

OPTICAL ENERGY DESIGN & DEVICES

Catalog (Herculux EN5.0)

Chengdu HercuLux Optoelectronics Technology Co.,Ltd.



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HERCULUX
LED Optics



HercuLux Optics

HercuLux Optics focuses on the design and manufacture of optics for LED lighting, LED Automotive headlamp, UV LED precision light distribution, laser ultra-short-throw projector matching screen who is a modern high-tech enterprise that provides professional secondary light distribution solutions.

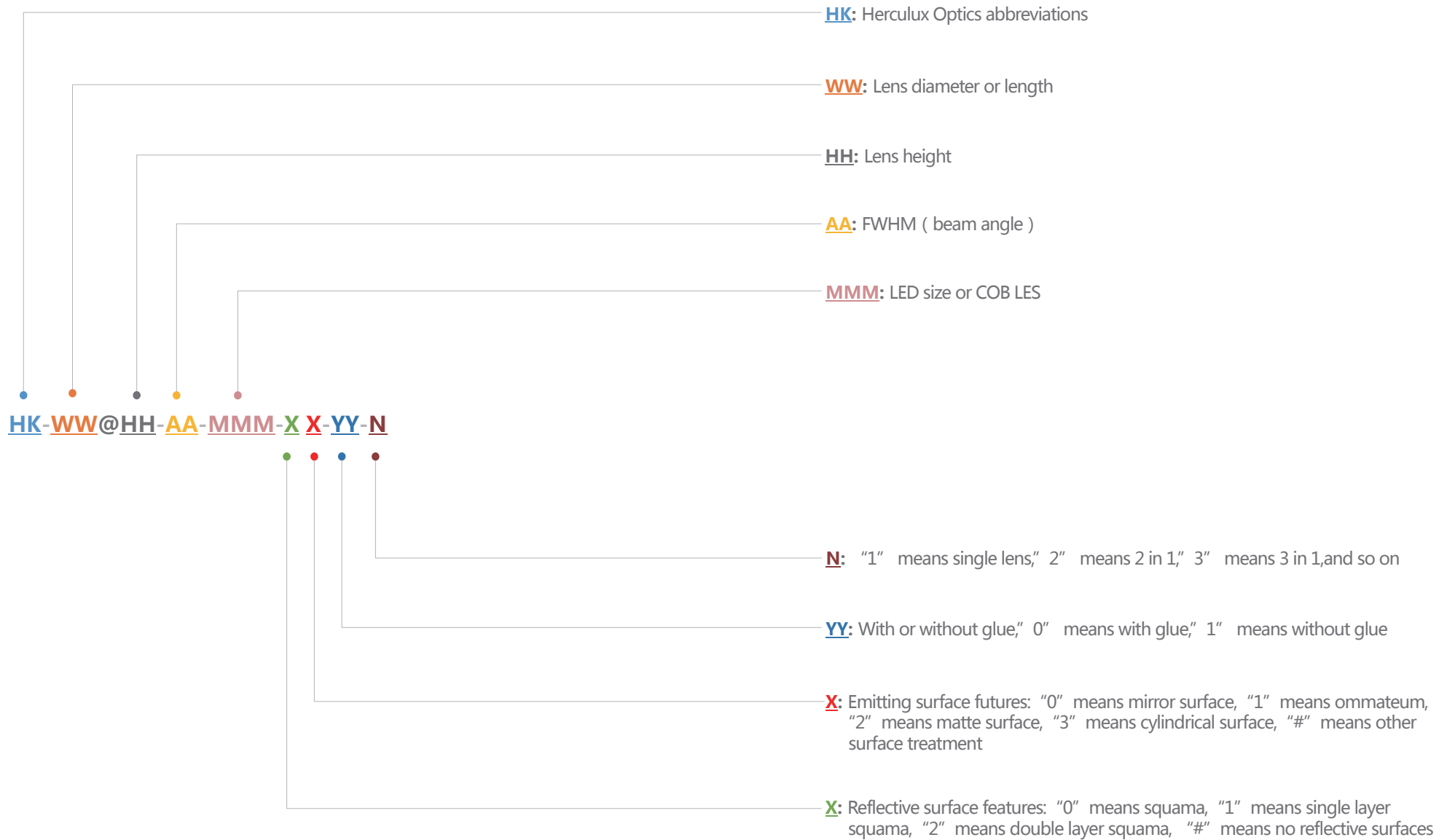
The Company boasts global-leading research and development strengths, advanced production equipments and a professional detection system, and a R&D team comprised of experts working in the fields of optics, precision optical die and precision optical injection for decades and an excellent and passionate marketing team, ensuring the stable quality of each product series and fast and considerate services.

Since the establishment, the Company has overcome many secondary optical match issues in the LED lighting field.

LIGHT THE LIGHT!

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TRANSFORMERS

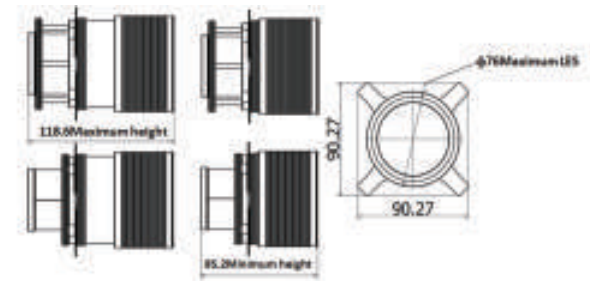
Change freely!
 Circle, bigger circle?
 Square, bigger Square?
 Rectangle, bigger rectangle?
 Even some times you need a irregular light spot!
 Herculux special technology—Transformers
 help you to change it freely!



P

rojection illuminated imaging system

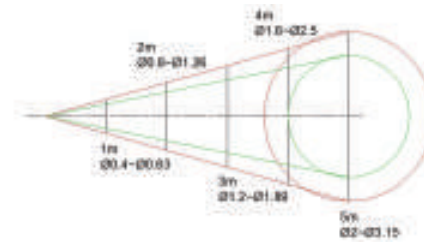
Structure diagram



Spot

This product consists of triple lens plus special structure. By moving the front and center lenses, the product can be made into circular patches of different sizes with clear or blurred borders.

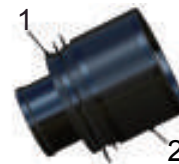
At the same time, through four inserts, the product can also freely adjust the circular spot to the following types of light spots.



Instructions

Transformers, its initial form is as follows:

At this moment, turn left and right respectively 1, 2. Get the following pattern:



Projection illuminated imaging system



Pulling the part pointed by arrow 1 can change the sharpness of the spot boundary; Pulling the part pointed by arrow 2 changes the spot size. At the same time plug four inserts, Spin can change the spot shape arbitrarily, as the following example shows:

Insert the initial state as the right, A circular spot.



Changing the position of the insert, the circular spot will change to a rectangular spot as shown below.



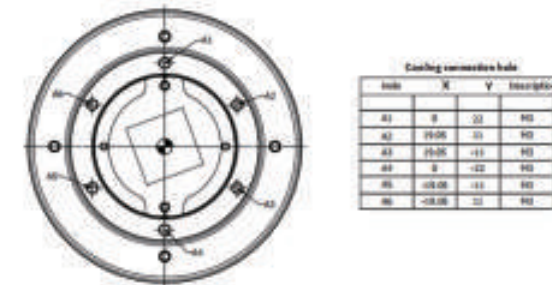
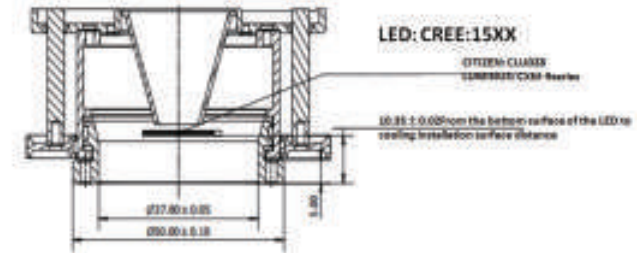
Change the position of the insert, as shown below, the circular spot will become a parallelogram spot.



Change the insert position, as shown below, the circular spot will become a trapezoidal spot.



Cooling installation size



When customers create cooling base, the remaining size can be customized, in addition to the size marked on the map for a fixed size.

Application: Museum lighting, Art exhibition lighting or lighting used in special application.

HK-76@95-199----ASM			
Size	Material	Efficiency	Lens by LED
L:119mm D:76mm	PC	70%	CREE: CXA15XX/CMA1516
			CITIZEN: CLU028/711/LCN-C01B
			BRIDGELUX: V10/H9/HD9/Tunable White 9mm
			PHILIPS: CertaFlux 1202/1203/Fortimo 1203/1204
			LUMINUS: CXM-9/CHM-9/CTM-9/CTM-9
			OSRAM: S9
			EVERLIGHT: JU1215
			ECO: R15XX
			HONOURTEK: HRA09XX
			TOYONIA: Y5XX
			SSC: MJT 9W/12W
			NICHIA: NVEWL-V1 /NFCWL-V3

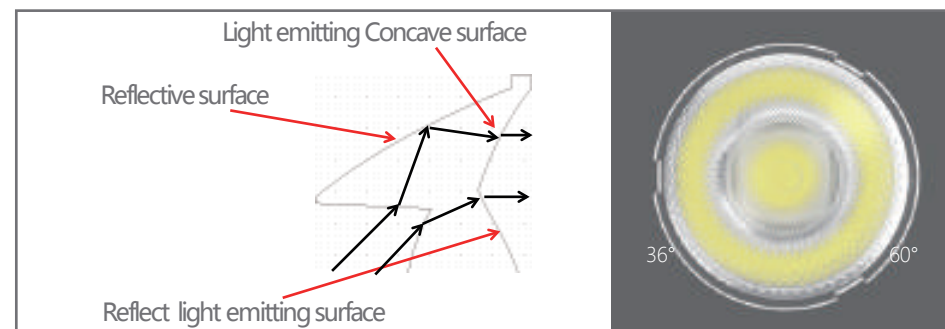
INFINITY

Zoom with a single optics, zoom distance is short (<7mm)
 High lens efficiency (>90%), high center light intensity
 The spot is wide,
 the spot of wide beam angle is full and uniform
 Strong zooming ability and good anti-glare effect
 Change, is the theme that will never change



High efficiency (90%)

Zooming is achieved by properly distributing the ratio of reflected and refracted light during zooming, rather than actively losing light to achieve it, thereby achieving high efficiency.



Short stroke

Beam angle of the intermediate refracted light is designed larger in a shorter stroke so that the Min and Max beam angles stroke difference are in a shorter range.



Nice cutoff and fulfilled spot center (strong zoom capability)

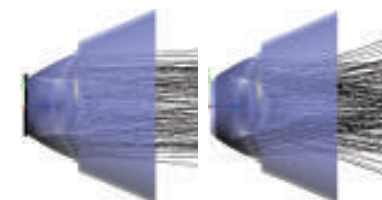
The spot cutoff is generated by the intermediate refracted light; considering the overall zooming effect, the cutoff is made moderate by adding an appropriate compound eye to optimize the spot edge on the refracting light exit surface.

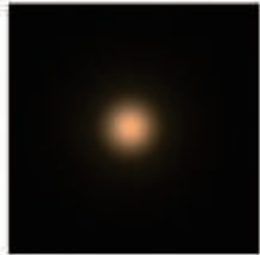
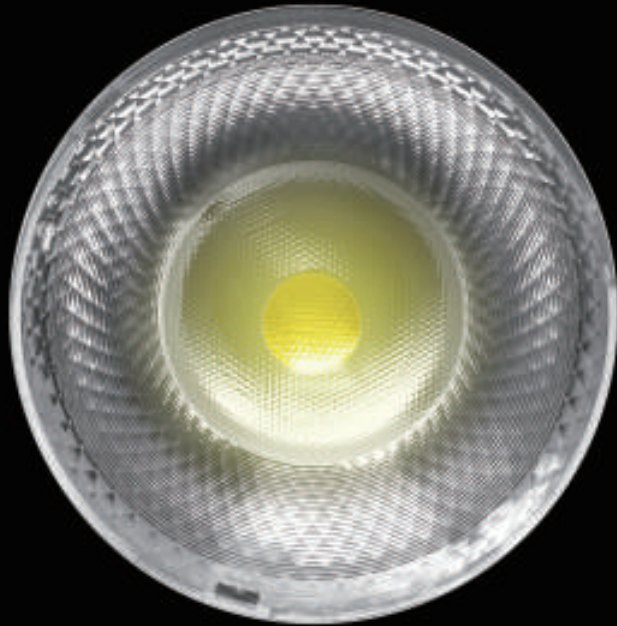
Innovatively adding a two-dimensional uniform light microstructure to the surface of the lens, so that the light intensity is softened, the central light intensity can be guaranteed; in particular, the wide beam angle central spot has a certain compensation effect, so that the wide beam angle spot center is fulfilled.

Better anti-glare effect

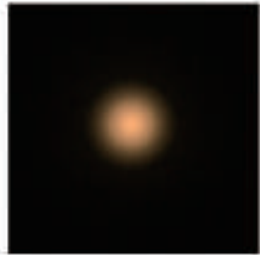
In the process of zooming, the main light of the narrow beam angle is emitted along the optical axis direction, while the main light is deflected away from the hood at a wide beam angle, only very little light reaches the hood regardless of the beam angles.

So the new lens can be matched with a deeper anti-glare cover to achieve a better anti-glare effect comparing to conventional KA.

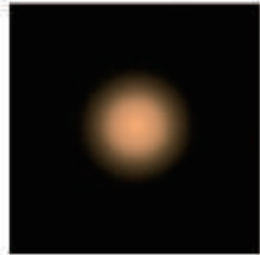




15°



24°



36°

15°~36°: Indicate the zoom range is 15° to 36°

INFINITY

HK-45@20-15_36-D6-21-1g-1			
Size	FWHM	Material	Efficiency
φ:45mm H:20mm	15°~36°	PMMA	90%~92%
Holder		Lens by LED	
Holder A	CREE: CXA 13XX		CITIZEN: CLU 701
	SAMSUNG: LC010C		
	EDISON: HM10/HD10/HD13/HD24		
	BRIDGELUX: H6/HD6		
	LUMILEDS: S01HD/S01HL/S02HD		
	PHILIPS: CertaFlux 1201		
	SSC: MJT 6W	TOYONIA: HR Y3XX	
Holder B	LUMINUS: CLM-6/CXM-6/CHM-6		
Holder C	LUMILEDS: 1204/1205/1208		
	EVERLIGHT: JU2024		
Holder D	LUMINUS: CDM-6		
	LUMILEDS: 205/207/209/1202S/1202HD		
	PHILIPS: Fortimo 1202		
	NICHIA: NTCWS024B/NTCWT012B		
	EVERLIGHT: JU1215	ECO: CSC1215	
HK-55@25-15_36-D9-21-1g-1			
Size	FWHM	Material	Efficiency
φ:55mm H:25mm	15°~36°	PMMA	90%~92%
Holder		Lens by LED	
Holder A	CREE: CXA15XX/CMA1516		
	BRIDGELUX: H9/V10-G6	HONOURTEK: HRB 09XX	
	PHILIPS: CertaFlux 1202/1203		
	TOYONIA: Y5XX/F10/Y5JS/Y5KS/M20		
Holder B	CITIZEN: CLU028		
	SAMSUNG: LC003D/LC006D/LC009D/LC013D		
	EDISON: HE03/HE06/HE09/HE13/HM03/HM06/HM09/HM13		
	BRIDGELUX: V10-G7/E-7W/13W/18W		
	OARAM: S9	SSC: MJT 6W/9W/12W	
Holder C	LUMINUS: CDM-9		
	LUMILEDS: 205/207/209/1202S/1202HD		
	PHILIPS: Fortimo 1202/CertaFlux 1202/1203		
	NICHIA: NTCWS024B/NTCWT012B		
	EVERLIGHT: JU1215	ECO: CSC1215	
Holder D	LUMINUS: CHM-9/CXM-9		

HK-62@28-15_36-D9-21-1g-1			
Size	FWHM	Material	Efficiency
φ:62mm H:28mm	15°~36°	PMMA	90%~92%
Holder	Lens by LED		
Holder A	LUMINUS: CHM-9(AA10) /CXM-9(AA00)/G3-CXM-9		
Holder B	CITIZEN: CLU028		
	SAMSUNG: LC003D/LC006D/LC009D/LC013D		
	EDISON: HE03/HE06/HE09/HE13/HM03/HM06/HM09/HM13		
	BRIDGELUX: V10-G7/E-7W/E-13W/E-18W		
	OSRAM: S9		
Holder C	SSC: MJT 6W/9W/12W		
	LUMINUS: CDM-9		
	LUMILEDS: 205/207/209/1202S/1202HD		
	PHILIPS: Fortimo 1202/CertaFlux 1202/1203		
	NICHIA: NTCWS024B/NTCWT012B		
Holder D	EVERLIGHT: JU1215		
	ECO: CSC1215		
	CREE: CXA15XX/CMA1516		
	BRIDGELUX: H9/V10-G6		
	LUMILEDS: CertaFlux 1202/1203		
PHILIPS: CertaFlux 1201			
TOYONIA: Y5XX/F10/Y5JS/Y5KS/M20			
HONOURTEK: HRB 09XX			

HK-72@33-15_36-D12-21-1g-1				
Size	FWHM	Material	Efficiency	
φ:72mm H:33mm	15°~36°	PMMA	90%~92%	
Holder	Lens by LED			
Holder A	CITIZEN: CLU038/721			
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C			
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40			
	BRIDGELUX: V13-G7/H15/E-27W/E-35W/E-42W			
	LUMINUS: CHM-11			
	OSRAM: S13/S15			
	SSC: MJT 18W/24W/30W			
	EVERLIGHT: XUAN1919			
	TOYONIA: F34/F40/M50			
	Holder B	CREE: CXA18XX/CMA18X		

