



衡力光电

东莞市衡正光学科技有限公司

DONGGUAN HENGZHENG OPTOELECTRONICS CO.,LTD.



国家高新技术企业
ISO9001:2015质量体系认证

精密光学树脂镜片

>> PRECISION OPTICAL RESIN LENS



2024

公司简介 ABOUT US

- 东莞市衡正光学科技有限公司成立于2013年，前身是东莞市衡力光电有限公司成立于2006年，专注精密光学镜片的研发、设计、生产和销售；公司拥有专业的、具有多年设计经验的光学设计师和模具技师；凝聚并培养了一批优秀的光学元器件注塑成型工艺人才；建立了专业、高效、团结的销售团队！拥有多台高精密切削加工设备、高精度的模具检测设备；全系统的光学检测设备；拥有多数量进口成型机台；拥有多个无尘成型车间及组装车间！

本公司产品涉及各领域，如激光定位、激光条码、TOF、激光雷达、激光传感、激光测距、激光高斯平顶、3D扫描、人脸、虹膜补光、成像等。点、线、面多领域应用的高精密树脂非球面镜片和自由曲面镜片。

东莞市衡正光学科技有限公司全体同仁坚持“诚信务实、创新致远”的经营理念，拥有专业的光学设计和制造技术的背景，可以满足客户在各种应用领域中的不同需求。在企业发展进程中不断进取创新，已通过ISO:9001质量管理体系认证，并拥有多项国家专利。为客户提供更高质量的产品、更好的系统解决方案、更完善的售后服务是我们不懈的追求。

- Dongguan Hengzheng Photoelectric Co., Ltd ,founded in 2013, as the successor of Hengli Optoelectronics, founded in 2006, is a expert company in design and manufacturing lenses for precise optical lens. The company have the professional optical designers and mould technicians with years of design experience, and agglomerate and cultivate a group high level experts in optical and injection molding,and established a professional, efficient and united sales team, and has many sets of high precision imported mold processing equipment and detection equipment; own the system-wide optical inspection equipment and imported lots of the forming machines and set up a number of the no-dust workshop and the assembling workshop.

Our products cover various fields, such as laser positioning, laser bar code, TOF, laser radar, laser sensing, laser ranging, laser gauss flat roof, 3D scanning, face recognition, iris supplementary light, imaging and so on... also including high precision resin aspherical lens and free-form surface lens,which applied in many fields of point, line and surface.

Dongguan Hengzheng Photoelectric Co., Ltd adhere to the business philosophy of “ be practical-minded and innovative” and have the deep background of the professional optical design and technical manufacture, can meet various requirements applied in different fields.In the process of enterprising development and innovation , we have passed ISO:9001 Quality management system , and have lots of national patents. It is always our permanent pursue to provide the customers with high quality products and the best system solutions.



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点定位镜

Point Positioning Lens

产品特点：亮度高、光斑清晰、光斑均匀。
应用场景：手持终端、点定位、POSE 机。

Product features: High light, Clear spot, Uniform spot.
Application scenarios: Hand-hold Terminal, Point Location, Pose machine.



主要说明 Main Description

光源 Source: OSRAM LS P476

材质 Material: 光学树脂 Optical resins

波长 Wavelength: 600-750nm

镜片面型 Lens face shape: 非球面 / 自由曲面 Aspheric / Freeform

光斑形状 Spot shape: 点圆形 / 点方形 Dot circle / Dot square

光斑特性 Spot characteristics: 均匀清晰 Uniform and clear

工作温度 Operation temperature: $-20^{\circ}\text{C} \sim 80^{\circ}\text{C}$

点定位镜

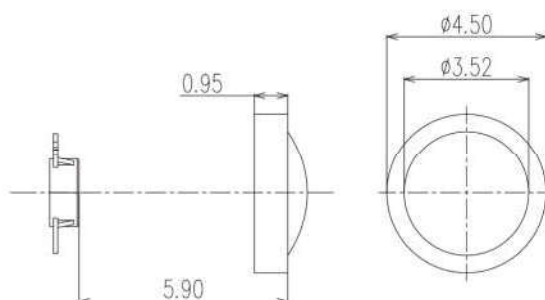
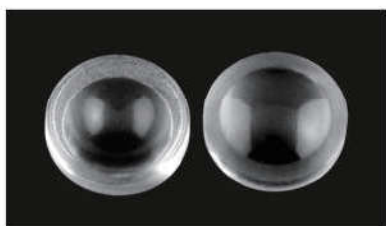
Point Positioning Lens

