* PRODUCT DATASHEET

* Model: HX-CSP-10(polish)
  HX-CSP-10M(matte)
  HX-CSP-10L(beads)
* Dimensions:
  Lens: Φ20.00mm H12. 15±0. 05mm
  Cylinder holder: Φ21. 50mm H12. 75mm
  bipod striped cylinder holder: N/A
* Materials:
  Lens: Optical Grade PMMA PC
  Holder: ABS
* Assembly Dimensions:
  Lens with cylinder holder: Φ21. 50mm H13. 20±0. 05mm
  Lens with bipod striped cylinder holder: N/A
* Surface Treatment: Polishing|Matte|Beads surface
* Beam Angle: 10deg
* For Led:
  CREE X-PC/E/G/G2
  CREE X-TE/BD Seoul Acriche Z5
  Oslon CP7P Federal 3535 Nichia 119A
* Certification: SGS RoHs

*Features:
High efficiency
Available in 1 beam Patterns
Optimized for uniform effects
Lens with holder

*Typical applications:
Stage lighting
Street lights
Decorative light
Architectural lighting
Down light
Flashlight

* Brief description:

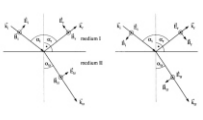
*The OPTIC-FOV (Shenzhen Hongxuan Optoelectronic Technology Co., Ltd) lens offers low-profile lenses specifically designed for the Luxeon® LEDs, Edison® LEDs , Bridgelux® LEDs or Seoul® LEDs,Cree® LEDs.

*A software-optimized aspheric profile enables the generation of several different beam output patterns:narrow,medium,elliptical and wides beams.

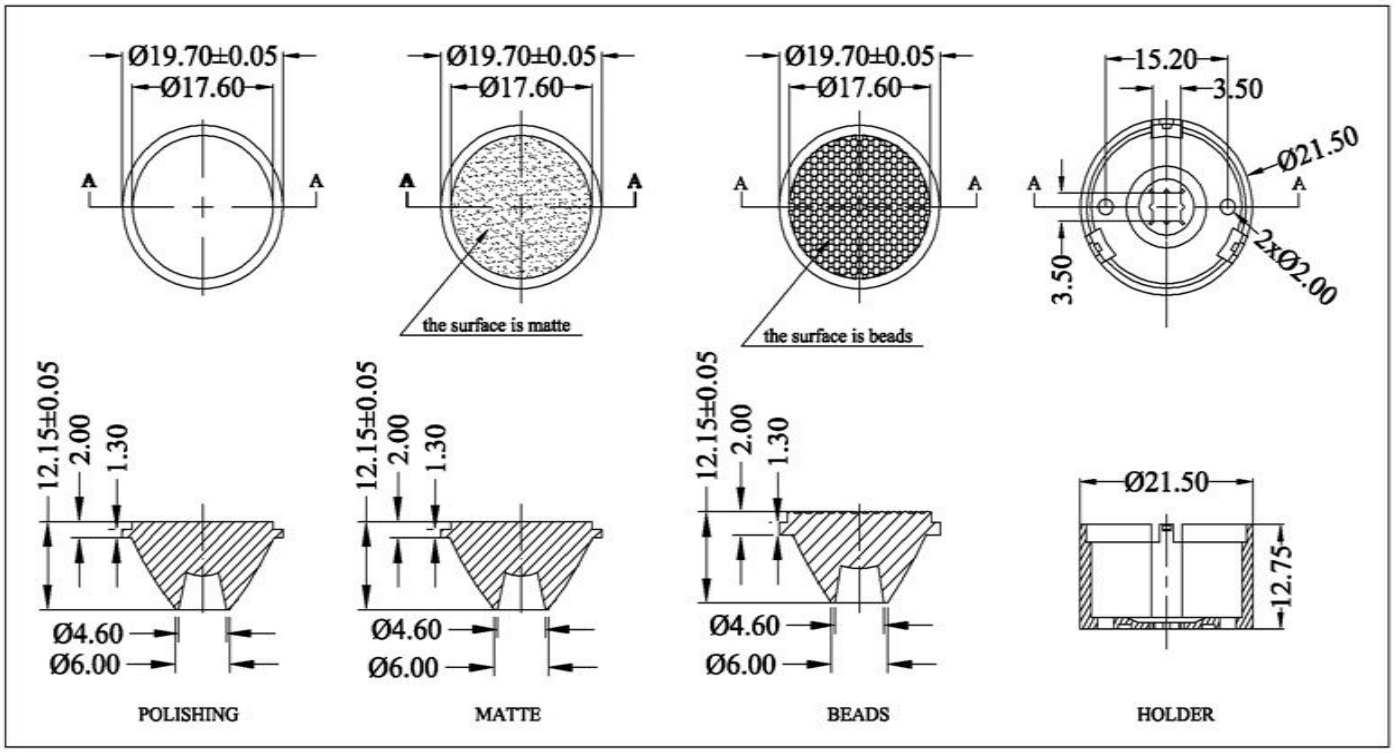
The high collection efficiency reaches 85% of the total flux emitted by the LEDs.