HK-72@33-15_36-D12-21-1g-1			
Size	FWHM	Material	Efficiency
φ:72mm H:33mm	15°~36°	PMMA	90%~92%
Holder	Lens by LED		
Holder B	BRIDGELUX: H12		
	PHILIPS: CertaFlux 1202/1203		
	NICHIA: NFCWL036B		
	TOYONIA: Y6XX		
	HONOURTEK: HRB 12XX		
Holder C	ECO: CRC1818		
	LUMILEDS: 1205HD		
	PHILIPS: Fortimo 1203/1204		
NICHIA: NFCWL036B			

HK-75@34-15_36-D12-21-1g-1			
Size	FWHM	Material	Efficiency
φ:75mm H:34mm	15°~36°	PMMA	90%~92%
Holder	Lens by LED		
Holder A	CITIZEN: CLU038/721		
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C		
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40		
	BRIDGELUX: V13-G7/H15/E-27W/E-35W/E-42W		
	LUMINUS: CHM-11		
	OSRAM: S13/S15		
	SSC: MJT 18W/24W/30W		
	EVERLIGHT: XUAN1919		
	TOYONIA: F34/F40/M50		
	Holder B	CREE: CXA18XX/CMA18X	
BRIDGELUX: H12			
PHILIPS: CertaFlux 1202/1203			
NICHIA: NFCWL036B			
TOYONIA: Y6XX			
Holder C	HONOURTEK: HRB 12XX		
	ECO: CRC1818		
	LUMILEDS: 1205HD		
PHILIPS: Fortimo 1203/1204			
NICHIA: NFCWL036B			



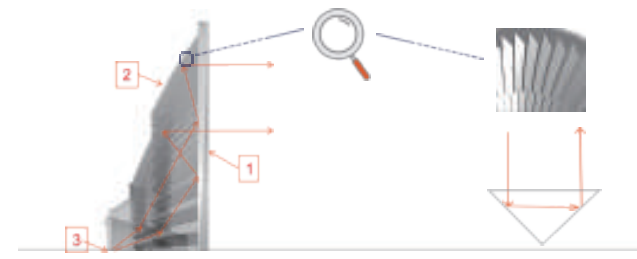
SUNFLOWERS

Triple-Reflection Technology
 Ultrathin thickness 8mm
 Thinner than thinner
 Save more space for designer

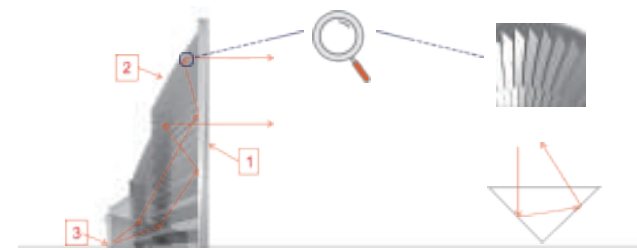


Principle

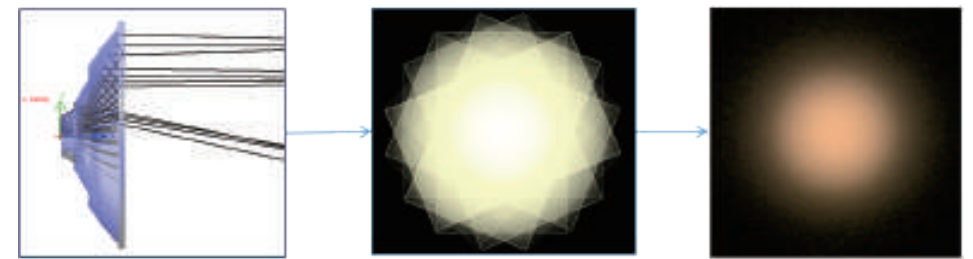
Triple-Reflection technology is a great innovation based on Calculus technology, greatly reduced the lens height compare with the original calculus lens, let the light reflect three times inside the lens, make sure get good light distribution with lower height lens.



Graphic 1 is a fully reflecting surface and a optical emitting surface, light from graphic 3(LED) fully reflected to graphic 2(included angle) by the surface 1, then totally reflect two times in the included angle, at last all lights emit out from surface 1 by total three times reflection.



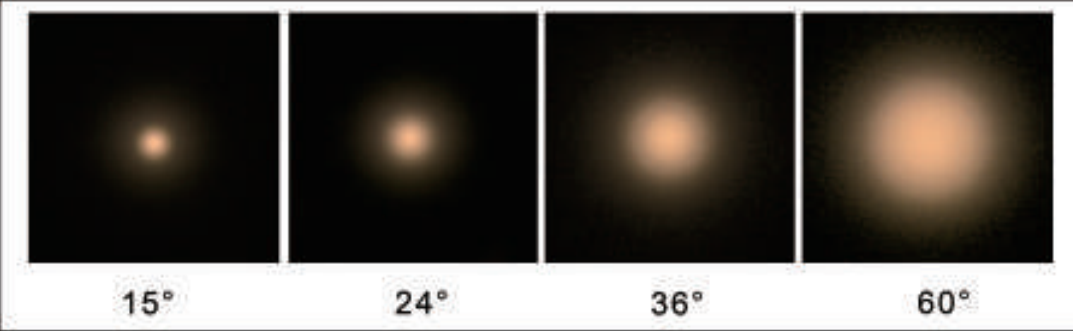
The reflect surfaces of included angle 2 are all fully reflecting surface, control the lens angle by adjust the surface shape. Application:MR16/GU10/Down Light/Par20.



SUNFLOWERS



HK-45@08-XX-7070-20-1g-1				
Size	FWHM	Material	Efficiency	Lens by LED
φ: 45mm H: 8mm	15°	PC	88%	CREE: 13XX/MHB
	24°			CITIZEN: CLU701/0A0/0B0
	36°			SAMSUNG: LC010C
	60°			EDISON: HM10/HD10/HD13/HD24
				PHILIPS: CertaFlux 1201/Fortimo 1202
				HONOURTEK: HRA06XX
				TOYONIA: Y3XX
				EVERLIGHT: XUAN1313
				BRIDGELUX: V6/H6/HD6/E6/SMD5050
				OSRAM: S8
				LUMILEDS: 205/207/SMD50501202HD/ S01HL/S02HD/
				NICHIA: NTCWT-V3/NTCWS-V3/NVNWS-V1/ NJCWS-V1





BLACK HOLE

Keep good light spot performance
even change the front ring direction
or change the whole ring, good antiglare design
for hotel down light

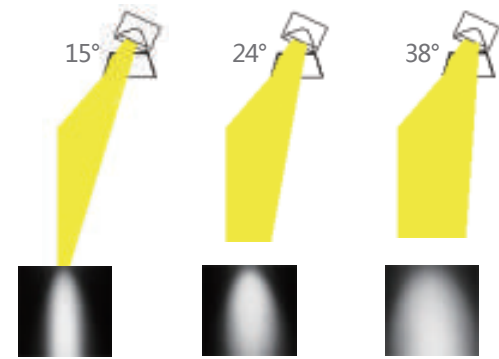
Light controlling technology

Introduction

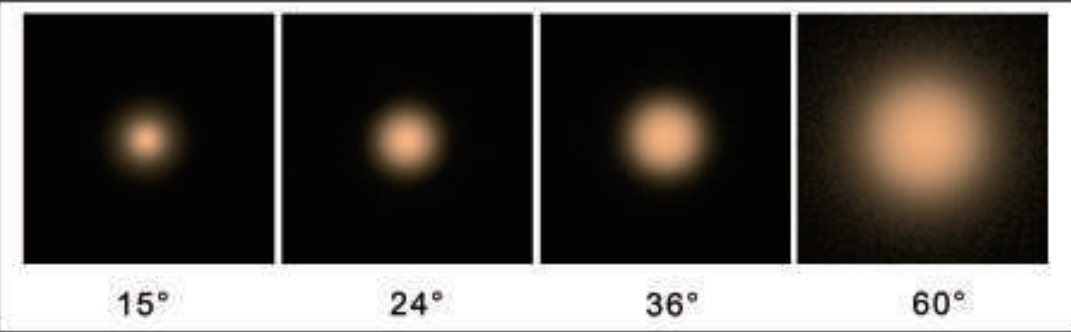
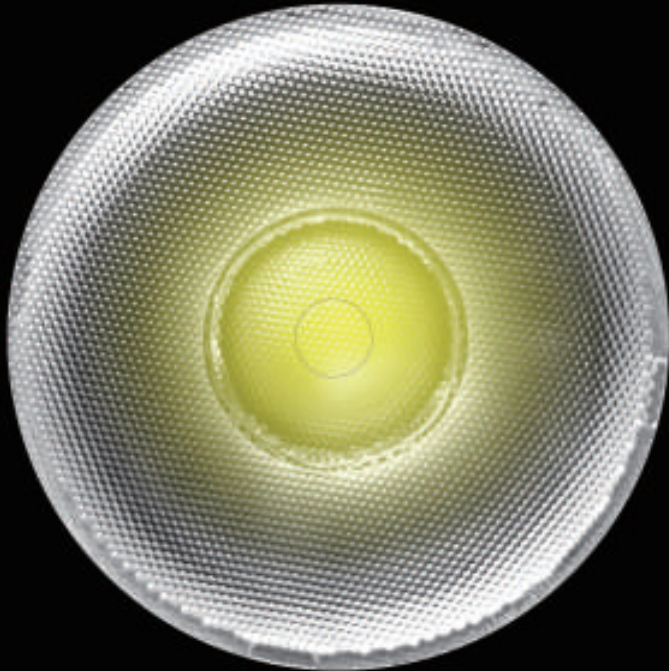
The Max shielding angle of the LED lamp is 46° , can avoid the glare effectively. The most accepted shielding angle of the human visual area always more than 30° , the other light in this area will occur the glare. So when the shielding angle of the LED lamp more than 30° , will control the light out the area to decrease glare.



The polarized light wash wall lamp should have the drift angle, normally have the problem of stratified facula because of the antiglare visor interfered the facula. HercuLux Black Hole family special designed for the hotel, considered the effect of the front ring of the antiglare visor before designing, can distribute the light effectively, even when the customer replacing the front ring, the facula will transit uniformly.



BLACK HOLE



HK-28@14-XX-D4-21-1g-1			
Size	FWHM	Material	Efficiency
φ:28mm H:14mm	15°/24°/36°	PC	85%
Holder		Lens by LED	
Holder A	CREE: 13XX		
	BRIDGELUX: H6 /HD6		
	PHILIPS: CertaFlux 1201		
	LUMILEDS: S01HD/S01HL/S02HD		
	CITIZEN: CLU701		
	TOYONIA: Y3XX		
	SSC: MJT 6W		
	SAMSUNG: LC010C		
	EDISON: HM10/HD10/HD13/HD24		
	ECO: CRC1313		
Holder B	HONOURTEK: HRA06XX/04XX		
	BRIDGELUX: V6-GEN6/V8-GEN6/V8-GEN7/HD4/E6		
Holder C	HONOURTEK: HRA06XX/04XX		
	CITIZEN: CLU0A0/0B0		

HK-30@14-XX-D6-01-1g-1			
Size	FWHM	Material	Efficiency
φ:30mm H:15mm	15°/24°/36°	PC	85%
Holder		Lens by LED	
Holder A	CREE: 13XX		
	BRIDGELUX: H6 /HD6		
	PHILIPS: CertaFlux 1201		
	LUMILEDS: S01HD/S01HL/S02HD		
	CITIZEN: CLU701		
	TOYONIA: Y3XX		
	SSC: MJT 6W		
	SAMSUNG: LC010C		
	EDISON: HM10/HD10/HD13/HD24		
	ECO: CRC1313		
Holder B	HONOURTEK: HRA06XX/04XX		
	BRIDGELUX: V6-GEN6/V8-GEN6/V8-GEN7/HD4/E6		
Holder C	HONOURTEK: HRA06XX/04XX		
	CITIZEN: CLU0A0/0B0		

BLACK HOLE

The orange indicates that you can get small beam angles

HK-35@18-XX-D4-20-1g-1			
Size	FWHM	Material	Efficiency
φ:35mm H:18mm	15°/24°/36°/50°	PC	85%
Holder		Lens by LED	
Holder A	CREE: 13XX /CMT14XX		
	BRIDGELUX: H6		
	PHILIPS: CertaFlux 1201		
	LUMILEDS: S01HD/S01HL/S02HD/S04HD		
Holder B	HONOURTEK: HRA06XX/04XX		
	CITIZEN: CLU0A0/0B0		
Holder C	CITIZEN: CLU 701		
	SAMSUNG: LC010C		
	EDISON: HM10/HD10/HD13/HD24		
	LUMINUS: CHM-9(AC10)CLM-9/CXM-9(AC00)		
	BRIDGELUX: V10-G7/HD6/ECOB-7W/13W/18W		
	EVERLIGHT: XUAN1313		
Holder C	HONOURTEK: HRA06XX/04XX		
	TOYONIA: Y3XX		
Holder C	ECO: H4E/H6/S6D		
	Holder D		
Holder E			
Holder F			
Holder G			

HK-45@24-XX-D6-20-1g-1			
Size	FWHM	Material	Efficiency
φ:45mm H:24mm	7°/10°/24°/34°/50°	PC	85%
Holder		Lens by LED	
Holder A	CREE: CXA13XX/CMT14XX		
	CITIZEN: CLU701	SAMSUNG: LC010C	
	EDISON: HM10/HD10/HD13/HD24		
	LUMINUS: CLM-6/CXM-6/CHM-6		
	BRIDGELUX: V6-G6/V8/V8-G7/V10/H6/HD6		
	PHILIPS: CertaFlux 1201		
	LUMILEDS: S01HD/S01HL/S02HD/S04HD		
	ECO: H4E/H6/S6D		
Holder B	CREE: 15XX		BRIDGELUX: V10-G6
	TOYONIA: Y5XX	ECO: CRC1515	
	HONOURTEK: HRB09XX		
Holder C	CITIZEN: 0A0/0B0		
	HONOURTEK: 0303		
Without Holder	CREE: XHP35 HI		
	FWHM: 7°		
	LUMINUS: SST-20		

The orange indicates that you can get small beam angles

BLACK HOLE

HK-50@24-XX-D9-20-1g-1			
Size	FWHM	Material	Efficiency
φ:50mm H:24mm	15°/24°/36°/50°	PC	85%
Holder		Lens by LED	
Holder A	CREE: CXA15XX/CMA1516		
	BRIDGELUX: V10-GEN6/V13-G6/H9		
	LUMINUS: CMH-9/CXM-9		
	TOYONIA: Y6XX	PHILIPS: CertaFlux 1202/1203	
Holder B	ECO: CRC1515		HONOURTEK: HRA09XX
	CREE: 13XX	CITIZEN: 701/028	
Holder B	SAMSUNG: LC010C/LC003D/LC006D/LC009D/LC013D		
	EDISON: HM10/HD10/HD13/HD24/HE03/HE06/HE09/HE13/HM03/HM06		
	BRIDGELUX: G7-V10/H6		
	LUMINUS: CHM-9(AC10)CLM-9/CXM-9(AC00)		
	OSRAM: S9	TOYONIA: Y3XX	
	ECO: H4E/H6/S6D	EVERLIGHT: XUAN1313	
	SSC: MJT 6W/9W/12W		
	HONOURTEK: HRA06XX/04XX		

HK-62@24-XX-D9-20-1g-1			
Size	FWHM	Material	Efficiency
φ:62mm H:24mm	15°/24°/36°/50°	PC	85%
Holder		Lens by LED	
Holder A	LUMILEDS: 1205HD		PHILIPS: Fortimo 1203/1204
	NICHIA: NFCWL036B		
Holder B	BRIDGELUX: H12		CREE: CXA18XX/CMA18X
	NICHIA: NFCWL036B	PHILIPS: CertaFlux 1202/1203	
	TOYONIA: Y6XX	HONOURTEK: HRB 12XX	
	ECO: CRC1818		
Holder C	CITIZEN: CLU028		OARAM: S9
	SAMSUNG: LC003D/LC006D/LC009D/LC013D		
	EDISON: HE03/HE06/HE09/HE13/HM03/HM06/HM09/HM13		
	BRIDGELUX: V10-G7/E-7W/13W/18W		
Holder D	SSC: MJT 6W/9W/12W		
	BRIDGELUX: H9/V10-G6	PHILIPS: CertaFlux 1201	
	CREE: CXA15XX/CMA1516		
	LUMILEDS: CertaFlux 1202/1203		
	TOYONIA: Y5XX/F10/Y5JS/Y5KS/M20		
HONOURTEK: HRB 09XX			



KA FAMILY

KA Family more focus on the great facula cut-off and K value, used for the track light with the application of shopping mall, hotel etc. KA Family also can be applied to Tunable White Solution and Dim to Warm Solution.