HY-DWD45-P-K

焦距 Focal length: 5.6mm

定位距离 Positioning distance: 150/200/250/300mm

光斑大小 Spot size: 最小光斑 (Minimum spot)4mmx4mm 或直径 (Diameter)4~7mm

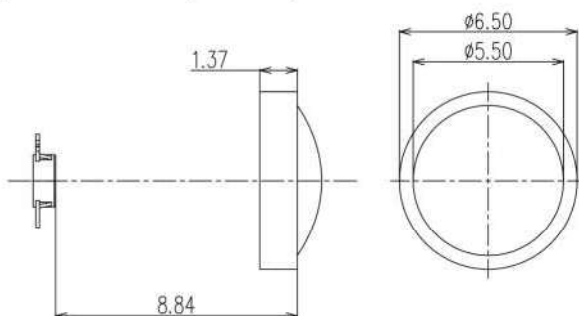


HY-DWD65-P

焦距 Focal length: 9mm

定位距离 Positioning distance: 400/500/600mm

光斑大小 Spot size: 最小光斑 (Minimum spot)5mmx5mm 或直径 (Diameter)7~10mm

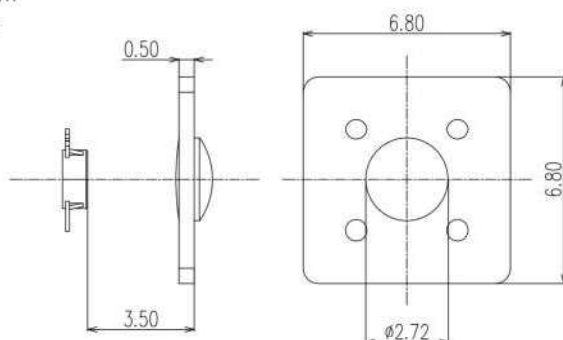


HY-DWD68-P

焦距 Focal length: 3.1mm

定位距离 Positioning distance: 150/200/250mm

光斑大小 Spot size: 直径 Diameter 12~38mm



高斯平顶线镜

Gauss Flat Top Line

产品特点：光束均匀、能量利用率高、陡峭度高。

应用场景：3D 扫描、Lidar、工业检测、机器视觉。

Product features: Beam uniformity, High energy utilization, High steep.

Application scenarios: 3d scanner, Lidar, Industry inspection, Machine vision.

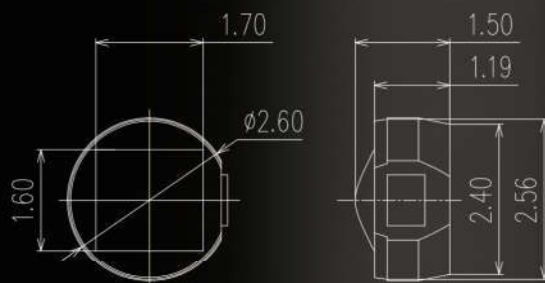
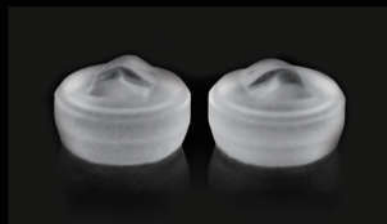


主要说明 Main Description

光源 Source: EEL / VCSEL	材质 Material: 光学树脂 Optical resins
波长 Wavelength: 632/850/905/940nm	焦距 Focal length: 0.2mm
入射光束直径 Input beam diameter: Max 0.9mm	
镜片面型 Lens face shape: 非球面 / 自由曲面 Aspheric / Freeform	
光斑形状 Spot shape: 线形 Linear	
均匀度 Uniformity: $\geq 85\%$	
工作温度 Operation temperature: $-20^{\circ}\text{C} \sim 80^{\circ}\text{C}$	
备注 Note: 需配套准直透镜使用 Need to be associated with the collimating lens to use.	

HY-SMFV30-L

角度 Angle: 30°

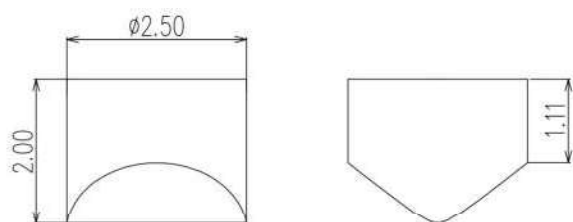


高斯平顶线镜

Gauss Flat Top Line

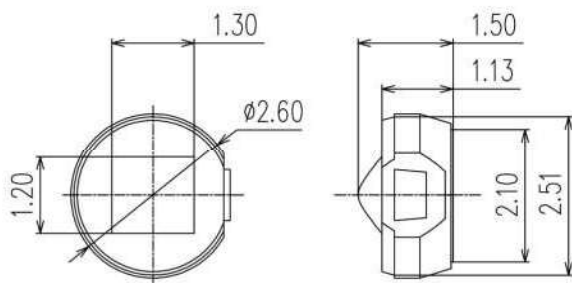
HY-SMFV50-L

角度 Angle: 50°



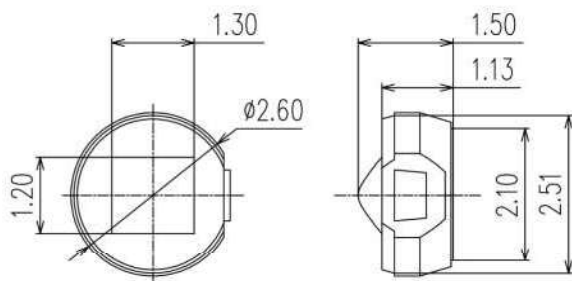
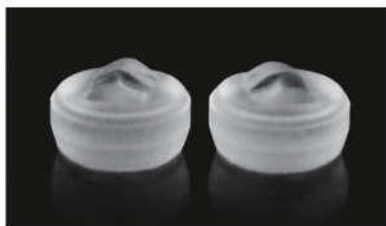
HY-SMFV60-L

角度 Angle: 60°



HY-SMFV90-L

角度 Angle: 90°



线定位镜

Line Positioning Lens

产品特点：亮度高、光斑清晰、光斑均匀。
 应用场景：手持终端、点定位、POSE 机。

Product features: High light, Clear spot, Uniform spot.
 Application scenarios: Hand-hold Terminal, Point Location, Pose machine.

