used in fiber optic communication systems, fiber-to-the-home (FTTH), fiber optic data transmission, fiber optic CATV, local area networks (LAN), optical testing equipment, and fiber optic sensors.

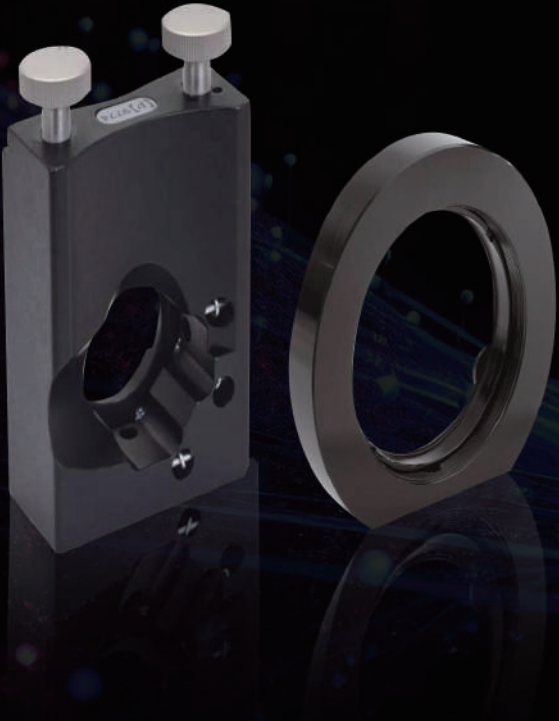


典型指标参考 Typical index reference

产品类型 Product type	ST		SC		FC		MT-RJ		LC	
	多模 multimode	单模 Single module	多模 multimode	单模 Single module	多模 multimode	单模 Single module	多模 multimode	单模 Single module	多模 multimode	单模 Single module
插入损耗 Insertion Loss	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB
反射损耗 Reflection Loss	PC≥45dB	PC≥45dB UPC≥50dB	PC≥45dB UPC≥50dB	PC≥45dB UPC≥50dB	PC≥45dB UPC≥50dB	PC≥45dB UPC≥50dB	PC≥45dB UPC≥50dB APC≥65dB	PC≥45dB UPC≥50dB APC≥65dB	PC≥45dB UPC≥50dB APC≥65dB	PC≥45dB UPC≥50dB APC≥65dB
重复性 Repeatability	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB
互换性 Interchangeability	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB	≤0.2dB
温度范围 Temperature Range	-40°C ~85°C	-40°C ~85°C	-40°C ~85°C	-40°C ~85°C	-40°C ~85°C	-40°C ~85°C	-40°C ~85°C	-40°C ~85°C	-40°C ~85°C	-40°C ~85°C

OPTO-MECHANICAL ELEMENT

光机元件



透镜固定架 Lens holder

这些 X26 光学调整架经过专门设计，适用于 X26 光学导轨和导轨载架。这些产品非常适合快速设置光学系统。

M-SB32.50 镜头筒支架可安装 B.50.8 系列 (50.8 毫米) 镜头筒在柱子上或在 X26 轨道系统。M-SB32 的标准光轴高度为 32.5mm。这些支架可以直接固定在 CN26 航空母舰上，并且在轨道上方有 40 毫米的中心高度。SB32.50 配备三个螺丝、三个垫圈和一个固定环，可以直接组装镜子和其他光学器件。它有 M55 x0.75 的线程。

These X26 optical adjustment frames are specially designed for X26 optical rails and rail carriers. These products are ideal for quick setup of optical systems.

The M-SB32.50 barrel bracket can be mounted on the B.50.8 series (50.8 mm) barrel on a post or on the X26 rail system. The standard optical axis height of the M-SB32 is 32.5mm. These brackets can be attached directly to the CN26 aircraft carrier and have a center height of 40 mm above the orbit. The SB32.50 is equipped with three screws, three washers, and a retaining ring for direct assembly of mirrors and other optics. It has M55 x0.75 threads.



反射镜调整架 Mirror adjusting rack

9774 顶部驱动的镜像安装可以容纳 1.0 英寸。(25.4 mm) 直径光学，是理想的用于紧凑的空间。它可以让你很容易地从顶部的旋钮调整顶端和倾角，而不用担心挡住横梁。顶部和侧面安装方案与柱式和基座式安装系统兼容。减轻的基础和厚框架确保稳定，而标准梁高度允许轻松集成到您的系统。内置锁和刚性弹簧增加长期稳定性。

The 9774 top-drive mirror mount can accommodate 1.0 inches. (25.4 mm) diameter optics, ideal for use in compact Spaces. It allows you to easily adjust the tip and tilt from the knob at the top without worrying about blocking the beam. Top and side mounting solutions are compatible with column and pedestal mounting systems. The lightened base and thick frame ensure stability, while the standard beam height allows for easy integration into your system. Built-in locks and rigid springs increase long-term stability.



滤光片调整架 Filter adjustment rack 偏振器调整架 Polarizer adjustment rack

保偏光纤和波片是偏振型元件，它们的偏振特性随方向和角度而变化。A11026 是一款简易移动支架组件用于调节方向和角度。

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立方棱镜调整架 Cubic prism adjusting frame

棱镜调整架 5PM57 是专业为棱镜安装调整和立方体安装调整而设计的棱镜安装座，也可以安装更宽的光学元件。棱镜调整架 5PM57 具有两个角度调整功能，采用特殊弹簧加片实现预加载驱动螺钉而消除反弹，消除坐标滚动。

Prism adjustment frame 5PM57 is a prism mounting mount specially designed for prism mounting adjustment and cube mounting adjustment, and can also be installed with wider optical components. The prism adjusting frame 5PM57 has two Angle adjusting functions, and uses a special spring to preload the drive screw and eliminate rebound and coordinate rolling.



圆柱 V 型夹持调整架 Cylindrical V-shaped clamp adjusting frame

夹持直径 Clamping diameter: 50-100mm, 8-25mm