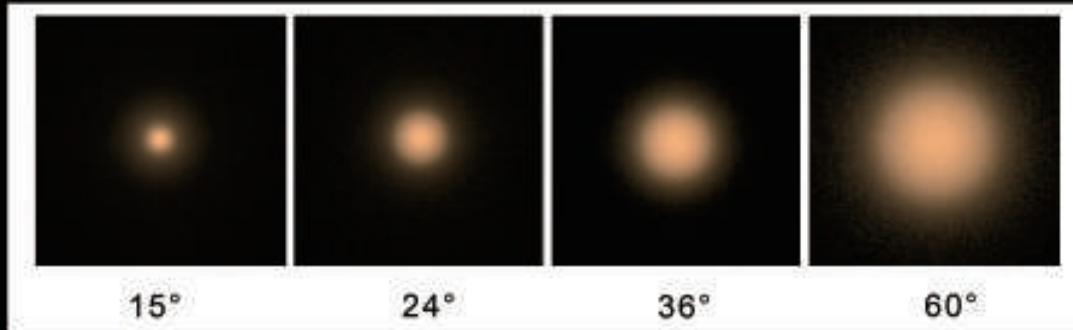
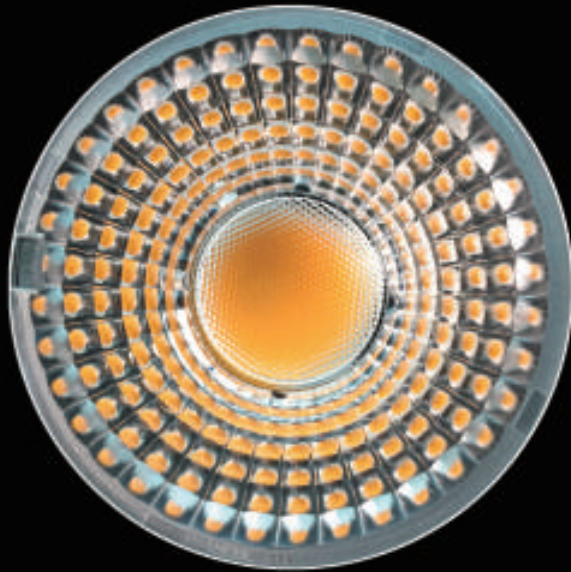
Calculus Anti-Glare Technology

Facula shape



Commercial lighting application





HK-35@16-15-D6-21-1g-1			
Size	FWHM	Material	Efficiency
φ: 35mm H: 16mm	15°/24°/36°/60°	PMMA	90%
Holder	Lens by LED		
Holder A	CREE: CXA13XX/CMT14XX		
	CITIZEN: CLU701		
	SAMSUNG: LC010C		
	EDISON: HM10/HD10/HD13/HD24		
	LUMINUS: CHM-6/CXM-7		
	BRIDGELUX: V6-G6/V8/V8-G7/H6/HD6/HD4/ECOB-E6/E8		
	PHILIPS: CertaFlux 1201		
	LUMILEDS: S01HD/S01HL/S02HD/S04HD		
	HONOURTEK: HRA06XX		
	TOYONIA: Y3AE		
EVERLIGHT: XUAN1313			
ECO: H4E/H6			
Holder B	CITIZEN: CLU0A0/0B0		
Holder C	LUMILEDS: 205/207/209/1202S/1202HD		
	PHILIPS: Fortimo 1202		
Holder D	NICHIA: NTCWS024B/NTCWT012B		
	ECO: SHC1208		
HK-43@19-18-D9-21-1g-1			
Size	FWHM	Material	Efficiency
φ: 43mm H: 19mm	15°/24°/36°/60°	PMMA	90%
Holder	Lens by LED		
Holder A	CREE: CXA15XX/CMA1516		
	BRIDGELUX: H9/V10-G6		
	PHILIPS: CertaFlux 1202/1203		
	HONOURTEK: HRA09XX		
	TOYONIA: Y5XX		
ECO: R15XX			
Holder B	CREE: CXA18XX/CMA18XX		
	CITIZEN: CLU038/711/721		
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C		
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40		
	LUMINUS: CHM-9G1(XH00)/CHM-11/CHM-14/CXM-14		
	BRIDGELUX: G7-V13/H15 /HD9/ECOB-27W/35W/42W		

HK-43@19-18-D9-21-1g-1			
Size	FWHM	Material	Efficiency
φ: 43mm H: 19mm	15°/24°/36°/60°	PMMA	90%
Holder	Lens by LED		
Holder B	PHILIPS: CertaFlux 1204/1205/1208		
	OSRAM: S13/S15		
	EVERLIGHT: XUAN1919		
	SSC: MJT 18W/24W/30W		
Holder C	ECO: I19XX/ S15D/S25D		
	LUMINUS: CDM-6/CDM-9		
	PHILIPS: Fortimo 1202		
Holder D	BRIDGELUX: Dim To Warm 9mm-6W/9mm-12W		
	BRIDGELUX: DS152 Tunable White 9mm		
Holder E	PHILIPS: CertaFlux 1202/1203		
Holder F	CITIZEN: CLC020		
Holder G	CITIZEN: LCN-C01B		
Holder H	LUMINUS: CTM-9		
	CITIZEN: CLU 028/701		
	SAMSUNG: SAMSUNG: LC003D/LC006D/LC009D/LC013D		
	EDISON: HE03/HE06/HE09/HE13/HM03/HM06/HM09/HM13		
	OSRAM: S9		
	BRIDGELUX: V10-G7/HD6		
	LUMINUS: CLM-9		
	SSC: MJT 9W/12W		
Holder I	EVERLIGHT: XUAN1313		
	BRIDGELUX: V8/E8		

HK-50@25-XX-D6-22-1g-1			
Size	FWHM	Material	Efficiency
φ: 50mm H: 25mm	15°/24°/36°/60°	PMMA	90%
Holder	Lens by LED		
Holder A1	CREE: CXA13XX/CMT14XX		
	CITIZEN: CLU701		SAMSUNG: LC010C
	TOYONIA: Y3AE		ECO: H4E/H6
	LUMINUS: CHM-6/CXM-7		
	BRIDGELUX: V6-G6/V8/V8-G7/H6/HD6/HD4/ECOB-E6/E8		
	PHILIPS: CertaFlux 1201		
	LUMILEDS: S01HD/S01HL/S02HD/S04HD		
	HONOURTEK: HRA06XX		
	EVERLIGHT: XUAN1313		
	EDISON: HM10/HD10/HD13/HD24		

HK-50@25-XX-D6-22-1g-1			
Size	FWHM	Material	Efficiency
φ: 50mm H: 25mm	15°/24°/36°/60°	PMMA	90%
Holder	Lens by LED		
Holder B1	CITIZEN: CLU0A0/0B0		
Holder C1	LUMILEDS: 205/207/209/1202S/1202HD		
	PHILIPS: Fortimo 1202		
Holder D1	NICHIA: NTCWS024B/NTCWT012B		
	ECO: SHC1208		
Holder A2	CREE: 15XX		
	LUMINUS: CXM-9/CHM-9/CTM-9		
	BRIDGELUX: V6-G6/V8/V10/V13/V8-G7/H9		
	HONOURTEK: HRA09XX		
	TOYONIA: Y5XX		
	SSC: MJT 9W/12W		
Holder B2	ECO: R15XX		
	CREE: CMT19XX		
	CITIZEN: CLU038/711/721		
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C		
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40		
	LUMINUS: CHM-9/CHM-11/CHM-14/CXM-14		
	BRIDGELUX: G7-V13/H15 /HD9/ECOB-27W/35W/42W		
	OSRAM: S13/S15		
	EVERLIGHT: XUAN1919		
	SSC: MJT 18W/24W/30W		
Holder C2	ECO: I19XX		
	LUMINUS: CDM-6/CDM-9		
Holder D2	BRIDGELUX: Dim To Warm 9mm-6W/9mm-12W		
	BRIDGELUX: DS152 Tunable White 9mm		
Holder E2	CITIZEN: CLC020		
Holder F2	CITIZEN: LCN-C01B		
Holder G2	LUMINUS: CTM-9		
	CITIZEN: CLU 028/701		
Holder H2	SAMSUNG: SAMSUNG: LC003D/LC006D/LC009D/LC013D		
	EDISON: HE03/HE06/HE09/HE13/HM03/HM06/HM09/HM13		
	OSRAM: S9		
	BRIDGELUX: V10-G7/HD6		
	LUMINUS: CLM-9		
	SSC: MJT 9W/12W		
	EVERLIGHT: XUAN1313		
	Holder I2	EDISON: HM10/HD10/HD13/HD24	
BRIDGELUX: V8/E8			

HK-55@24-XX-D9-20-1g-1			
Size	FWHM	Material	Efficiency
φ: 55mm H: 24mm	15°/24°/36°/60°	PMMA	90%
Holder	Lens by LED		
Holder A	CREE: CXA15XX/CMA1516		
	BRIDGELUX: H9/V10-G6		
	PHILIPS: CertaFlux 1202/1203		
	HONOURTEK: HRA09XX		
	TOYONIA: Y5XX		
Holder B	ECO: R15XX		
	CREE: CXA18XX/CMA18XX		
	CITIZEN: CLU038/711/721		
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C		
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40		
	LUMINUS: CHM-9G1(XH00)/CHM-11/CHM-14/CXM-14		
	BRIDGELUX: G7-V13/H15 /HD9/ECOB-27W/35W/42W		
	PHILIPS: CertaFlux 1204/1205/1208		
	OSRAM: S13/S15		
	EVERLIGHT: XUAN1919		
	SSC: MJT 18W/24W/30W		
	ECO: I19XX/ S15D/S25D		
Holder C	LUMINUS: CDM-6/CDM-9		
	PHILIPS: Fortimo 1202		
Holder D	BRIDGELUX: Dim To Warm 9mm-6W/9mm-12W		
	PHILIPS: CertaFlux 1202/1203		
Holder E	CITIZEN: CLC020		
Holder F	CITIZEN: LCN-C01B		
Holder G	LUMINUS: CTM-9		
Holder H	CITIZEN: CLU 028/701		
	SAMSUNG: SAMSUNG: LC003D/LC006D/LC009D/LC013D		
	EDISON: HE03/HE06/HE09/HE13/HM03/HM06/HM09/HM13		
	OSRAM: S9		
	BRIDGELUX: V10-G7/HD6		
	LUMINUS: CLM-9		
Holder I	SSC: MJT 9W/12W		
	EVERLIGHT: XUAN1313		
Holder I	BRIDGELUX: V8/E8		

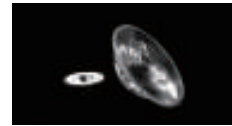
HK-62@31-XX-D9-20-1g-1			
Size	FWHM	Material	Efficiency
62mm H:30mm	15°/24°/36°/60°	PMMA	90%
Holder	Lens by LED		
Holder A	CREE: CXA15XX/CMA1516		
	BRIDGELUX: H9/V10-G6		
	PHILIPS: CertaFlux 1202/1203		
	HONOURTEK: HRA09XX		
	TOYONIA: Y5XX		
Holder B	ECO: R15XX		
	CREE: CXA18XX/CMA18XX		
	CITIZEN: CLU038/711/721		
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C		
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40		
	LUMINUS: CHM-9G1(XH00)/CHM-11/CHM-14/CXM-14		
	BRIDGELUX: G7-V13/H15 /HD9/ECOB-27W/35W/42W		
	PHILIPS: CertaFlux 1204/1205/1208		
	OSRAM: S13/S15		
	EVERLIGHT: XUAN1919		
	SSC: MJT 18W/24W/30W		
	ECO: I19XX/ S15D/S25D		
Holder C	LUMINUS: CDM-6/CDM-9		
	PHILIPS: Fortimo 1202		
Holder D	BRIDGELUX: Dim To Warm 9mm-6W/9mm-12W		
	PHILIPS: CertaFlux 1202/1203		
Holder E	CITIZEN: CLC020		
Holder F	CITIZEN: LCN-C01B		
Holder G	LUMINUS: CTM-9		
Holder H	CITIZEN: CLU 028/701		
	SAMSUNG: SAMSUNG: LC003D/LC006D/LC009D/LC013D		
	EDISON: HE03/HE06/HE09/HE13/HM03/HM06/HM09/HM13		
	OSRAM: S9		
	BRIDGELUX: V10-G7/HD6		
	LUMINUS: CLM-9		
Holder I	SSC: MJT 9W/12W		
	EVERLIGHT: XUAN1313		
Holder I	BRIDGELUX: V8/E8		

HK-72@33-XX-D9-20-1g-1				
Size	FWHM	Material	Efficiency	
φ:72mm H:33mm	12° /15°/20°/24°/36°/60°	PMMA	90%	
Holder	Lens by LED			
Holder A	CREE: CXA18XX/CMA18XX			
	BRIDGELUX: H12			
	PHILIPS: CertaFlux 1204/1205/1208			
	ECO: R18XX			
	HONOURTEK: HRA12XX			
	TOYONIA: Y6XX			
Holder B	CREE: CMT19XX			
	CITIZEN: CLU038/ 711 /721			
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C			
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40			
	LUMINUS: CHM-9 /CHM-11/CXM-11/CHM-14/CXM-14			
	BRIDGELUX: G7-V13/H15 / HD9 /ECOB-27W/35W/42W			
	OSRAM: S13/S15			
	EVERLIGHT: XUAN1919			
	TOYONIA: Y6XX			
	SSC: MJT 18W/24W/30W			
	ECO: I19XX/SD15/SD25			
	Holder C	LUMILEDS: 1204/1205/1208		
		PHILIPS: Fortimo 1205/1208		
EVERLIGHT: JU2024				
Holder D	CREE: CXA15XX/CMA1516			
	BRIDGELUX: G6-V10/V13/H9			
	LUMILEDS: 1202/1203/1204HD/1205HD			
	PHILIPS: Fortimo 1203/1204			
	HONOURTEK: HRA09XX			
	TOYONIA: Y5XX			
	SSC: MJT 9/12W			
NICHIA: NFCWL-V3/NVEWL-V1				

HK-72@33-XX-D9-20-1g-1			
Size	FWHM	Material	Efficiency
φ:72mm H:33mm	12° /15°/20°/24°/36°/60°	PMMA	90%
Holder	Lens by LED		
Holder E	CREE: CMT14XX		
	CITIZEN: CLU028		
	SAMSUNG: SAMSUNG: LC003D/LC006D/LC009D/LC013D		
	EDISON: HE03/HE06/HE09/HE13/HM03/HM06/HM09/HM13		
	LUMINUS: CHM-9(AC10)/CLM-9/CXM-9(AC00)		
	BRIDGELUX: G7-V10		
	OSRAM: S9		
ECO: H9			
Holder F	LUMINUS: CDM-14/CDM-18		
Holder G	BRIDGELUX: Dim To Warm 15mm-33W		
Holder H	BRIDGELUX: DS153 Tunable White 13mm		
Holder I	CITIZEN: CLC030-081B8		
Holder J	CITIZEN: LCN-C03A		
Holder K	CITIZEN: LCN-C02B		
Holder L	LUMINUS: CTM-14/CTM-18		

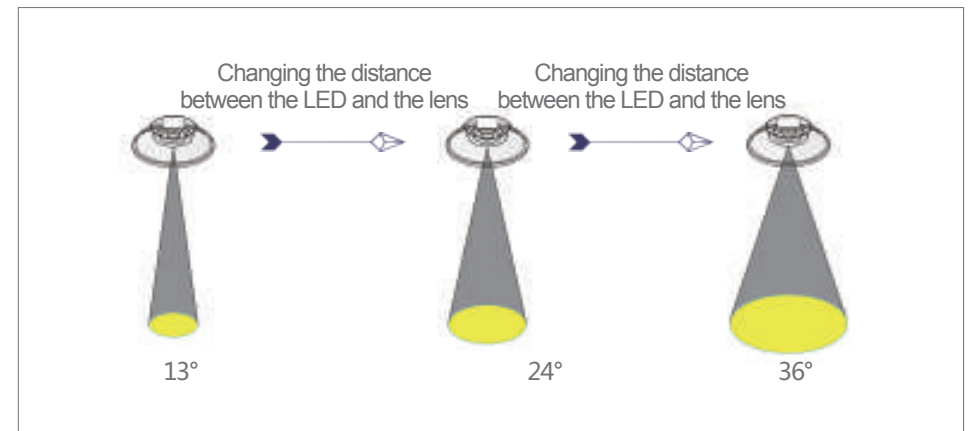
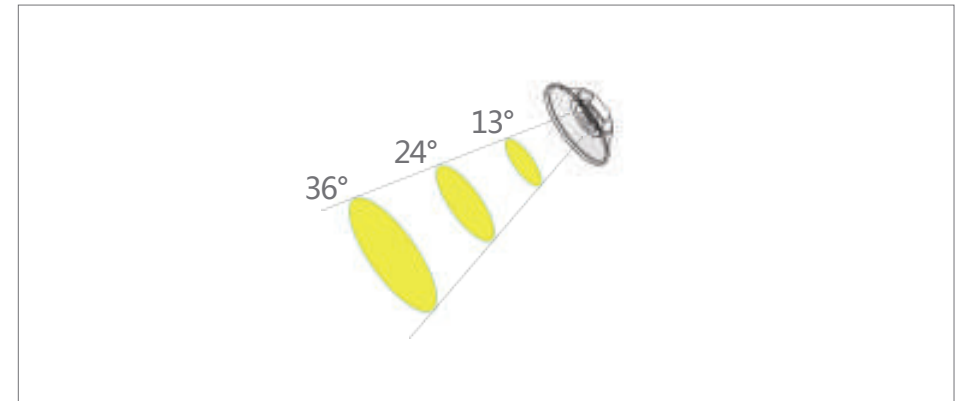
HK-75@31-XX-D9-20-1g-1			
Size	FWHM	Material	Efficiency
φ:75mm H:31mm	10°/15°/24°/36°/60°	PMMA	92%
Holder	Lens by LED		
Holder A	CREE: CMT14XX		
	CITIZEN: CLU028		
	LUMILEDS: 205/207/209/1202S/1202HD		
	PHILIPS: Fortimo 1202		
	OSRAM: S9		
	EVERLIGHT: JU1215		
	SAMSUNG: LC003D/LC006D/LC009D/LC013D		
	EDISON: HE03/HE06/HE09/HE13/HM03/HM06/HM09/HM13		
	HONOURTEK: HRA06XX/04XX		
	TOYONIA: Y3XX		
	ECO: M6/M8/ H9		
Holder B	CREE: 18XX /CMT19XX		
	CITIZEN: CLU038/ 711 /721		
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C		
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40		
	LUMINUS: CHM-9 /CHM-11/CXM-11/CHM-14/CXM-14		
	BRIDGELUX: G7-V13/H12/H15 / HD9 /ECOB-27W/35W/42W		
	PHILIPS: CertaFlux 1204/1205/1208		
	OSRAM: S13/S15		
	EVERLIGHT: XUAN1919		
	SSC: MJT 18W/24W/30W		
	ECO: R18XX/I19XX/S15D/S25D		