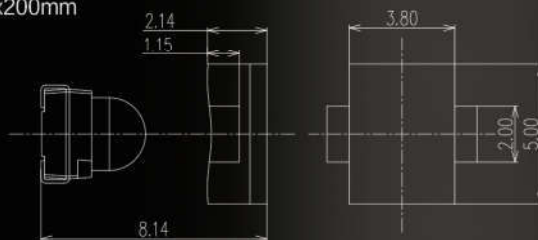


主要说明 Main Description

光源 Source: OSRAM LS E63B / LS E65F	材质 Material: 光学树脂 Optical resins
波长 Wavelength: 600-750nm	镜片面型 Lens face shape: 非球面 / 自由曲面 Aspheric / Freeform
光斑形状 Spot shape: 线形 Linear	
光斑特性 Spot characteristics: 均匀清晰 Uniform and clear	
工作温度 Operation temperature: $-20^{\circ}\text{C} \sim 80^{\circ}\text{C}$	

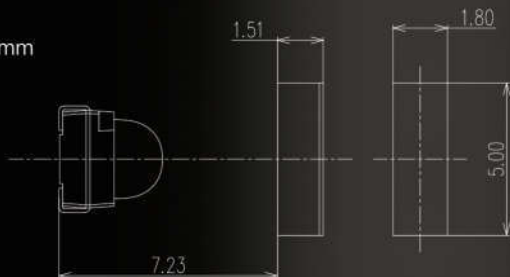
HY-DWD5X38-L

焦距 Focal length: 10.8mm
 定位距离 Positioning distance: 150/200/250mm
 光斑大小 Spot size: 光斑 Spot 15x160mm~50x200mm



HY-DWD5X18-L

焦距 Focal length: 6mm
 定位距离 Positioning distance: 150/200/250mm
 光斑大小 Spot size: 光斑 spot 10x35mm~40x140mm



激光传感 Laser Sensor

产品特点：平顶均匀光束、能量利用率高、大通光亮、结构紧凑。

应用场景：传感器、汽车传感、光开关、编码器。

Product features: Flat top uniform beam, High energy utilization, Datong light, Compact structure.
Application scenarios: Sensor, Vehicle sensing, Photoswitch, Coder.



主要说明 Main Description

光源 Source: SFH 46 系列 IR Laser or LED 材质 Material: 光学树脂 Optical resins

波长 Wavelength: 850/940nm 焦距 Focal length: 3.1mm

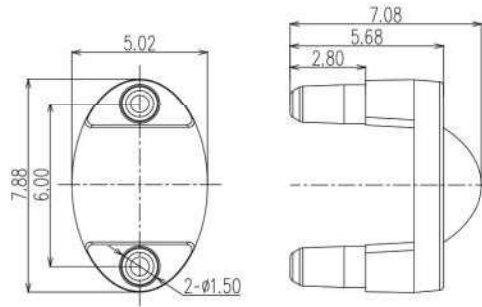
镜片面型 Lens face shape: 非球面 / 自由曲面 Aspheric / Freeform

光斑形状 Spot shape: 圆形 Circular 均匀度 Uniformity: $\geq 85\%$

工作温度 Operation temperature: $-20^{\circ}\text{C} \sim 80^{\circ}\text{C}$

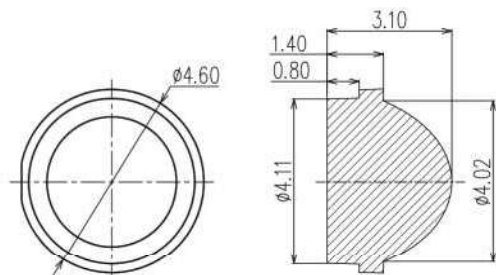
HY-CGD79-S-K

工作距离 Work distance: 2~12mm



HY-CGD46-S-K

工作距离 Work distance: 1~8mm



虹膜补光

Iris supplementing

产品特点：偏光设计、人眼安全、光束均匀、能量利用率高、结构紧凑。

应用场景：应用手机、平板、门禁、POSE 终端、考勤机。

Product features: Polarized light design, Eye safe, Beam uniformity, High energy utilization, Compact structure.

Application scenarios: Mobile phone application, Flat, Entrance guard, Pose terminal, Attendance Machines.



主要说明 Main Description

光源 Source: OSRAM SFH 4780S

材质 Material: 光学树脂 Optical resins

波长 Wavelength: 850/940nm

角度 Angle: 25°

工作距离 Working distance: 200 ~ 300mm

镜片面型 Lens face shape: 复合面 / 自由曲面 Composite surface / Freeform

光斑形状 Spot shape: 椭圆 / 方形 Ellipse / Square

光斑特性 Spot characteristics: 均匀清晰 Uniform and clear

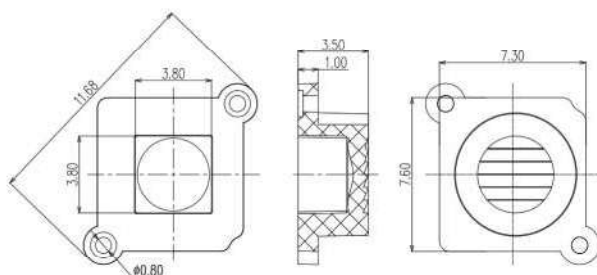
工作温度 Operation temperature: -20° C ~ 80° C