*Lens holders are available in white or black,and provide the proper alignment the between the LEDs and the lenses,set correct distance between the lens and LED.

*The lens holder can be glued to the PCB to provide a secure assembly.

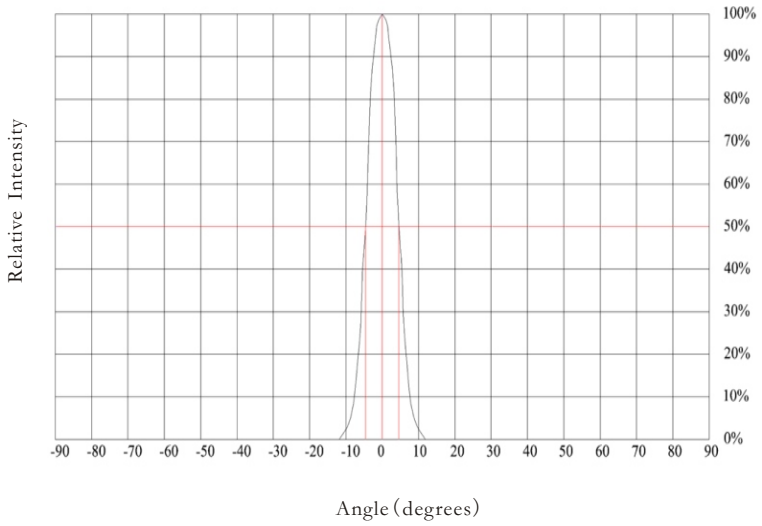


* Holder and Lens dimensions of the 2D views



* Beam Pattern

* Angular Intensity Distribution



* Typical illuminance values

Normal Distance (m)	1. 5	2	5	9
Illuminance (lux 1W led)	1681	945. 6	151. 3	46. 7
Illuminance (lux 3W led)	N/A	N/A	N/A	N/A

Notes:

*Cree flux characteristics at IF=350mA and TJ=25℃: for 1W Q5 (Part Name: XPGWHT-L1-0000-00DE4/Neutral White/107lm/Lambertian LED)

*Performance values given are typical values and will vary dependant on LED binning, colour and drive profile

*Typical illuminance values is reference data (Receiving surface of the average illuminance values).

* LED Lens materials feature table

Items	Features	Experimental methods	Units	PMMA
Physical properties	Density	ASTM D792	g/cm	1.19
	Absorbtion	ASTM D570	%	2
Optical properties	Refraction index	ASTM D542		1.49
	Transmittance	ASTM D1003	%	95
	ABBE	ASTM D542		58
	Birefringence		nm	<20
Thermodynamical properties	Glass transition point	DSC	℃	150
	Heat distortion	ASTM D648 (1.85kg/cm)	℃	120
Mechanical properties	Tensile strength	ASTM D638	MPA	730
	Tensile elongation	ASTM D638	%	10
	Flexural modulus	ASTM D790	10MPA	3

* Notes:

1.Engineering drawings and all dimensions are in millimeters,holder and lens tolerance,respectively ±0.10 and ±0.05.

2.Product operating temperature range -40℃~+70℃(upper limit +80℃).

3.Product storage temperature range -40℃~+70℃(upper limit +80℃).

4.Average transmittance in visible specturm 400nm~700nm>92%.

5.If necessary,clean lenses with mild soap water and soft cloth.

6.Never use any commercial cleaning solvents on lenses,like alcohol.

7.Please handle and install lenses with wearing gloves,skin oils may damage lens or its optical characteristic.