HK-75@31-XX-D9-20-1g-1			
Size	FWHM	Material	Efficiency
φ:75mm H:31mm	10°/15°/24°/36°/60°	PMMA	92%
Holder	Lens by LED		
Holder C	LUMILEDS: 1204/1205/1208		
	PHILIPS: Fortimo 1205/1208		
	EVERLIGHT: JU2024		
Holder D	CREE: CXA15XX /CMA1516		
	LUMINUS: CHM-9/CXM-9		
	BRIDGELUX: V10-G6/V13/H9		
	PHILIPS: CertaFlux 1202/1203		
	HONOURTEK: HRA09XX		
	TOYONIA: Y5XX		
	SSC: MJT 9/12W		
Holder E	ECO: R15XX		
	LUMILEDS: 1202/1203/1204HD/1205HD		
	PHILIPS: Fortimo 1203/1204		
Holder F	NICHIA: NFCWL-V3/NVEWL-V1		
	BRIDGELUX: Dim To Warm 15mm		
Holder G	LUMINUS: CDM-14/CDM-18		
Holder H	BRIDGELUX: DS153 Tunable White 13mm		
Holder I	CITIZEN: CLC030-081B		
Holder J	CITIZEN: LCN-C03A		
Holder K	CITIZEN: LCN-C02B		
	LUMINUS: CTM-14/CTM-18		



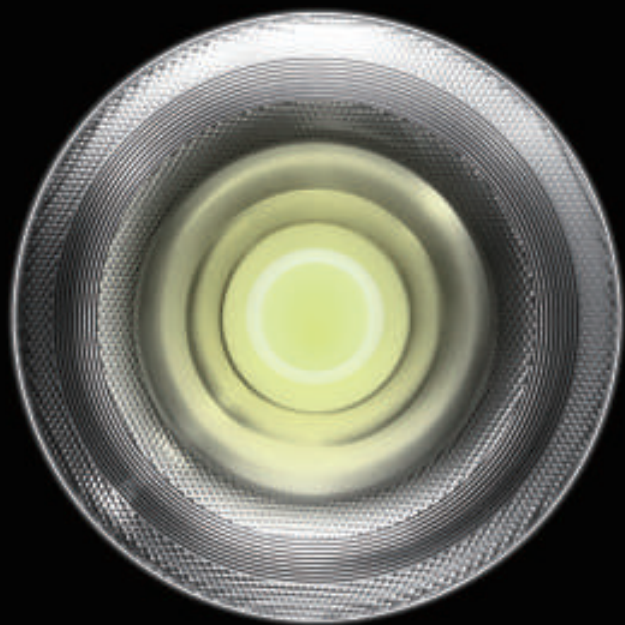
Introduction

Different with the traditional convex lens, the focus family can keep the same efficiency when zooming. By the special optical designing, each reflection surfaces have the same uniform energy to achieve good uniformity without the dark in the middle.



Product characteristic

Fresnel lens has unique optical properties, which can change the optical angle and the size of the spot by changing the distance between light source and lens.



15°~38°: Indicate the zoom range is 15° to 38°

FOCUS

HK-50@14-13_45-D6-20-1g-1				
Size	FWHM	Material	Efficiency	Lens by LED
φ:50mm H:14mm	13°~38°	PC	85%	CREE: 13XX
				LUMILEDS: S01HD/S01HL/S02HD
				PHILIPS: CertaFlux 1201
				BRIDGELUX: H6
				ECO: CRC1313
				HONOURTEK: HRA06XX/04XX

HK-75@19-13_45-D6-20-1g-1				
Size	FWHM	Material	Efficiency	Lens by LED
φ:75mm H:19mm	13°~38°	PC	85%	CREE: CXA15XX/CMA1516
				ECO: R15XX
				PHILIPS: CertaFlux 1202/1203
				BRIDGELUX: G6-V10/H9
				HONOURTEK: HRA09XX
				TOYONIA: Y5XX

HK-90@24-13_45-D6-20-1g-1				
Size	FWHM	Material	Efficiency	Lens by LED
φ:90mm H:24mm	13°~38°	PC	85%	CREE: CXA18XX/CMA18XX
				PHILIPS: CertaFlux 1204/1205/1208
				ECO: CRC1818
				BRIDGELUX: H12
				TOYONIA: Y6XX
				HONOURTEK: HRA12XX

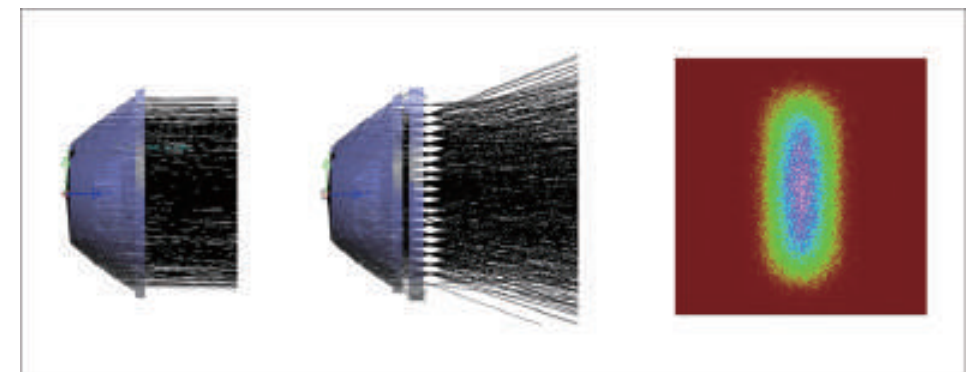
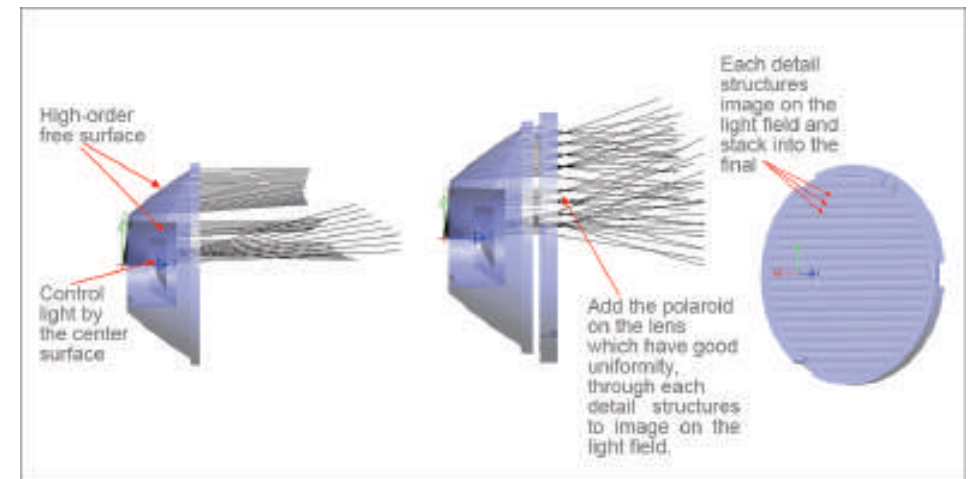


Introduction

Polaroid means using the normally narrow beam angle circle optics to achieve different beam angle, different shape of the facula. Main application is the partial lighting in the art exhibition, not only can achieve different facula requirements, but also can decrease the cost effectively.

Principle

Redistributing the collimating light by each tiny structures to achieve different beam angle and different shape optics, then mixed to achieve different target facula.



POLAROID

FWHM $\leq 3^\circ$?

Small FWHM lens use to design small track lights,
match with Polaroid small pcs,
not only can realize the angle change,
but also can realize the facula shape change.

POLAROID

POLAROID

HK-30@11-6-3535-20-1g-1				
Size	FWHM	Material	Efficiency	Lens by LED
φ:30mm H:11mm	6°	PC	90%	CREE: XPG/XPE/XTE/XHP35
				SSC: Z5M2
				LUMILEDS: LUXEON C/MZ

HK-50@18-3-3535-20-1g-1				
Size	FWHM	Material	Efficiency	Lens by LED
φ:50mm H:18mm	3°	PC	90%	CREE: XPG/XPE/XTE/XHP35
				SSC: Z5M2
				LUMILEDS: LUXEON C/MZ
				LUMINUS: SST-20

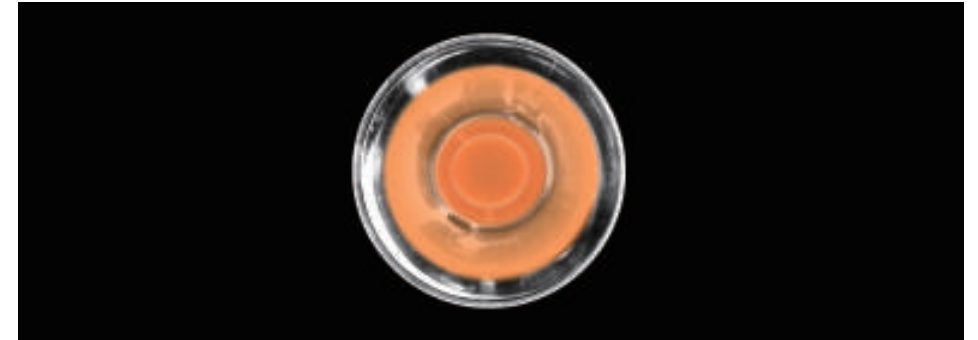
HK-40@15-4-3535-20-1g-1					
Size	FWHM	Material	Efficiency	Holder	Lens by LED
φ:40mm H:15mm	4°	PC	90%	Holder A	CREE: XPG/XPE/XTE
					LUMILEDS: LUXEON C/CZ
					LUMINUS: SST-20
	6.9°	PC	90%	Holder A	CREE: XHP35
					SSC: Z5M2
					LUMILEDS: MZ
				Holder B	SMD 5050

Holder A: Have with Buckle version and without Buckle version.

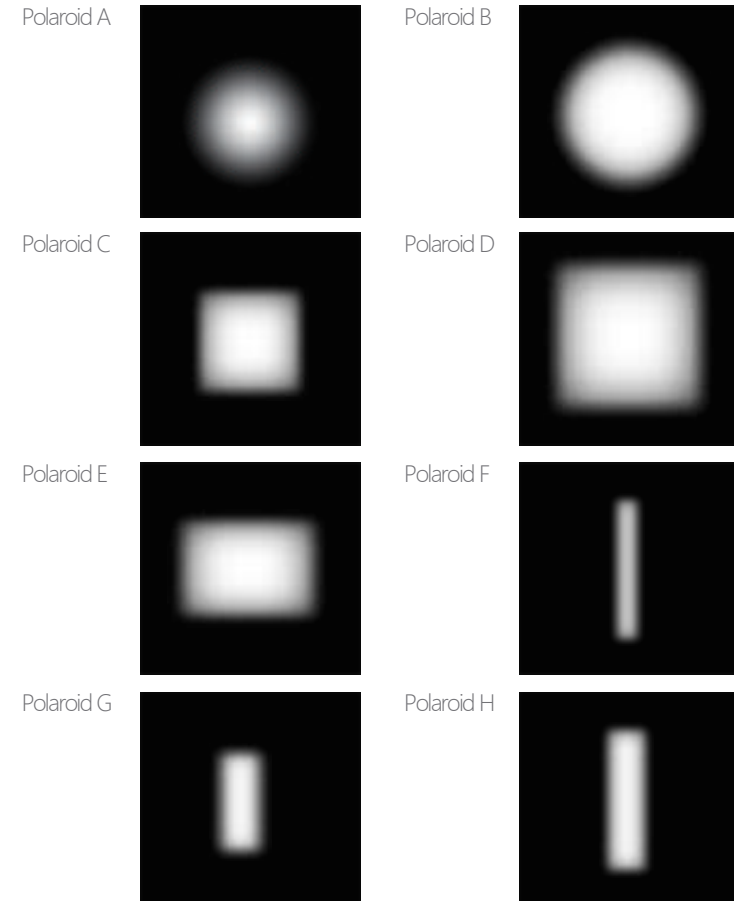
Polaroid	FWHM
Polaroid A	25°
Polaroid B	36°
Polaroid C	25°×25°
Polaroid D	36°×36°
Polaroid E	25°×36°
Polaroid F	10°×25°
Polaroid G	10°×36°
Polaroid H	4°×36°

Polaroid diffusers is designed for HK-40@15, For HK-30@11 and HK-50@18 could also make customization for Polaroid diffusers.

Lens front view



Facula shape





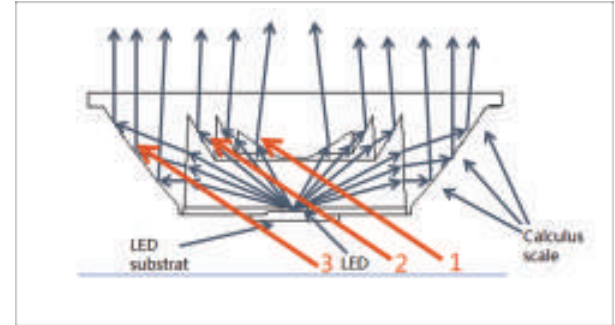
PHOTON

Degree from 12°- 36°
 Diameter from 35mm-90mm
 Thickness from 9.5mm-23.2mm
 More angle, more size,
 give you more choices.



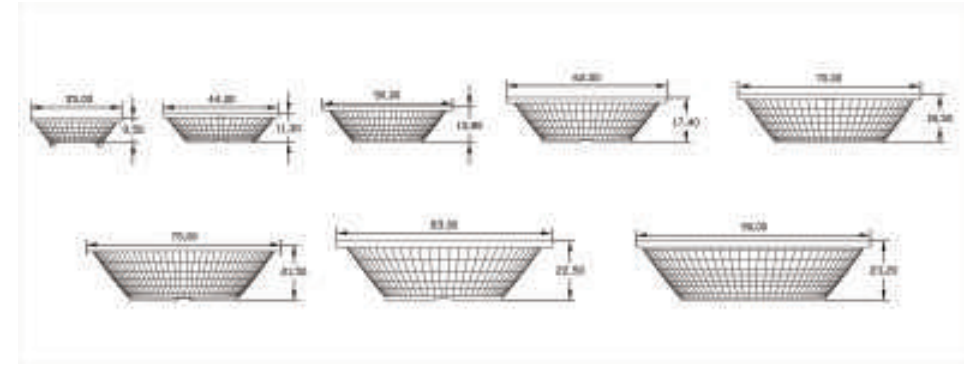
Spot

Photon Lens designed by one refracting surface and several fully reflecting surfaces, can control the light distribution well by lower lens height.



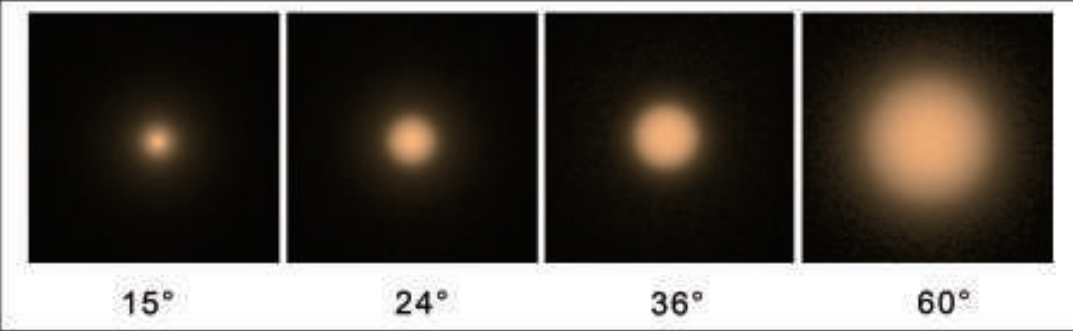
Why can make the light distribution well by lower lens height ?

- 1、 Area 1 is refracting surface, control the light from the middle of the LED, to control the small beam angle;
- 2、 Area 2 are fully reflecting surfaces, little far away from the COB, control some long lights to be small beam angle;
- 3、 Area 3 are periphery fully reflecting surfaces, control the outermost lights also the best lights, can make smaller beam angle and make a clear edge light spot.