虹膜补光

Iris supplementing

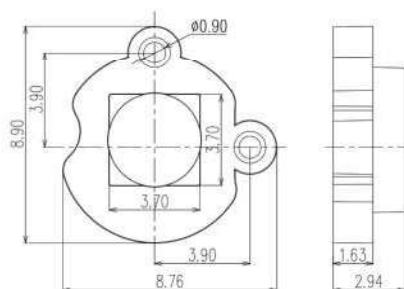
HY-C70S-BOTTOM

偏转角度 Flip angle: 8°



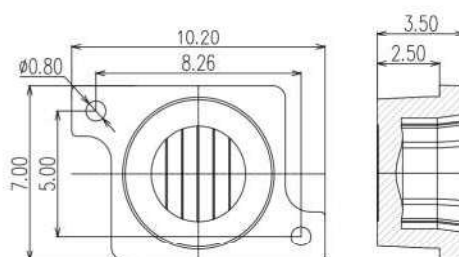
HY-C70S-FRONT

偏转角度 flip angle: 10°



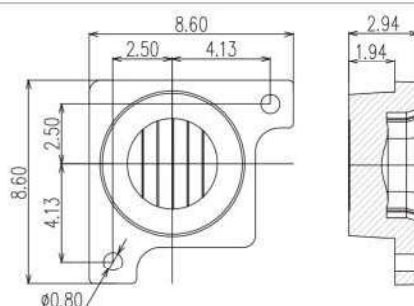
HY-HM-B

偏转角度 Flip angle: 8°



HY-HM-F

偏转角度 Flip angle: 10°



广角补光

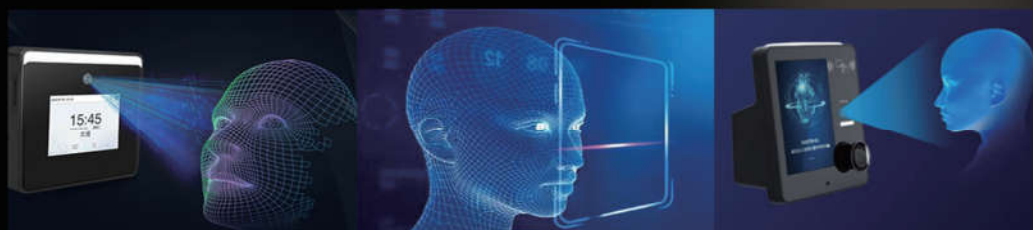
Wide angle supplementary light

产品特点：光束均匀、高利用率、尺寸小巧。

应用场景：应用手机、平板、门禁、POSE 终端、公共监测、考勤机、人脸识别。

Product features: Beam uniformity, High utilization, Compact size.

Application scenarios: Mobile phone application, Flat, Entrance guard, Pose terminal, Public monitoring, Attendance Machines, Face Recognition.

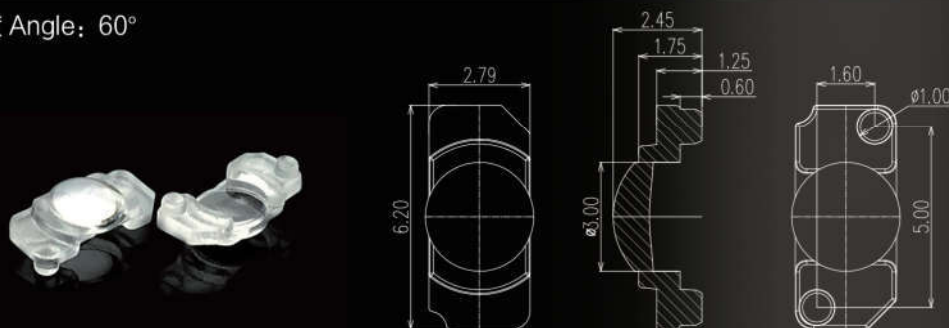


主要说明 Main Description

光源 Source: OSRAM SFH 4770S	材质 Material: 光学树脂 Optical resins
波长 Wavelength: 850nm	焦距 Focal length: 3.4mm
工作距离 Work distance: 200~300mm	镜片面型 Lens face shape: 非球面 / 自由曲面 Aspheric / Freeform
光斑形状 Spot shape: 圆形 Circular	均匀度 Uniformity: $\geq 85\%$
工作温度 Operation temperature: $-20^{\circ}\text{C} \sim 80^{\circ}\text{C}$	

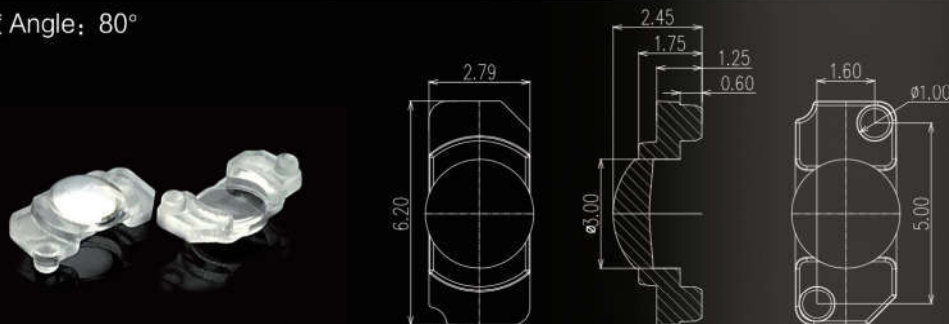
HY-RLFV60-S-K

角度 Angle: 60°



HY-RLFV80-S

角度 Angle: 80°



广角补光

Wide angle supplementary light

产品特点：偏光设计、人眼安全、长距离补光、光束均匀、高利用率、结构紧凑。
 应用场景：门禁、门闸、公共监测、考勤机。

Product features: Polarized light design, Eye-Safe, Long distance supplementing light,
 Beam uniformity, High utilization, Compact structure.

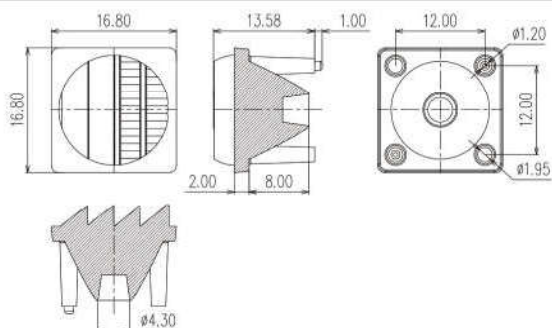
Application scenarios: Access Control, Gate brake, Public monitoring, Attendance Machines.



主要说明 Main Description

光源 Source: OSRAM SFH 4715	材质 Material: 光学树脂 Optical resins
波长 Wavelength: 850nm	偏转角度 Flip angle: 28°
角度 Angle: 25°	工作距离 Work distance: 1200mm
镜片面型 Lens face shape: 非球面 / 自由曲面 Aspheric / Freeform	
光斑形状 Spot shape: 圆形 Circular	均匀度 Uniformity: $\geq 85\%$
工作温度 Operation temperature: $-20^{\circ}\text{C} \sim 80^{\circ}\text{C}$	

HY-RLFV25-S



广角补光 - TOF 镜片

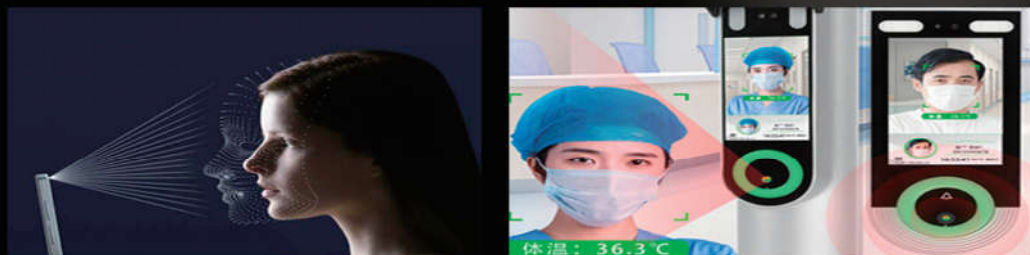
Wide angle supplementary light-TOF lenses

产品特点：M形光束均匀分布、能量利用率高、透镜类型。

应用场景：手机、机器人、平板、3D识别、激光TOF、人脸识别。

Product features: Uniform distribution of m-beams, High energy utilization, Lens Type.

Application scenarios: Handset, Robot, Flat, 3D recognition, Laser TOF, Face Recognition.

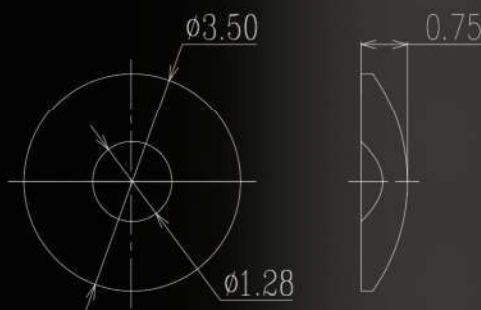


主要说明 Main Description

光源 Source: VCSEL	材质 Material: 光学树脂 Optical resins
波长 Wavelength: 940nm	工作距离 Work distance: 200~300mm
镜片面型 Lens face shape: 非球面 / 自由曲面 Aspheric / Freeform	
光斑形状 Spot shape: 椭圆 / 方形 Ellipse / Square	光斑特性 Spot characteristics: M形 M shape
工作温度 Operation temperature: -20° C ~ 80° C	

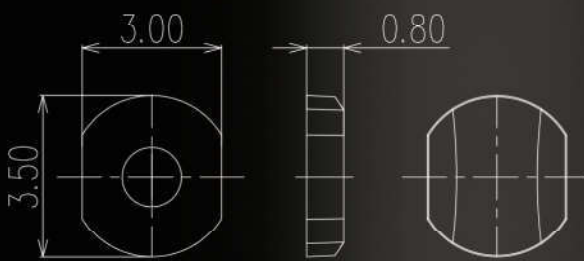
HY-TOF4560-S

角度 Angle: 45X60°



HY-TOF5572-S

角度 Angle: 55X72°



手机照明

Mobile phone lighting

产品特点：均匀性高、透光率高。

应用场景：手机补光、移动终端。

Product features: High uniformity, Light transmittance.

Application scenarios: Mobile phone fill up, Mobile Terminal.



主要说明 Main Description

光源 Source: LED

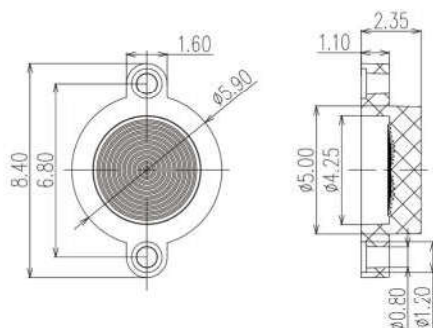
材质 Material: 光学树脂 Optical resins

角度 Angle: 76°

镜片面型 Lens face shape: 菲涅尔 Fresnel

工作温度 Operation temperature: -20° C ~ 80° C

HY-BG76-S-K



一体平顶线镜、 十字镜

Integrated flat top line lens / Straight lens

产品特点：长边高均匀度 / 窄边能量密度集中 / 结构简单 / 装调方便。

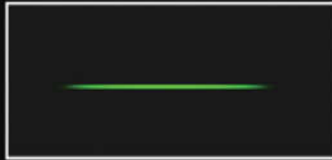
应用场景：扫地机，MEMS 扫描，线定位，测量，标定。

Product features: Long edge with high uniformity, Narrow edge with concentrated energy density, Simple structure, Convenient installation and adjustment.

Application scenarios: Sweeper, MEMS scanning, line positioning, measurement, calibration.