HK-35@10-XX-D6-20-1g-1			
Size	FWHM	Material	Efficiency
φ:35mm H:9.5mm	15°/24°/36°/60°	PC	85%
Holder	Lens by LED		
Holder A	CREE: CXA13XX/CMT14XX		
	CITIZEN: CLU701		
	SAMSUNG: LC010C/LC003D/LC006D/LC009D/LC013D		
	EDISON: HM10/HD10/HD13/HD24/HE03/HE06/HE09/HE13/HM03/HM06/HM09/HM13		
	LUMINUS: CHM-6/CXM-7		
	BRIDGELUX: V6-G6/V8/V8-G7/H6/HD6/HD4/ECOB-E6/E8		
	PHILIPS: CertaFlux 1201		
	LUMILEDS: S01HD/S01HL/S02HD/S04HD		
	HONOURTEK: HRA06XX		
	TOYONIA: Y3AE		
Holder B	EVERLIGHT: XUAN1313		
	ECO: H4E/H6		
Holder C	CITIZEN: CLU0A0/0B0		
	LUMILEDS: 205/207/209/1202S/1202HD		
Holder D	PHILIPS: Fortimo 1202		
	NICHIA: NTCWS024B/NTCWT012B		
Holder D	ECO: SHC1208		



PHOTON

HK-44@11-XX-D9-20-1g-1			
Size	FWHM	Material	Efficiency
φ:44mm H:11.3mm	15°/24°/36°/60°	PC	85%
Holder	Lens by LED		
Holder A	CREE: CXA13XX/CMT14XX		
	CITIZEN: CLU701/028		
	SAMSUNG: LC010C/LC003D/LC006D/LC009D/LC013D		
	EDISON: HM10/HD10/HD13/HD24/HE03/HE06/HE09/HE13/HM03/HM06/HM09/HM13		
	LUMINUS: CHM-6/CXM-7		
	BRIDGELUX: V10-G7/H6/ECOB-7W/13W/18W		
	PHILIPS: CertaFlux 1201		
	LUMILEDS: S01HD/S01HL/S02HD/S04HD		
	HONOURTEK: HRA06XX		
	TOYONIA: Y3XX		
	OSRAM: S9		
Holder B	BRIDGELUX: V6-G6/V8-G6/HD4/ECOB-E6/E8		
	EVERLIGHT: JU1215		
Holder C	LUMILEDS: 205/207/209/1202S/1202HD/1204HD/1205HD		
	PHILIPS: Fortimo 1202/1203/1204		
	NICHIA: NTCWS024B/NTCWT012B		
Holder D	ECO: M6/M8/SHC1215		
	CITIZEN: 0A0/0B0		
Holder E	CREE: CXA15XX.CMA1516		
	BRIDGELUX: V10-G6/V13-G6//H9		
	LUMILEDS: S01HD/S01HL/S02HD		
	PHILIPS: CertaFlux 1202/1203		
	LUMINUS CHM-9/CXM-9		
	HONOURTEK: HRA09XX		
	TOYONIA: Y3XX		
SSC: MJT 9W/12W			

PHOTON

HK-50@14-12-D6-20-1g-1			
Size	FWHM	Material	Efficiency
φ:50mm H:14mm	15°/24°/36°/60°	PC	85%
Holder	Lens by LED		
Holder A	CREE: CXA13XX/CMT14XX		
	CITIZEN: CLU701/028		
	SAMSUNG: LC010C/LC003D/LC006D/LC009D/LC013D		
	EDISON: HM10/HD10/HD13/HD24/HE03/HE06/HE09/HE13/HM03/HM06/HM09/HM13		
	LUMINUS: CHM-6/CXM-7		
	BRIDGELUX: V10-G7/H6/ECOB-7W/13W/18W		
	PHILIPS: CertaFlux 1201		
	LUMILEDS: S01HD/S01HL/S02HD/S04HD		
	HONOURTEK: HRA06XX		
	TOYONIA: Y3XX		
	OSRAM: S9		
Holder B	BRIDGELUX: V6-G6/V8-G6/HD4/ECOB-E6/E8		
	EVERLIGHT: JU1215		
Holder C	LUMILEDS: 205/207/209/1202S/1202HD/1204HD/1205HD		
	PHILIPS: Fortimo 1202/1203/1204		
	NICHIA: NTCWS024B/NTCWT012B		
Holder D	ECO: M6/M8/SHC1215		
	CITIZEN: 0A0/0B0		
Holder E	CREE: CXA15XX.CMA1516		
	BRIDGELUX: V10-G6/V13-G6//H9		
	LUMILEDS: S01HD/S01HL/S02HD		
	PHILIPS: CertaFlux 1202/1203		
	LUMINUS CHM-9/CXM-9		
	HONOURTEK: HRA09XX		
	TOYONIA: Y3XX		
SSC: MJT 9W/12W			

PHOTON

HK-62@18-XX-D9-20-1g-1			
Size	FWHM	Material	Efficiency
φ:62mm H:17.5mm	15°/24°/36°/60°	PC	85%
Holder	Lens by LED		
Holder A	CREE: CXA15XX /CMA1516		
	LUMINUS: CHM-9/CXM-9		
	BRIDGELUX: V10-G6/V13/H9		
	PHILIPS: CertaFlux 1202/1203		
	HONOURTEK: HRA09XX		
	TOYONIA: Y5XX		
	SSC: MJT 9/12W		
Holder B	ECO: R15XX		
	CREE: CXA18XX/CMA18XX		
	CITIZEN: CLU038/711/721		
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C		
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40		
	LUMINUS: CHM-9G1(XH00)/CHM-11/CHM-14/CXM-14		
	BRIDGELUX: G7-V13/H15 /HD9/ECOB-27W/35W/42W		
	PHILIPS: CertaFlux 1204/1205/1208		
	OSRAM: S13/S15		
	EVERLIGHT: XUAN1919		
	Holder B	SSC: MJT 18W/24W/30W	
ECO: I19XX/ S15D/S25D			
Holder C	LUMILEDS: 1204/1205/1208		
	PHILIPS: Fortimo 1205/1208		
	EVERLIGHT: JU2024		
Holder D	LUMILEDS: 1202/1203/1204HD/1205HD		
	PHILIPS: Fortimo 1203/1204		
	NICHIA: NFCWL-V3/NVEWL-V1		

PHOTON

HK-70@19-XX-D9-20-1g-1			
Size	FWHM	Material	Efficiency
φ:70mm H:18.5mm	15°/24°/36°/60°	PC	85%
Holder	Lens by LED		
Holder A	LUMINUS: CHM-9G1(XH00)/CHM-11 XH00/CXM-11G2/ CXM-11G3/CHM-14G1(AC00)/CXM-14G1(AC00)/CXM- 14G2(AC00)		
	CREE: CXA15XX /CMA1516		
Holder B	CITIZEN: CLU028		
	SAMSUNG: SAMSUNG: LC003D/LC006D/LC009D/LC013D		
	EDISON: HE03/HE06/HE09/HE13/HM03/HM06/HM09/HM13		
	LUMINUS: CHM-9/CXM-9		
	BRIDGELUX: V10-G6/V13/H9		
	PHILIPS: CertaFlux 1202/1203		
	OSRAM: S9		
	HONOURTEK: HRA09XX		
	TOYONIA: Y5XX		
	SSC: MJT 9/12W		
	ECO: R15XX		
Holder C	CREE: CXA18XX/CMA18XX		
	CITIZEN: CLU038/711/721		
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C		
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40		
	LUMINUS: CHM-9G1(XH00)/CHM-11/CHM-14/CXM-14		
	BRIDGELUX: G7-V13/H15 /HD9/ECOB-27W/35W/42W		
	PHILIPS: CertaFlux 1204/1205/1208		
	OSRAM: S13/S15		
	EVERLIGHT: XUAN1919		
	SSC: MJT 18W/24W/30W		
	ECO: I19XX/ S15D/S25D		
Holder D	LUMILEDS: 1204/1205/1208		
	PHILIPS: Fortimo 1205/1208		
	EVERLIGHT: JU2024		
	LUMINUS: CHM-9(AA10) /CXM-9(AA00)/G3-CXM-9		
Holder E			

PHOTON

HK-75@21-XX-D9-20-1g-1			
Size	FWHM	Material	Efficiency
φ:75mm H:21.5mm	15°/24°/36°/60°	PC	85%
Holder	Lens by LED		
Holder A	CREE: CXA15XX /CMA1516		
	LUMINUS: CHM-9/CXM-9		
	BRIDGELUX: V10-G6/V13/H9		
	PHILIPS: CertaFlux 1202/1203		
	HONOURTEK: HRA09XX		
	TOYONIA: Y5XX		
	SSC: MJT 9/12W		
Holder B	ECO: R15XX		
	CREE: CXA18XX/CMA18XX		
	CITIZEN: CLU038/711/721		
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C		
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40		
	LUMINUS: CHM-9G1(XH00)/CHM-11/CHM-14/CXM-14		
	BRIDGELUX: G7-V13/H15 /HD9/ECOB-27W/35W/42W		
	PHILIPS: CertaFlux 1204/1205/1208		
	OSRAM: S13/S15		
	EVERLIGHT: XUAN1919		
	SSC: MJT 18W/24W/30W		
Holder C	ECO: I19XX/ S15D/S25D		
	LUMILEDS: 1204/1205/1208		
	PHILIPS: Fortimo 1205/1208		
EVERLIGHT: JU2024			

PHOTON

HK-83@22-XX-D12-20-1g-1			
Size	FWHM	Material	Efficiency
φ:83mm H:22mm	15°/24°/36°/60°	PC	85%
Holder	Lens by LED		
Holder A	CREE: CXA18XX/CMA18XX		
	CITIZEN: CLU038/711/721		
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C		
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40		
	LUMINUS: CHM-9G1(XH00)/CHM-11/CHM-14/CXM-14		
	BRIDGELUX: G7-V13/H15 /HD9/ECOB-27W/35W/42W		
	PHILIPS: CertaFlux 1204/1205/1208		
	OSRAM: S13/S15		
	EVERLIGHT: XUAN1919		
	SSC: MJT 18W/24W/30W		
Holder B	ECO: I19XX/ S15D/S25D		
	CREE: 25XX		
	HONOURTEK: HRA19XX		
	SORAM: S19		
	PHILIPS: Fortimo 1205/1208		
Holder C	LUMILEDS: 1204/1205/1208		
	EVERLIGHT: JU2024		
Holder D	BRIDGELUX: V15-G6/V18-G6		
	LUMINUS: CHM-14(XH00)/CXM-18G2/CXM-18G3		
	CREE: CMT28XX		
	CITIZEN: 048/731		
	SAMSUNG: LC040D/LC060D/LC080D		
	EDISON: HE33/HE36/HE55/HE60/HE83/HM33/HM36/HM55/HM60/HM83		
	BRIDGELUX: ECOB-53W		
	PHILIPS: Fortimo 1211		
	LUMILEDS: 1211/1216		
	EVERLIGHT: XUAN2828		
PHILIPS: Fortimo 1205/1208			

PHOTON

HK-90@22-XX-D12-20-1g-1			
Size	FWHM	Material	Efficiency
φ:90mm H:23.2mm	15°/24°/36°/60°	PC	85%
Holder	Lens by LED		
Holder A	CREE: CXA18XX/CMA18XX		
	CITIZEN: CLU038/711/721		
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C		
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40		
	LUMINUS: CHM-9G1(XH00)/CHM-11/CHM-14/CXM-14		
	BRIDGELUX: G7-V13/H15 /HD9/ECOB-27W/35W/42W		
	PHILIPS: CertaFlux 1204/1205/1208		
	OSRAM: S13/S15		
	EVERLIGHT: XUAN1919		
	SSC: MJT 18W/24W/30W		
Holder B	ECO: I19XX/ S15D/S25D		
	CREE: CMT28XX		
	CITIZEN: 048/731		
	SAMSUNG: LC040D/LC060D/LC080D		
	EDISON: HE33/HE36/HE55/HE60/HE83/HM33/HM36/HM55/HM60/HM83		
	BRIDGELUX: ECOB-53W		
	PHILIPS: Fortimo 1211		
	LUMILEDS: 1211/1216		
	EVERLIGHT: XUAN2828		
	PHILIPS: Fortimo 1205/1208		
Holder C	BRIDGELUX: V15-G6/V18-G6		
Holder D	LUMINUS: CHM-14(XH00)/CXM-18G2/CXM-18G3		
	CREE: 25XX		
	HONOURTEK: HRA19XX		
	SORAM: S19		
	PHILIPS: Fortimo 1205/1208		
Holder E	LUMILEDS: 1204/1205/1208		
	EVERLIGHT: JU2024		
	CREE: CXA15XX/CMA1516		
	BRIDGELUX: H9/V10-G6		
	LUMILEDS: CertaFlux 1202/1203		
	PHILIPS: CertaFlux 1201		
	TOYONIA: Y5XX/F10/Y5JS/Y5KS/M20		
	HONOURTEK: HRB 09XX		



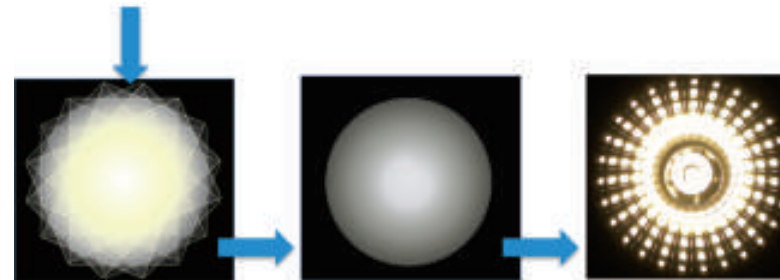
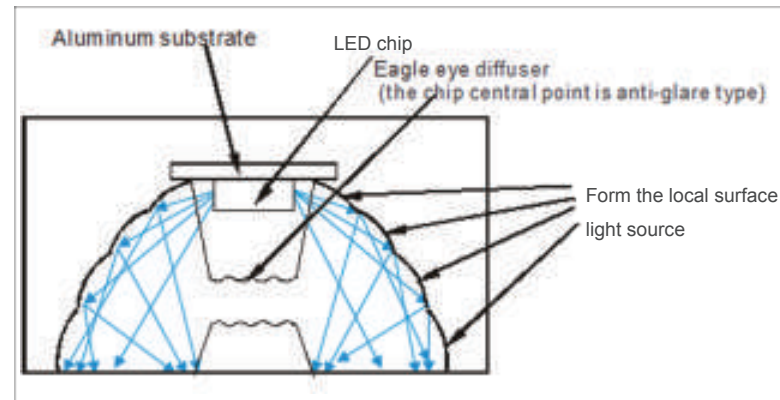


DIAMOND

Herculux Optics is the first one to propose and design lens using calculus technology, completely solve the dazzling and glare of lighting.

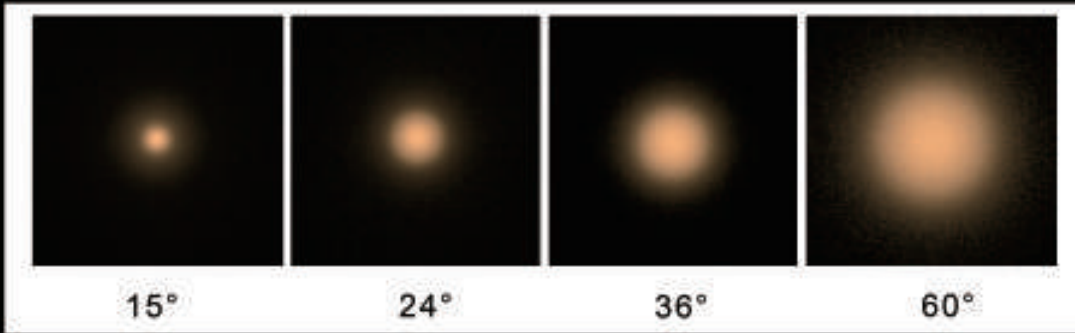
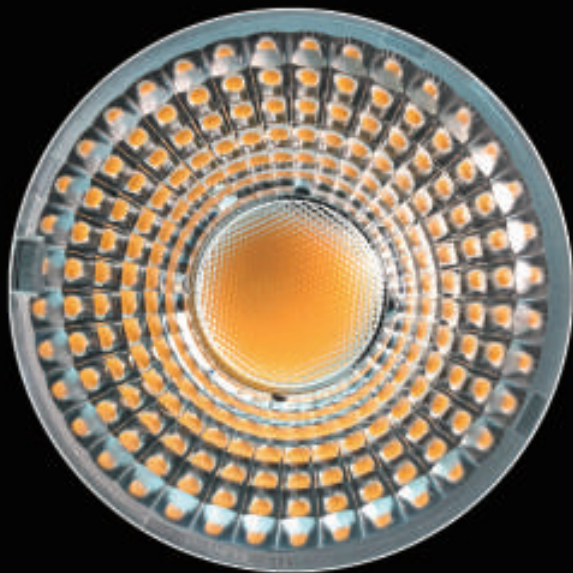


Design Principle



- 1、 Make segmentation differential process for the wave surface of several scale light sources. In this way, the light source will be cut into several sub-light sources. (differential calculus for light source);
- 2、 Each sub-light source forms sub-facula on the light field. The centers coincide with each other, rotate and overlay (differential calculus of light field) and form a lighting field with uniform color;
- 3、 The light received by each scale would be consistent or with uniform change. In this way, the glaring surface of lens would have the same brightness and prevent dazzling.

DIAMOND



HK-35@12.4-XX-D6-20-1g-1				
Size	FWHM	Material	Efficiency	Lens by LED
Φ:35mm H:12.4mm	24° 38°	PMMA	92%	CITIZEN: CLU025/CLL012
				CREE: MHB/CXA1304/CXA1310
				LUMINUS: CLM-6/CXM-6/CHM-6/CXM-7
				BRIDGELUX: C6/V6
				SSC: ZC4/ZC6

HK-35@17-XX-D6-20-1g-1				
Size	FWHM	Material	Efficiency	Lens by LED
Φ:35mm H:17.2mm	15° 24° 38° 60°	PMMA	92%	CITIZEN: CLL028/012
				CREE: MHB/CXA13XX
				LUMINUS: CLM-3/CHM-6/CXM-7
				SSC: ZC4/ZC6
				BRIDGELUX: C6/V6

HK-43@22.8-XX-D9-20-1g-1				
Size	FWHM	Material	Efficiency	Lens by LED
Φ:43mm H:22.8mm	15° 24° 36° 60° 90° 120°	PMMA	92%	CITIZEN: CLU024/CLL022
				CREE: CXA1507/CXA1512/CXA1520
				LUMINUS: CLM-9/CXM-9/CHM-9
				SSC: ZC4/ZC6

HK-44@18-XX-D9-20-1g-1				
Size	FWHM	Material	Efficiency	Lens by LED
Φ:44mm H:18mm	24° 38°	PMMA	92%	CITIZEN: CLU024/CLL022
				CREE: CXA1507/CXA1512/CXA1520
				LUMINUS: CLM-9/CXM-9/CHM-9
				BRIDGELUX: V8
				SSC: ZC4/ZC6

DIAMOND

HK-44@20-XX-D9-20-1g-1				
Size	FWHM	Material	Efficiency	Lens by LED
Φ:44mm H:20mm	15° 24° 36° 60°	PC	92%	CITIZEN: CLU024/CLL022
				CREE: CXA1507/CX1512/CXA1520
				LUMINUS: CLM-9/CXM-9/CHM-9
				BRIDGELUX: V8
				SSC: ZC4/ZC6

HK-46@24-XX-D6-20-1g-1				
Size	FWHM	Material	Efficiency	Lens by LED
Φ:44.5mm H:24.4mm	10°	PC	90%	LUMINUS: MZ
				CREE: XHP35/CXA1304/CXA1310
				LUMINUS: CXM-6

HK-52@25-XX-D6-20-1g-1				
Size	FWHM	Material	Efficiency	Lens by LED
Φ:52mm H:25mm	15° 24° 36°	PC	92%	CITIZEN: CLU025/CLL012/CLU024/CLL022
				CREE: MHB/MHD/CXA1304/CXA1310
				LUMINUS: CLM-6/CXM-6/CHM-6/CXM-7
				BRIDGELUX: C6/V6
				SSC: ZC4/ZC6

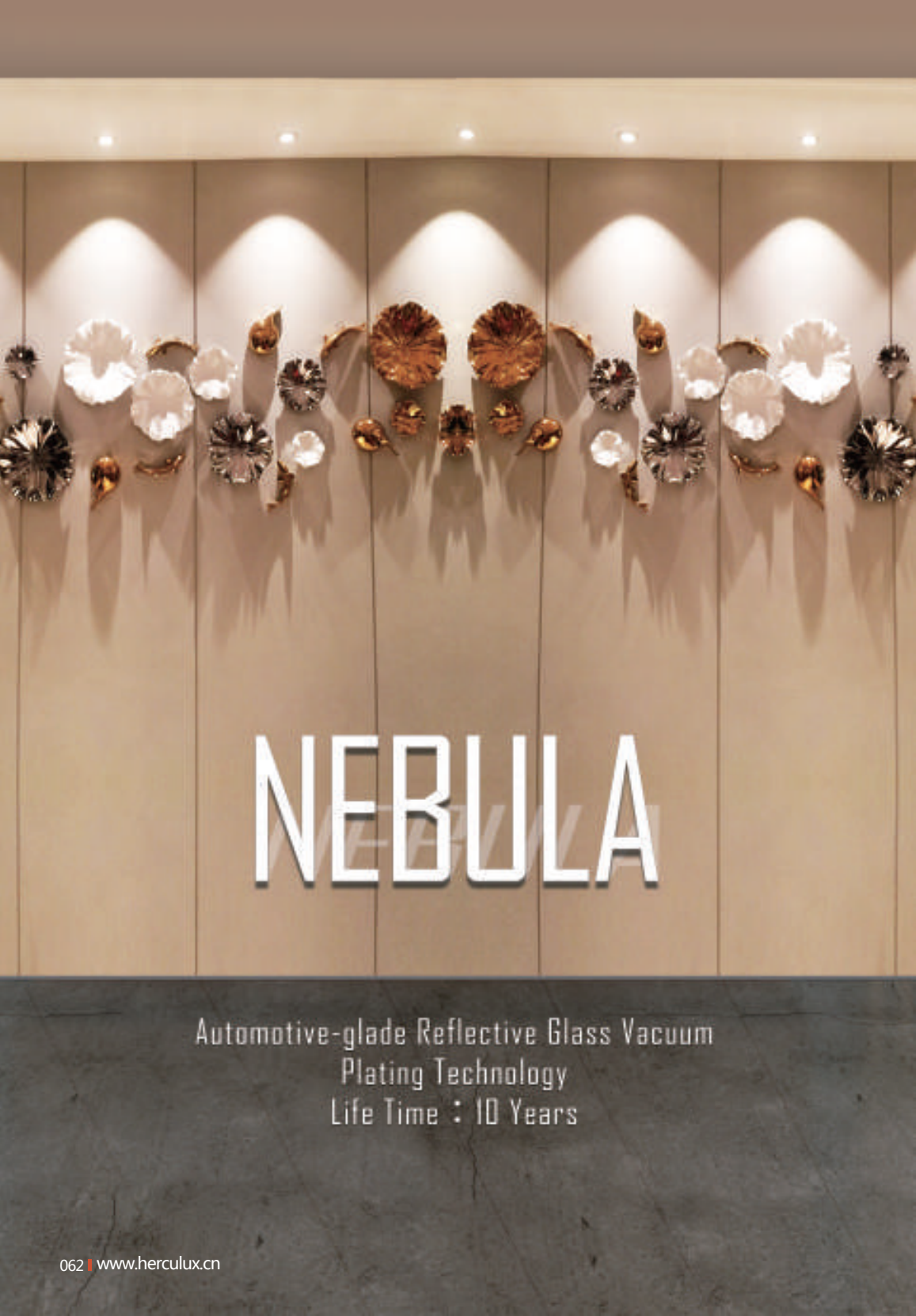
HK-55@21-XX-D9-20-1g-1				
Size	FWHM	Material	Efficiency	Lens by LED
Φ:54.7mm H:21.5mm	15° 20° 24° 36°	PMMA	88%	CREE: CXA1507/CXA1512/CXA1520
				LUMINUS: CXM-9
				BRIDGELUX: V8

DIAMOND

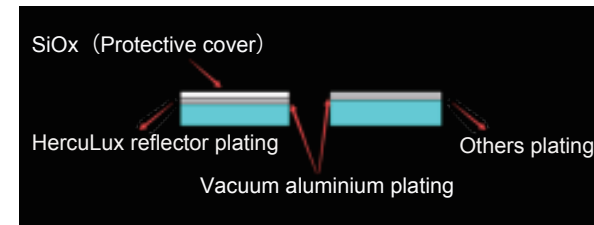
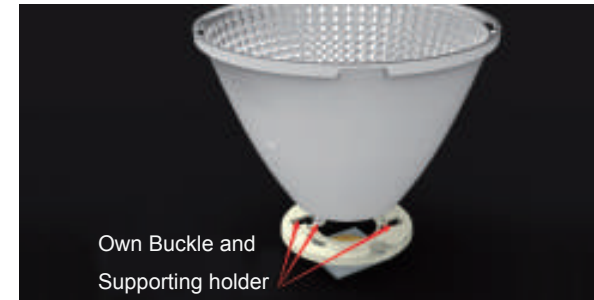
HK-62@22-XX-D18-20-1g-1				
Size	FWHM	Material	Efficiency	Lens by LED
Φ:62mm H:22mm	30° 38° 60° 90°	PMMA	92%	CITIZEN: CLL032/CLU034/CLU044/CLL042
				CREE: CXA1816/CXA1820/CXA1830/ CXA2520/CXA2530/CXA2540
				LUMINUS: CXM-14/CHM-14/CXM-18/CHM-18
				BRIDGELUX: V18
				SSC: ZC12/ZC18/ZC25/ZC40/ZC60

HK-72@37-XX-D18-22-1g-1				
Size	FWHM	Material	Efficiency	Lens by LED
Φ:72 mm H:36.5mm	15° 24°	PC	90%	CREE: CXA1816/CXA1820/CXA1830
				LUMINUS: CXM-11
				BRIDGELUX: V13

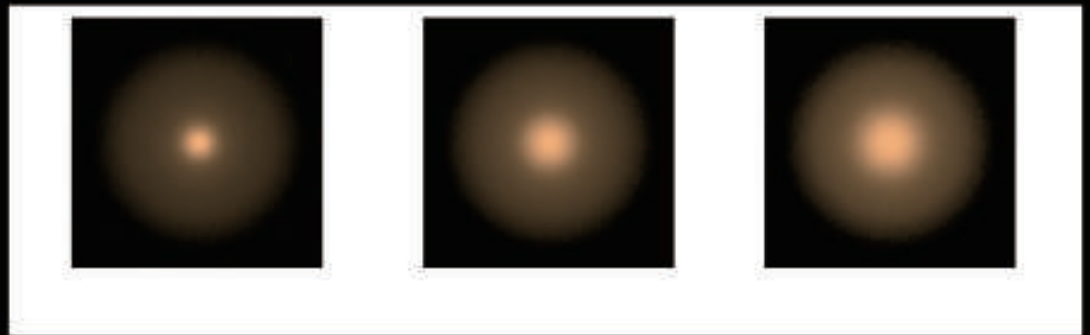
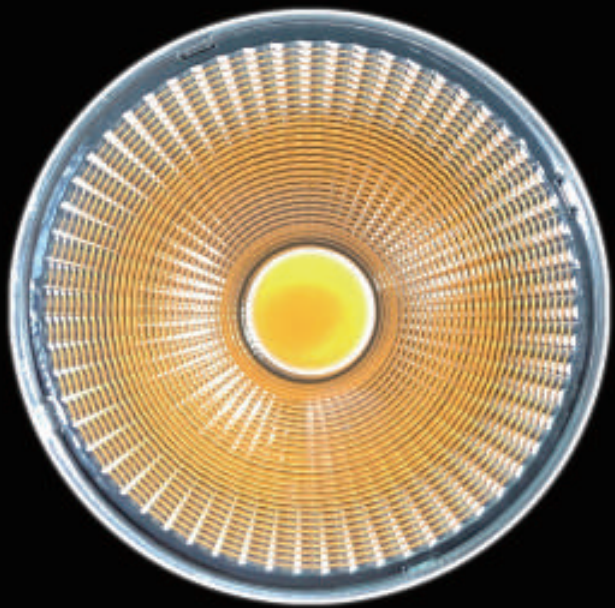
HK-76@28-60-XX-D18-20-1g-1				
Size	FWHM	Material	Efficiency	Lens by LED
Φ:76mm H:28mm	38° 60° 90°	PMMA	92%	CITIZEN: CLL032/CLU034/CLU044/CLL042
				CREE: CXA1816/CXA1820/CXA1830/CXA2520 /CXA2530/CXA2540
				LUMINUS: CXM-14/CHM-14/CXM-18/CHM-18
				BRIDGELUX: V18
				SSC: ZC12/ZC18/ZC25/ZC40/ZC60



Spot



- 1、 Easy Assembling Own buckle design and supporting holder design, Easy for assembling and precise positioning ;
- 2、 Easy Changing By special buckle and supporting holder and holder design, can easy change the reflector to get different beam angle in project site ;
- 3、 SiOx plating Automotive-grade reflective glass vacuum Plating technology of aluminium and SiOx, separate air and the aluminium plating, Superior anti-corrosion performance, can pass NaOH Alkali solution testing.



K-44@20-XX-D9-2#-1g-1			
Size	FWHM	Material	Efficiency
φ: 44mm H: 20mm	15°/24°/36°	Vacuum Aluminum Plating PC+SiOx	90%
Holder	Lens by LED		
Holder A	CREE: 15XX		
	LUMINUS: CHM-9		
	BRIDGELUX: H9		
	ECO: R15XX		
Holder B	CREE: 13XX		
	CITIZEN: CLU028		
	SAMSUNG: LC003D/LC006D/LC009D/LC013D		
	EDISON: HE03/HE06/HE09/HE13/HM03/HM06/HM09/HM13		
	OSRAM: S9		
	HONOURTEK: HRA06XX		
	TOYONIA: Y3AE		
	BRIDGELUX: HD6		
	EVERLIGHT: XUAN1313		
Holder C	CITIZEN: 711/038/721		
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C		
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40		
	OSRAM: S13		
	BRIDGELUX: HD9		
	ECO: R19XX/S15D/S25D		
Holder D	LUMILEDS: 1202/1203/1204HD/1205HD		
	PHILIPS: Fortimo 1203/1204		
	NICHIA: NFCWL036B		
Holder E	EVERLIGHT: JU1215		
	LUMILEDS: 205/207/209/1202/1202HD		
	NICHIA: NTCWS024B/NTCWT012B		
	PHILIPS: Fortimo 1202		
	HONOURTEK: HRC09XX-DW		
	ECO: M6/M8		

NEBULA

K-50@35-XX-D9-2#-1g-1			
Size	FWHM	Material	Efficiency
φ: 50mm H: 35mm	15°/24°/36°	Vacuum Aluminum Plating PC+SIOx	90%
Holder	Lens by LED		
Holder A	CREE: 15XX		
	LUMINUS: CHM-9		
	BRIDGELUX: H9		
	ECO: R15XX		
Holder B	CREE: 13XX		
	CITIZEN: CLU028		
	SAMSUNG: SAMSUNG: LC003D/LC006D/LC009D/LC013D		
	EDISON: HE03/HE06/HE09/HE13/HM03/HM06/HM09/HM13		
	OSRAM: S9		
	HONOURTEK: HRA06XX		
	TOYONIA: Y3AE		
	BRIDGELUX: HD6		
	EVERLIGHT: XUAN1313		
Holder C	CITIZEN: 711/038/721		
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C		
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40		
	OSRAM: S13		
	BRIDGELUX: HD9		
Holder D	ECO: R19XX/S15D/S25D		
	LUMILEDS: 1202/1203/1204HD/1205HD		
	PHILIPS: Fortimo 1203/1204		
Holder E	NICHIA: NFCWL036B		
	EVERLIGHT: JU1215		
	LUMILEDS: 205/207/209/1202/1202HD		
	NICHIA: NTCWS024B/NTCWT012B		
	PHILIPS: Fortimo 1202		
Holder B	HONOURTEK: HRC09XX-DW		
	ECO: M6/M8		

NEBULA

HK-69@46-XX-D12-2#-1g-1			
Size	FWHM	Material	Efficiency
φ: 69mm H: 46mm	15°/24°/36°	Vacuum Aluminum Plating PC+SIOx	90%
Holder	Lens by LED		
Holder A	CREE: CXA18XX/CMA18XX		
	CITIZEN: CLU711/721		
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C		
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40		
	BRIDGELUX: H12//H15/V13/HD9/ECOB-27W/35W/42W		
	LUMINUS: CHM-11/CXM-14		
	PHILIPS: CertaFlux 1204/1205/1208		
	OSRAM: S13/S15		
	EVERLIGHT: XUAN1919		
	SSC: MJT 18W/24W/30W		
	ECO: R18XX/I19XX/S15D/S25D		
	TOYONIA: Y6M		
	HONOURTEK: HRA12XX		
	Holder B	LUMILEDS: 1204/1205	
PHILIPS: Fortimo 1205/1208			
EVERLIGHT: JU2024			

NEBULA

HK-75@54-XX-D18-2#-1g-1			
Size	FWHM	Material	Efficiency
φ: 75mm H: 54mm	15°/24°/36°	Vacuum Aluminum Plating PC+SIOx	90%
Holder	Lens by LED		
Holder A	CREE: 25XX		
	LUMINUS: CHM-18		
	OSRAM: S19		
	BRIDGELUX: V18-G7		
Holder B	CREE: CMT19XX		
	CITIZEN: CLU038/711/721		
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C		
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40		
	BRIDGELUX: HD9/ECOB-27W/35W/42W		
	SSC: MJT 18W/24W/30W		
	ECO: R18XX/I19XX/S15D/S25D		
Holder C	CREE: CMT28XX		
	CITIZEN: CLU048/731		
	SAMSUNG: LC040D/LC060D/LC080D		
	EDISON: HE33/HE36/HE55/HE60/HE83/HM33/HM36/HM55/HM60/HM83		
	BRIDGELUX: ECOB-53W		
	EVERLIGHT: XUAN2828		
	PHILIPS: Fortimo 1211		
	LUMILEDS: 12011		
	ECO: 28XX		
Holder D	LUMILEDS: 1204/1205		
	PHILIPS: Fortimo 1205/1208		
	EVERLIGHT: JU2024		

NEBULA

HK-95@64-XX-D18-2#-1g-1			
Size	FWHM	Material	Efficiency
φ: 95mm H: 64mm	15°/24°/36°	Vacuum Aluminum Plating PC+SIOx	90%
Holder	Lens by LED		
Holder A	CREE: 25XX		
	LUMINUS: CHM-18		
	OSRAM: S19		
	BRIDGELUX: V18-G7		
Holder B	CREE: CMT19XX		
	CITIZEN: CLU038/711/721		
	SAMSUNG: LC016D/LC019D/LC026D/LC033D/LC020C/LC030C/LC040C		
	EDISON: HE15/HE18/HE24/HE30/HM15/HM18/HM24/HM30/HD40		
	BRIDGELUX: HD9/ECOB-27W/35W/42W		
	SSC: MJT 18W/24W/30W		
	ECO: R18XX/I19XX/S15D/S25D		
Holder C	CREE: CMT28XX		
	CITIZEN: CLU048/731		
	SAMSUNG: LC040D/LC060D/LC080D		
	EDISON: HE33/HE36/HE55/HE60/HE83/HM33/HM36/HM55/HM60/HM83		
	BRIDGELUX: ECOB-53W		
	EVERLIGHT: XUAN2828		
	PHILIPS: Fortimo 1211		
	LUMILEDS: 12011		
	ECO: 28XX		
Holder D	LUMILEDS: 1204/1205		
	PHILIPS: Fortimo 1205/1208		
	EVERLIGHT: JU2024		



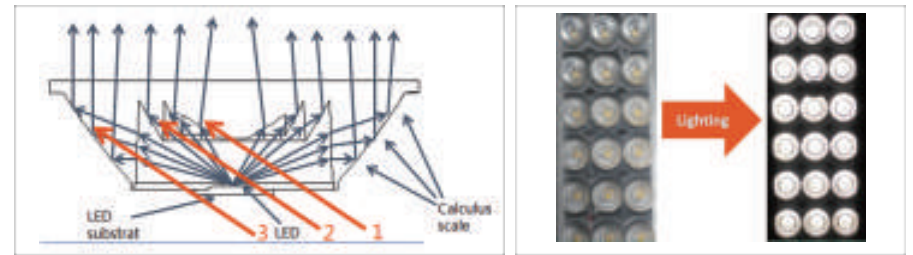
LIGHTNING

Adapted the calculus and Fresnel technology, have good effect although the short height assemble, and lower UGR importantly.

M Multi-level Reflect Technology

Design principle

Adapted the calculus and Fresnel technology, have good effect although the short height assemble, and lower UGR importantly.