十字光线效果



一字光线效果



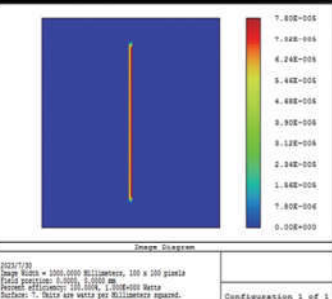
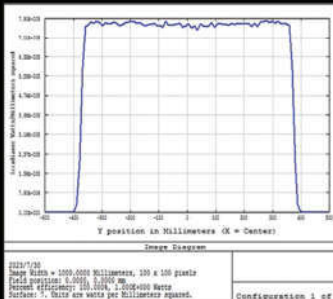
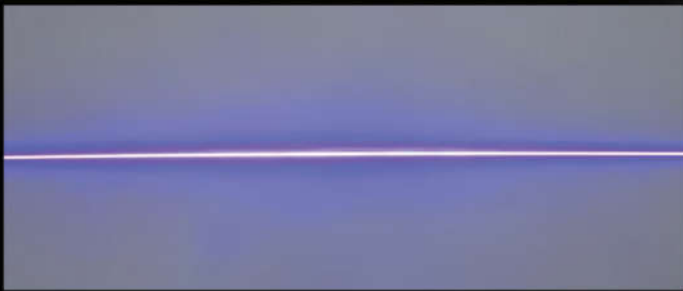
精准测量不偏差



绿光水平仪



Accurate measurement without deviation



主要说明 Main Description

光源 Source: EEL

材质 Material: 光学树脂 Optical resins

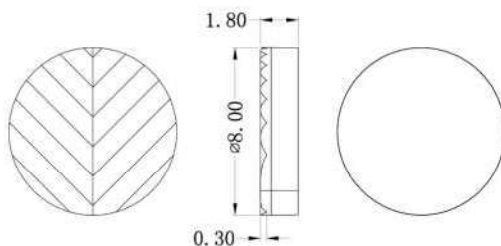
波长 Wavelength: 532nm、630nm、805nm、905nm、850nm、940nm

规格 Specification: 30° / 60° / 90° / 120° / 140° (其它规格 TBD / TBD for other specifications)

均匀类型 Uniform type: M型、平顶型、可定制 M-type, flat top type can be customized

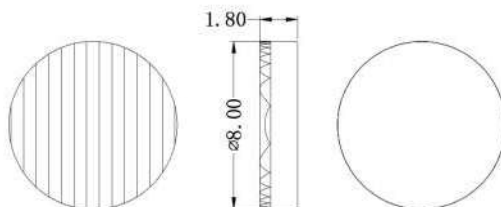
HY-FV60X60L

角度 Angle: 60X60°



HY-FV120L

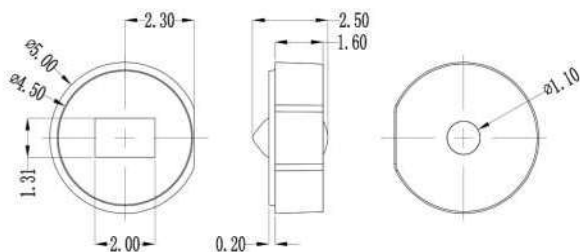
角度 Angle: 120°



HY-YTFL30L HY-YTFL60L HY-YTFL90L

角度 Angle: 30° / 60° / 90°

波长 Wavelength: TBD



阵列平顶线镜

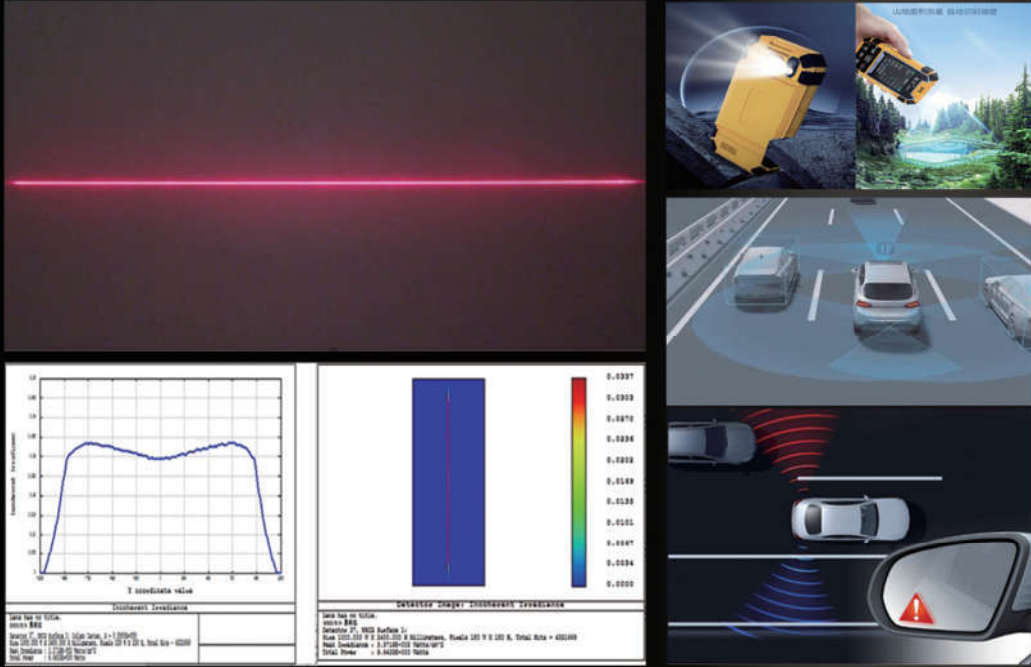
Array flat top lens

产品特点：长边高均匀度 / 窄边能量密度集中 / 结构简单 / 装调方便。

应用场景：扫地机、MEMS 扫描、线定位、测量、标定。

Product features: Long edge with high uniformity, Narrow edge with concentrated energy density, Simple structure, Convenient installation and adjustment.