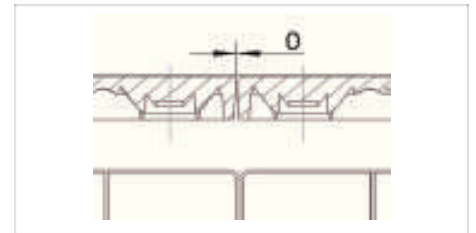


Appearance

HercuLux adopted the calculus and Fresnel technology, make the lens looked beautiful , The scales' space create the similar effect like the grid when lighting, and the surface brightness is more downy.Own technology, enough patents.

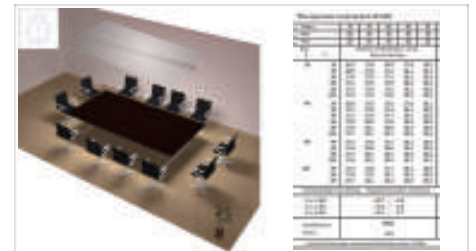
Structure

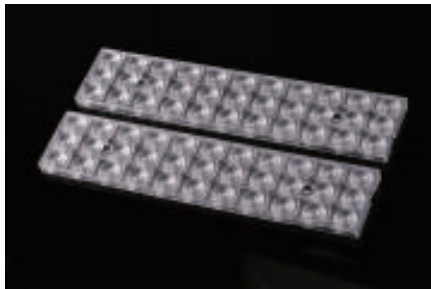
- 1、Injecting the glue from the mouldle front surface, upper is bigger than the under, can achieve the lens zero clearance assembled.
- 2、Optical PC, enough heat and weather resistance, UL-94: V2; UV cut : f1.



UGR

In our optical designing experience, the better angle for the office lighting is 80°, lower UGR.





Lightning

HK-286@10-XX-3030-22-1g-33

Size : L:286mm W:61mm

FWHM : 30°/60°/80°

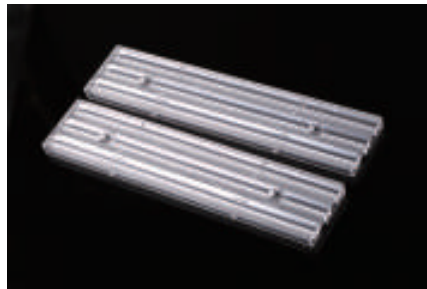
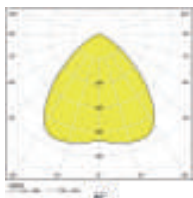
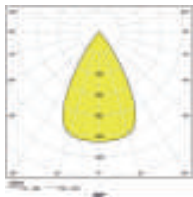
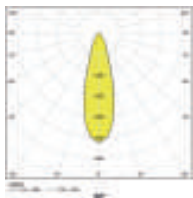
Material : PC

Efficiency : 86%

Application : Linear Light

Lens by LED :

SMD 3030/2835



Lightning

HK-286@10-XX-3030-22-1g-3

Size : L:286mm W:61mm

FWHM : Asymmetric/double asymmetric

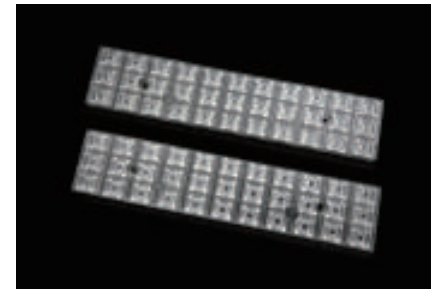
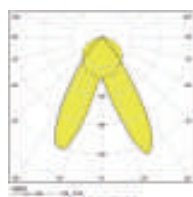
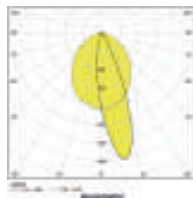
Material : PC

Efficiency : 86%

Application : Linear Light

Lens by LED :

SMD 3030/2835



Lightning

HK-286@08-XX-3030-22-1g-33

Size : L:286mm W:61mm

FWHM : 30°/60°/80°

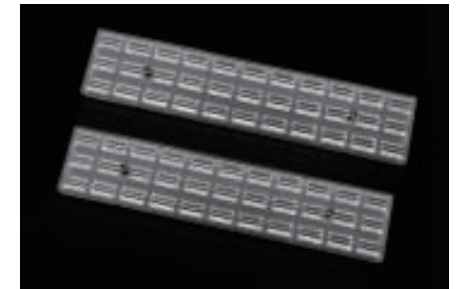
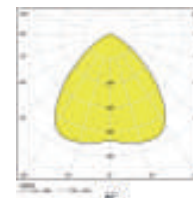
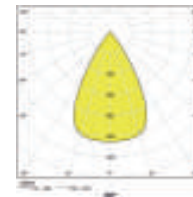
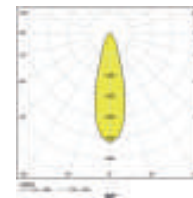
Material : PMMA

Efficiency : 88%

Application : Linear Light

Lens by LED :

SMD 3030/2835



Lightning

HK-286@08-XX-3030-22-1g-33

Size : L:286mm W:61mm

FWHM : Asymmetric/double asymmetric

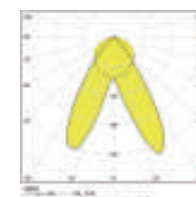
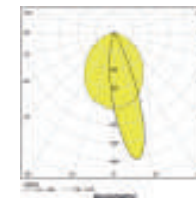
Material : PMMA

Efficiency : 88%

Application : Linear Light

Lens by LED :

SMD 3030/2835





COMET

Original Calculus imitated COB Technology
 Application: Down Light/
 PAR 16 PAR20/ PAR30/ PAR38



Comet

HK-45@13-XX-3030-22-1g-1

Size: Φ : 45 mm H: 13.3mm

FWHM: 30°

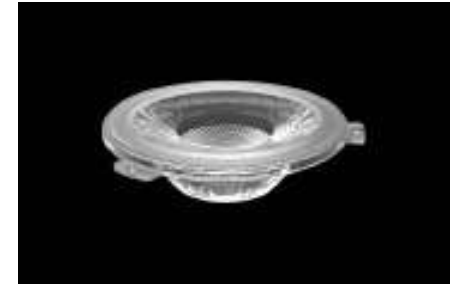
Material: PC

Efficiency: 88%

Application: PAR16、 Down Light

Lens by LED:

Copy COB: 6PCS 3030 , 6PCS 2835



Comet

HK-51@16-XX-3030-22-1g-1

Size: Φ : 51.3 mm H: 16.3mm

FWHM: 25°/40°

Material: PC

Efficiency: 88%

Application: PAR20、 Down Light

Lens by LED:

Copy COB: 6PCS 3030 , 6PCS 2835



Comet

HK-73@20-XX-3030-22-1g-1

Size: Φ : 73.3 mm H: 20.3mm

FWHM: 25°/40°

Material: PC

Efficiency: 88%

Application: PAR30、 Down Light

Lens by LED:

Copy COB: 12PCS 3030 , 12PCS 2835



Comet

HK-83@24-XX-3030-22-1g-1

Size: Φ : 94.2 mm H: 24mm

FWHM: 25°/40°

Material: PC

Efficiency: 88%

Application: PAR38、 Down Light

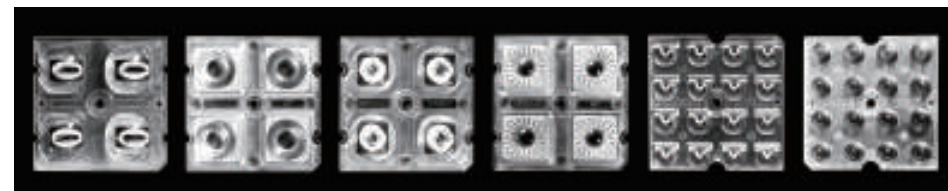
Lens by LED:

Copy COB: 12PCS 3030 , 12PCS 2835

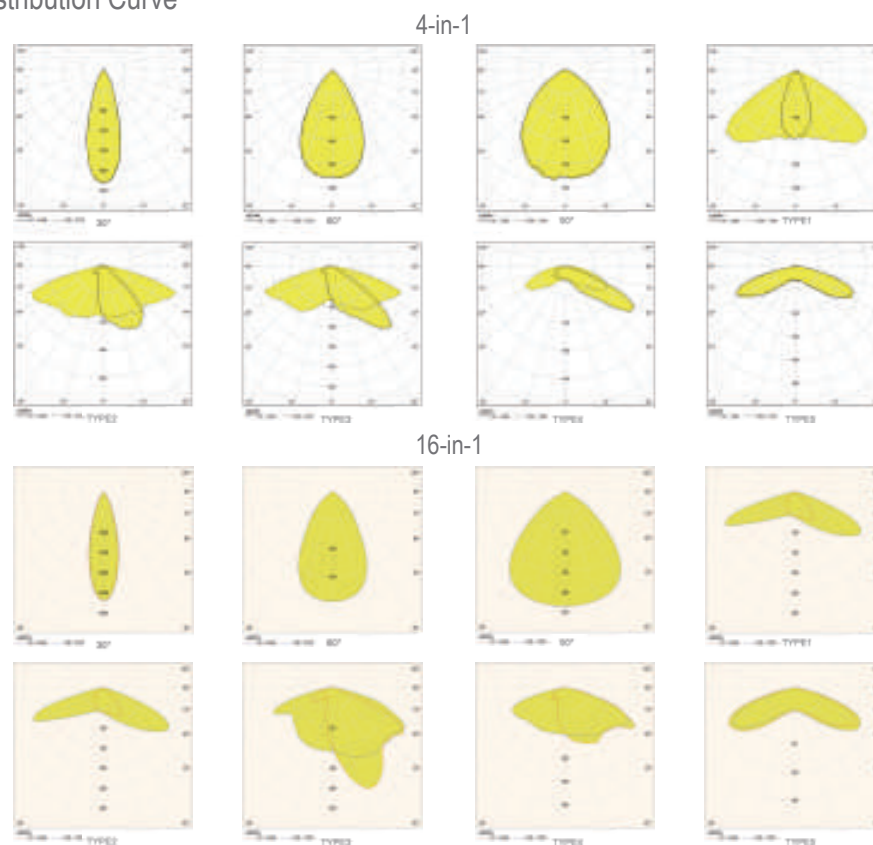


The Matrix lens has the following features:

1. The installation is flexible, and the number of lens can be flexibly selected according to the power /module of the lamp;
2. The matching light source is diversified. The 4-in-1 can match the common 3535/5050 light source in the market; The 16-in-1 can match the common 3030 light source in the market;
3. Complete light distribution to meet North American road standards, European standards and GB-CJJ45-2015 (ME4);
4. Special optical form to effectively control the backward light.



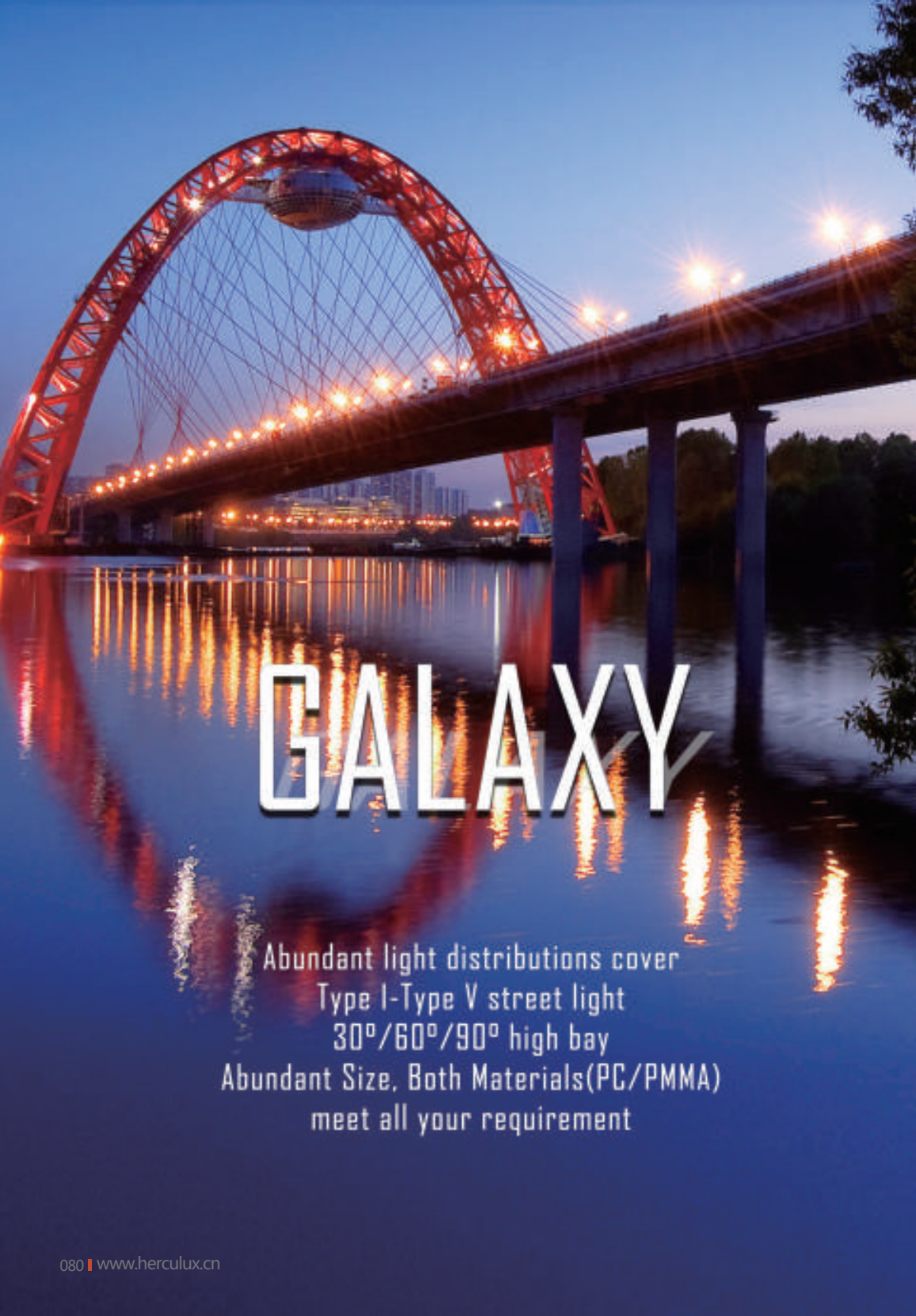
Distribution Curve



MATRIX SERIES (4-in-1)			
Size	L:50mm W:50mm		
Material	PC/PMMA		
PN	FWHM	Efficiency	Lens by LED
HK-50@12-10-3535-02-1g-4	10°	88%-92%	CREE: XPE/XTE/XPG OSRAM: OSLO Square/SSL/ P7/P8 NICHIA: 219B/319
HK-50@09-XX-3535-20-1g-4	25°/50°	88%-92%	CREE: XPE/XTE/XPG
		88%-92%	OSRAM: OSLO Square/SSL/ P7/P8
		88%-92%	LUMILEDS: Luxeon C
		88%-92%	NICHIA: 219B/319
HK-50@10-XX-5050-20-1g-4	30°/60°/90°	88%-92%	SMD 5050
HK-50@09-120X50-5050-#0-1g-4	Type I -S	88%-92%	SMD 5050
HK-50@09-150X60-5050-#0-1g-4_T2S	Type II -S	88%-92%	SMD 5050
HK-50@09-150X65-5050-#0-1g-4	Type II -M	88%-92%	SMD 5050
HK-50@09-155X80-5050-#0-0g-4	Type II -M	98% Lens with Gel	SMD 5050
HK-50@09-150X60-5050-#0-1g-4	TypeIII-S	88%-92%	SMD 5050
HK-50@09-150X70-5050-#0-1g-4_T3M	TypeIII-M	88%-92%	SMD 5050
HK-50@09-140X30-5050-#0-1g-4	TypeIV-S	88%-92%	SMD 5050
HK-50@09-148-5050-#0-1g-4	Type V -S	88%-92%	SMD 5050

MATRIX SERIES (16-in-1)			
Size	L:50mm W:50mm		
Material	PC/PMMA		
PN	FWHM	Efficiency	Lens by LED
HK-50@06-XX-3030-#1-1g-16	30°/60°/90°	88%-92%	SMD 3030
HK-50@05-140X70-3030-#0-1g-16	Type I	88%-92%	SMD 3030
HK-50@05-70X150-3030-#0-1g-16	Type II	88%-92%	SMD 3030
HK-50@04-150X80-3030-#0-1g-16	TypeIII	88%-92%	SMD 3030
HK-50@04-50X140-3030-#0-1g-16	TypeIV	88%-92%	SMD 3030
HK-50@04-140X140-3030-#0-1g-16	Type V	88%-92%	SMD 3030





GALAXY

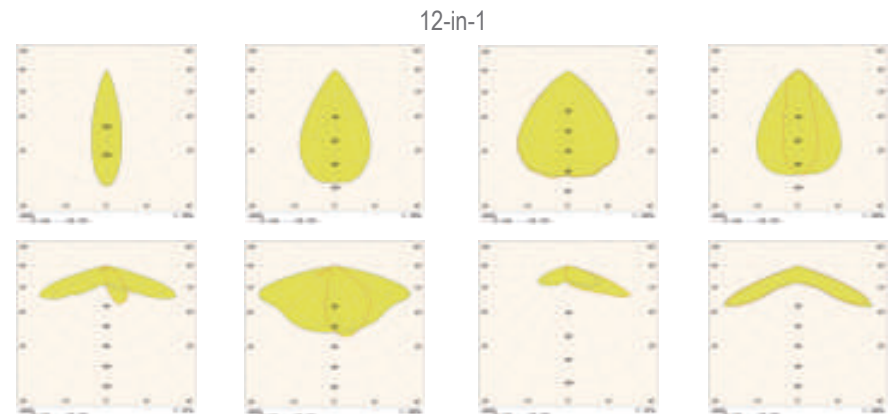
Abundant light distributions cover
 Type I-Type V street light
 30°/60°/90° high bay
 Abundant Size, Both Materials(PC/PMMA)
 meet all your requirement

The Galaxy lens has the following features:

1. The installation is flexible, and the number of lens can be flexibly selected according to the power /module of the lamp;
2. The matching light source is diversified, 56-in-1 lens can match the common 2835/3030 light source in the market; 28-in-1 can match the common 5050 light source; 12-in-1 lens can match the common 5050 light source;
3. Complete light distribution to meet North American road standards, European standards and GB-CJJ45-2015 (ME4);
4. Special optical form to effectively control the backward light.

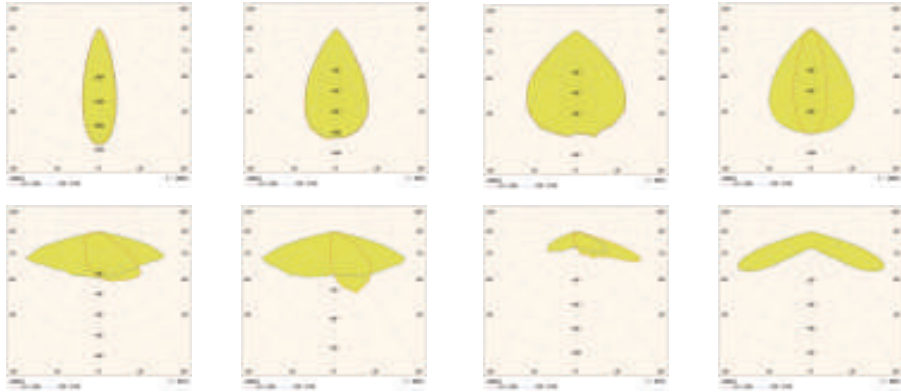


Distribution Curve

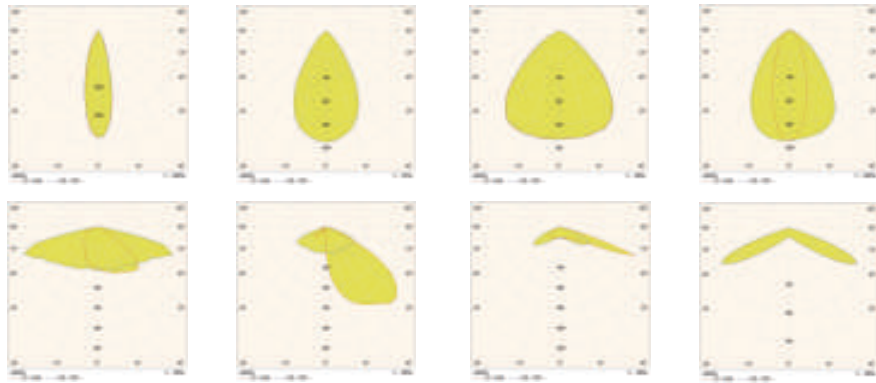


Distribution Curve

28-in-1



56-in-1

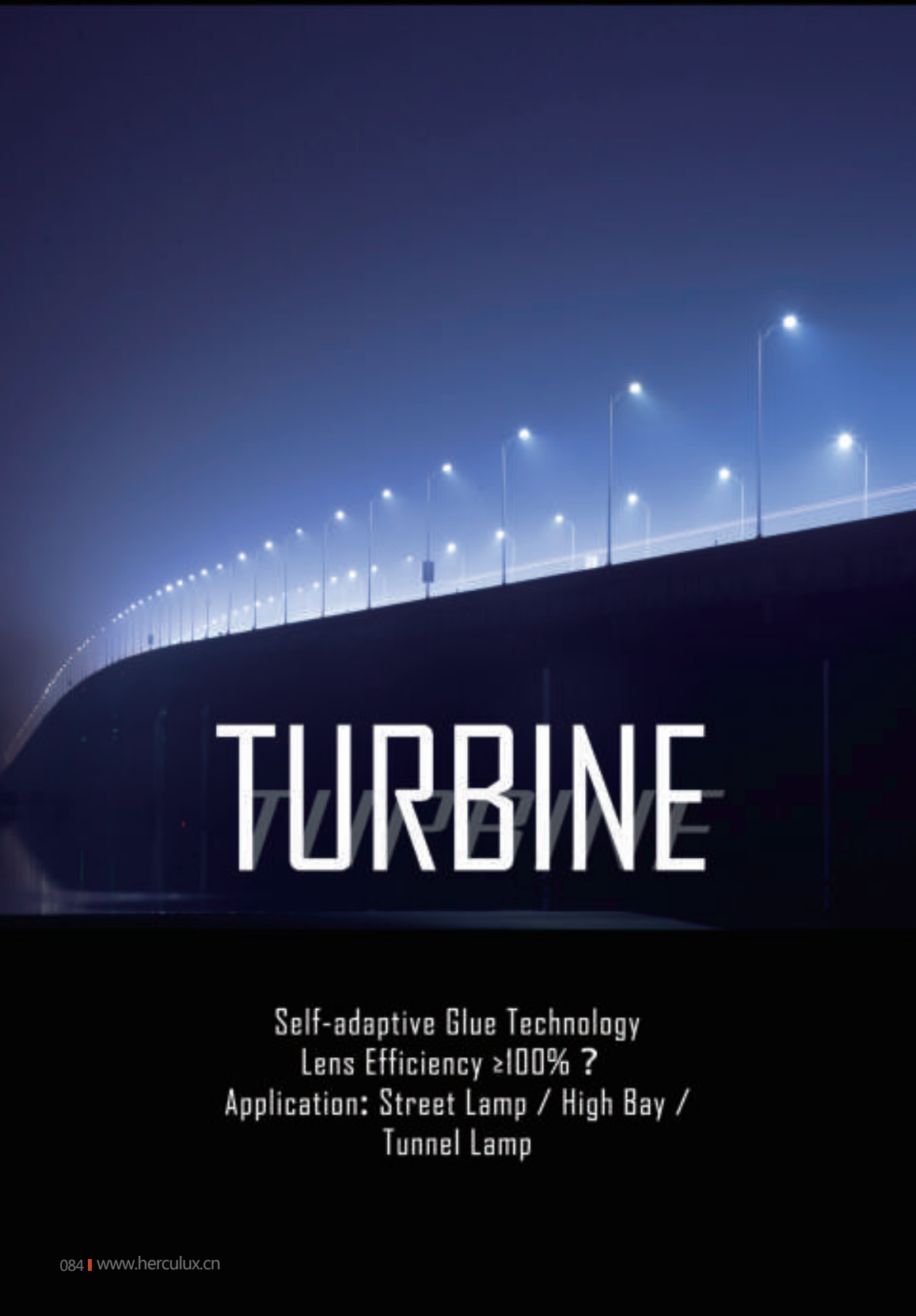


GALAXY SERIES (12-in-1)			
Size	L:173mm W:71.4mm		
Material	PC/PMMA		
PN	FWHM	Efficiency	Lens by LED
HK-173@12-30-5050-20-1g-12	30°	88%-92%	SMD 5050
HK-173@10-60-5050-#0-1g-12	60°	88%-92%	SMD 5050
HK-173@09-90-5050-#0-1g-12	90°	88%-92%	SMD 5050
HK-173@10-40X80-5050-#0-1g-12	Type I	88%-92%	SMD 5050
HK-173@11-50X148-5050-#0-1g-12	Type II	88%-92%	SMD 5050
HK-173@12-60X150-5050-#0-1g-12	Type III	88%-92%	SMD 5050
HK-173@10-30X140-5050-#0-1g-12	Type IV	88%-92%	SMD 5050
HK-173@08-140-5050-#0-1g-12	Type V	88%-92%	SMD 5050

GALAXY SERIES (28-in-1)			
Size	L:260mm W:70mm		
Material	PC/PMMA		
PN	FWHM	Efficiency	Lens by LED
HK-260@11-30-5050-20-1g-28	30°	88%-92%	SMD 5050
HK-260@09-60-5050-#0-1g-28	60°	88%-92%	SMD 5050
HK-260@07-90-5050-#0-1g-28	90°	88%-92%	SMD 5050
HK-260@10-40X80-5050-00-1g-28	Type I	88%-92%	SMD 5050
HK-260@08-150X80-5050-#0-1g-28	Type II	88%-92%	SMD 5050
HK-260@10-65X152-5050-#0-1g-28	Type III	88%-92%	SMD 5050
HK-260@10-30X140-5050-#0-1g-28	Type IV	88%-92%	SMD 5050
HK-260@08-140-5050-#0-1g-28	Type V	88%-92%	SMD 5050

GALAXY SERIES (56-in-1)			
Size	L:260mm W:70mm		
Material	PC/PMMA		
PN	FWHM	Efficiency	Lens by LED
HK-260@09-30-3030-20-1g-56	30°	88%-92%	SMD 3030
HK-260@07-60-3030-#0-1g-56	60°	88%-92%	SMD 3030
HK-260@07-90-3030-#0-1g-56	90°	88%-92%	SMD 3030
HK-260@07-40X80-3030-#0-1g-56	Type I	88%-92%	SMD 3030
HK-260@07-150X80-3030-#0-1g-56	Type II	88%-92%	SMD 3030
HK-260@07-63X150-3030-20-1g-56	Type III	88%-92%	SMD 3030
HK-260@07-13X138-3030-#0-1g-56	Type IV	88%-92%	SMD 3030
HK-260@07-138-3030-#0-1g-56	Type V	88%-92%	SMD 3030

GALAXY SERIES			
Material	PC		
Efficiency	92%		
PN	Size	FWHM	Lens by LED
HK-28@09-150X70-5050-#0-1g-1	L:28mm W:18mm	150°X70°	SMD 5050
HK-82@26-150X70-60W-#0-1g-1	L:86mm W:65mm	150°X70°	COB 60W
HK-126@06-150X70-3030-#0-1g-84	L:126mm W:64mm	150°X70°	SMD 3030



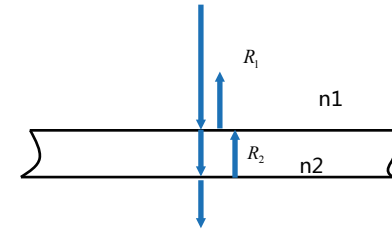
TURBINE

Self-adaptive Glue Technology
 Lens Efficiency >100% ?
 Application: Street Lamp / High Bay /
 Tunnel Lamp

Self-adaptive Glue Technology

Basic concepts

When lights pass by a surface with differentiated refractive index, they will be reflected by the surface.

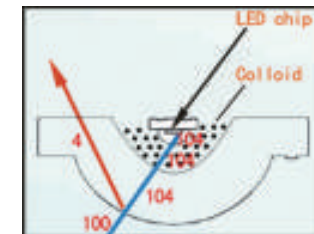
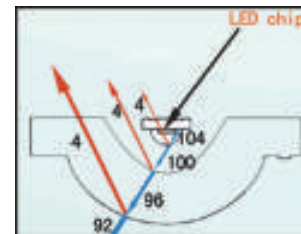


If $n1=1(\text{air})$, $n2=1.5(\text{optical materials})$

$$R_1 = R_2 = \left(\frac{n1 - n2}{n1 + n2} \right)^2 = \left(\frac{1 - 1.5}{1 + 1.5} \right)^2 \approx 4\%$$

$$R_1 + R_2 \approx 8\%$$

Realization Principles



Self-adaptive colloid, luminous efficiency increase 8%

TURBINE SERIES				
Efficiency	98%			
PN	Size	FWHM	Material	Lens by LED
HK-22@08-140X75-3535-#0-0g-1	L:20mm W:13.5mm	140°X50°	PC	CREE: XPE/ XPE2/XTE/XPG2 LUMILEDS: LUXEON T SAMSUNG: 351B NICHIA: NVSW219/319 OSRAM: P8/P9
HK-23@06-140X60-3535-10-0g-1	L:23mm W:10mm	140°X60°	PMMA	CREE: XPE/ XPE2/XTE/XPG2 LUMILEDS: LUXEON T SAMSUNG: 351B NICHIA: NVSW219/319 OSRAM: P8/P9
HK-50@08-143X59-7070-00-0g-2	L:50mm W:50mm	143°X59°	PC	PHILIPS: LXR7
HK-51@25-7-3535-00-0g-4	L:51mm W:51mm	7°	PMMA	CREE: XPE/XPE2 LUMILEDS: LUXEON T SAMSUNG: 351B NICHIA: NVSW219/319 OSRAM: P8/P9
HK-59@07-120X120-7070-00-0g-2	L:59mm W:40mm	120°X120°	PC	PHILIPS: LXR7
HK-50@8-140X65-3535-#0-0g-4	L:50mm W:50mm	140°X65°	PC	CREE: XTE/XPE/XPG LUMILEDS: LUXEON T NICHIA: NVSW219/319 OSRAM: P8/P9
HK-106@08-143X59-7070-#0-0g-6	L:106mm W:59mm	143°X59°	PC	PHILIPS:LXR7
HK-144@12-140X50-5050-#0-0g-12	L:144mm W:78mm	140°X50°	PC	CREE: XML

TURBINE SERIES			
Efficiency	98%		
Material	PC		
PN	Size	FWHM	Lens by LED
HK-186@10-140X55-3535-#0-0g-36	L:186mm W:162mm	140°X55°	CREE: XPE/ XPE2/XTE/XPG2 LUMILEDS: LUXEON T SAMSUNG: 351B NICHIA: NVSW219/319 OSRAM: P8/P9
HK-186@13-XX-3535-20-0g-36	L:186mm W:162mm	15° 45°	CREE: XPE/ XPE2/XTE/XPG2 SAMSUNG: 351B NICHIA: NVSW219/319 OSRAM: P8/P9 LUMILEDS: LUXEON T
HK-196@11-60-3535-#0-0g-14	L:196mm W:51mm	60°	CREE: XPE/ XPE2/XTE/XPG2 LUMILEDS: LUXEON T/ LUXEON SAMSUNG: 351B NICHIA: NVSW219/319 OSRAM: P8/P9
HK-235@08-XX-3535-#0-0g-22	L:235mm W:69mm	150°X65° 88°X130° 150°X60° 145°X65°	CREE: XPE/ XPE2/XTE/XPG2 LUMILEDS: LUXEON T/ LUXEON SAMSUNG: 351B NICHIA: NVSW219/319 OSRAM: P8/P9
HK-235@14-XX-3535-20-0g-22	L:235mm W:69mm	15° 38° 60°	CREE: XPE/ XPE2/XTE/XPG2 LUMILEDS: LUXEON T

TURBINE SERIES			
Efficiency	98%		
Material	PC		
PN	Size	FWHM	Lens by LED
HK-235@14-XX-3535-20-0g-22	L:235mm W:69mm	15° 38° 60°	SAMSUNG: 351B NICHIA: NVSW219/319 OSRAM: P8/P9
HK-236@08-150X70-CSP-#0-0g-14	L:236mm W:60mm	150°X70°	CSP
HK-236@09-150x90-3535-#0-0g-18	L:236mm W:70mm	150°X90°	CREE: XPE/ XPE2/XTE/XPG2 LUMILEDS: LUXEON T SAMSUNG: 351B NICHIA: NVSW219/319 OSRAM: P8/P9
HK-243@11-140X75-3535-#0-0g-30	L:236mm W:72mm	140°X75°	CREE: XPE/XPE2 LUMILEDS: LUXEON T SAMSUNG: 351B NICHIA: NVSW219/319 OSRAM: P8/P9
HK-247@11-150X50-K2-#0-0g-22	L:247mm W:71mm	150°X50°	LUMILEDS: K2
HK-260@07-150X90-3535-#0-0g-14	L:260mm W:58mm	150°X90°	CREE: XPE/ XPE2/XTE/XPG2 LUMILEDS: LUXEON T SAMSUNG: 351B NICHIA: NVSW219/319 OSRAM: P8/P9
HK-260@10-150X70-5050-#0-0g-28	L:260mm W:70mm	150°X70°	5050
HK-260@13-148X50-5050-#0-0g-30	L:260mm W:100mm	148°X50°	5050
HK-267@11-150X65-K2-#0-0g-20	L:267mm W:72mm	150°X65°	LUMILEDS: K2
HK-270@9-60-3535-#0-0g-18	L:270mm W:68mm	60°	CREE: XPE/ XPE2/XTE/XPG2 LUMILEDS: LUXEON T SAMSUNG: 351B

TURBINE SERIES			
Efficiency	98%		
Material	PC		
PN	Size	FWHM	Lens by LED
HK-270@9-60-3535-#0-0g-18	L:270mm W:68mm	60°	NICHIA: NVSW219/319 OSRAM: P8/P9
HK-272@08-XX-3535-#0-0g-14	L:272mm W:80mm	150°X65° 150°X93°	CREE: XPE/ XPE2/XTE/XPG2 LUMILEDS: LUXEON T SAMSUNG: 351B NICHIA: NVSW219/319 OSRAM: P8/P9
HK-272@08-160-3535-#0-0g-28	L:272mm W:80mm	160°	CREE: XPE/XPE2/XTE/X PG2 LUMILEDS: LUXEON T SAMSUNG: 351B NICHIA: NVSW219/319 OSRAM: P8/P9
HK-272@10-150X65-K2-#0-0g-28	L:272mm W:80mm	150°X65°	LUMILEDS: K2
HK-276@08-160X68-3535-#0-0g-22	L:276mm W:81mm	160°X68°	CREE: XPE/ XPE2/XTE/XPG2 LUMILEDS: LUXEON T SAMSUNG: 351B NICHIA: NVSW219/319 OSRAM: P8/P9
HK-276@10-150X50-K2-#0-0g-22	L:276mm W:81mm	150°X50°	LUMILEDS: K2
HK-292@09-150X60-3535-#0-0g-15	L:292mm W:57mm	150°X60°	CREE: XPE/ XPE2/XTE/XPG2 LUMILEDS: LUXEON T SAMSUNG: 351B NICHIA: NVSW219/319 OSRAM: P8/P9