Application scenarios: Sweeper, MEMS scanning, line positioning, measurement, calibration.



主要说明 Main Description

光源 Source: Laser diode VCSEL

材质 Material: 光学树脂 Optical resins

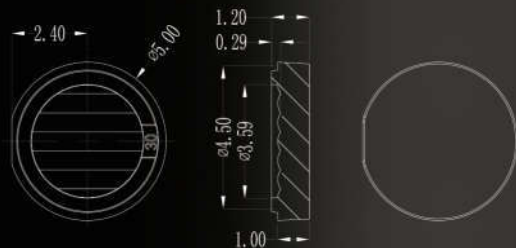
波长 Wavelength: 532nm、630nm、805nm、905nm、850nm、940nm

规格 Specification: 30° / 60° / 90° / 120° / 140° (其它规格 TBD / TBD for other specifications)

均匀类型 Uniform type: M 型、平顶型、可定制 M-type, flat top type can be customized

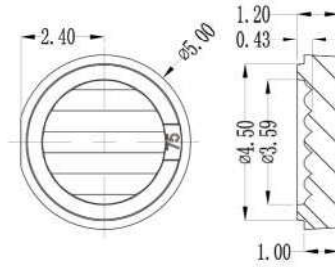
HY-FTFV30L

角度 Angle: 30°



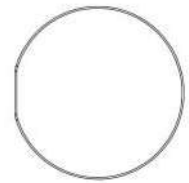
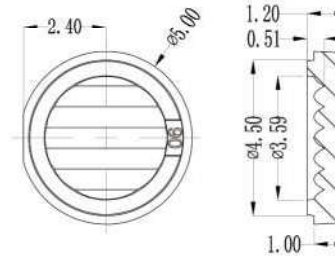
HY-FTFV75L

角度 Angle: 75°



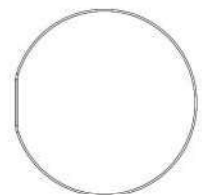
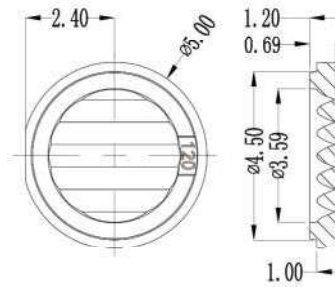
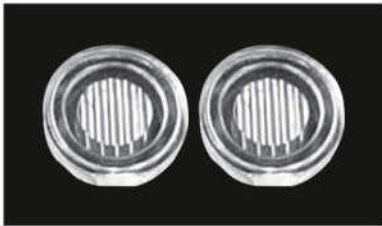
HY-FTFV90L

角度 Angle: 90°



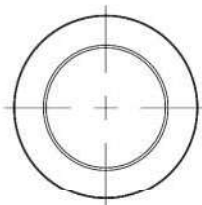
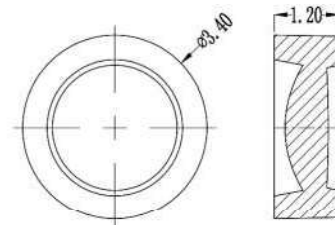
HY-FTFV120L

角度 Angle: 120°



HY-LA033D04C

角度 Angle: 准直 Collimating



PIR 平板类 PIR flat panel

产品特点：大通光、远距离探测。

应用场景：额温枪、红外线电子体温计。

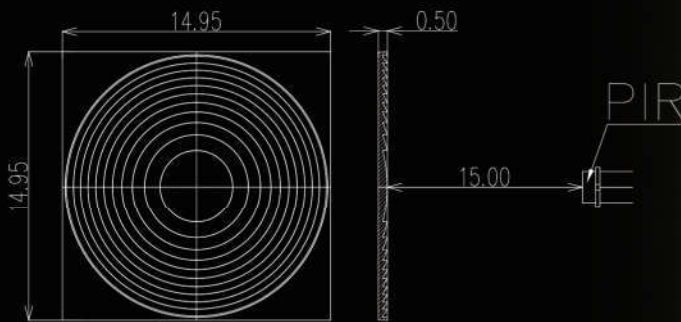
Product features: Higher lumens, Remote detection.

Application scenarios: Forehead temperature gun, Infrared electronic thermometer.

PIR-16A

焦距 Focal length: 15mm

距离比 Distance ratio: 6:1



PIR dome 类

产品特点：大通光、明暗区明显、远距离探测。

应用场景：入侵探测、红外报警、照明自动化。

PIR-F6-120D

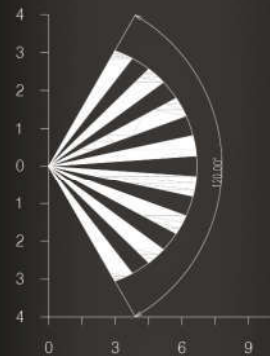
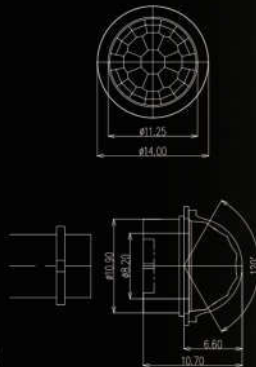
Product features: Higher lumens, Obvious distinction of light and dark area, Long-distance detection.

Application scenarios: Intrusion detection, Infrared alarm, Lighting automation.

焦距 Focal length: 6.6mm

角度 Angle: 120°

距离 Distance: 9m



红外安防透镜

Infrared security lens



产品索引

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点定位镜 Point positioning lens	页码 PAGE	产品型号 ITEM NO.	焦距 FOCAL LENGTH	尺寸 SIZE(mm)	适配光源 LED TYPE
	P04	HY-DWD45-P-K	5.6mm	Ø4.5*H1.5	OSRAM LS P476
	P04	HY-DWD65-P	9mm	Ø6.5*H2.26	
	P04	HY-DWD68-P	3.1mm	L6.8*W6.8*H1.2	
高斯平顶线镜 Gauss flat top line	页码 PAGE	产品型号 ITEM NO.	角度 ANGLE	尺寸 SIZE(mm)	适配光源 LED TYPE
	P05	HY-SMFV30-L	30°	Ø2.6*H1.5	EEL / VCSEL
	P06	HY-SMFV50-L	50°	Ø2.5*H2	
	P06	HY-SMFV60-L	60°	Ø2.6*H1.5	
	P06	HY-SMFV90-L	90°	Ø2.6*H1.5	
线定位镜 Line positioning lens	页码 PAGE	产品型号 ITEM NO.	焦距 FOCAL LENGTH	尺寸 SIZE(mm)	适配光源 LED TYPE
	P07	HY-DWD5X38-L	10.8mm	L5.4*W5*H2.14	OSRAM LS E63B/LS E65F
	P07	HY-DWD5X18-L	6mm	L5*W1.8*H1.51	
激光传感 Laser sensor	页码 PAGE	产品型号 ITEM NO.	工作距离 WORK DISTANCE	尺寸 SIZE(mm)	适配光源 LED TYPE
	P08	HY-CGD79-S-K	2~12mm	L7.88*W5.02*H7.08	SFH 46系列IR Laser or LED
	P08	HY-CGD46-S-K	1~8mm	Ø4.6*H3.1	
虹膜补光 Iris supplementing	页码 PAGE	产品型号 ITEM NO.	偏转角度 FLIP ANGLE	尺寸 SIZE(mm)	适配光源 LED TYPE
	P10	HY-C70S-BOTTOM	8°	L9*W8.68*H3.5	OSRAM SFH 4780S
	P10	HY-C70S-FRONT	10°	L8.9*W8.76*H2.94	
	P10	HY-HM-B	8°	L10.2*W7*H3.5	
	P10	HY-HM-F	10°	L8.6*W8.6*H2.94	
广角补光 Wide angle supplementary light	页码 PAGE	产品型号 ITEM NO.	角度 ANGLE	尺寸 SIZE(mm)	适配光源 LED TYPE
	P11	HY-RLFV60-S-K	60°	L6.2*W2.79*H2.45	OSRAM SFH 4770S
	P11	HY-RLFV80-S	80°	L6.2*W2.79*H2.45	
	P12	HY-RLFV25-S	25°	L16.8*W16.8*H14.58	OSRAM SFH 4715
广角补光-TOF镜片 Wide angle supplementary light- TOF lenses	页码 PAGE	产品型号 ITEM NO.	角度 ANGLE	尺寸 SIZE(mm)	适配光源 LED TYPE
	P13	HY-TOF4560-S	45X60°	Ø3.5*H0.75	VCSEL
	P13	HY-TOF5572-S	55X72°	L3.5*W3*H0.8	
手机照明 Mobile phone lighting	页码 PAGE	产品型号 ITEM NO.	角度 ANGLE	尺寸 SIZE(mm)	适配光源 LED TYPE
	P14	HY-BG76-S-K	76°	L8.4*W5.9*H2.35	LED

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	页码 PAGE	产品型号 ITEM NO.	角度 ANGLE	尺寸 SIZE(mm)
一体平顶线镜、十字镜 Integrated flat top line lens / Straight lens	P16	HY-FV60X60L	60X60°	Ø8*H1.8mm
	P16	HY-FV120L	120°	Ø8*H1.8mm
	P16	HY-YTFL30L	30°	Ø5*H2.5mm
	P16	HY-YTFL60L	60°	Ø5*H2.5mm
	P16	HY-YTFL90L	90°	Ø5*H2.5mm

	页码 PAGE	产品型号 ITEM NO.	角度 ANGLE	尺寸 SIZE(mm)
阵列平顶线镜 Array flat top lens	P17	HY-FTFV30L	30°	Ø5*H1.2mm
	P18	HY-FTFV75L	75°	Ø5*H1.2mm
	P18	HY-FTFV90L	90°	Ø5*H1.2mm
	P18	HY-FTFV120L	120°	Ø5*H1.2mm
	P18	HY-LA033D04C	准直	Ø4*H1.2mm

	页码 PAGE	产品型号 ITEM NO.	焦距 FOCAL LENGTH	尺寸 SIZE(mm)
PIR平板类 PIR flat panel	P19	PIR-16A	15mm	L14.95*W14.95*H0.5

	页码 PAGE	产品型号 ITEM NO.	焦距 FOCAL LENGTH	尺寸 SIZE(mm)
PIR dome 类 PIR dome class	P19	PIR-F6-120D	6.6mm	Ø14*H6.6





• **东莞市衡正光学科技有限公司**

DONGGUAN HENGZHENG OPTOELECTRONICS CO.,LTD.

- 地址: 东莞市虎门镇大宁大板地工业区南江路107号
电话: 0769-81615456
传真: 0769-85226246
邮箱: Mark@henglilens.com
网址: www.henglilens.com
- Add: #107 Nanjiang Road, Dabandi Industrial Park,
Daning Humen Dongguan, Guangdong, 523930 China
Tel: +86 769 85024056
Fax: +86 769 85226246
E-mail: Mark@henglilens.com
Chinese Web: www.henglilens.com
English Web: en.henglilens.com
Korean Web: kr.henglilens.com
Russian Web: ru.henglilens.com