


OPTICAL ENERGY DESIGN & DEVICES

# INDOOR

HercuLux Optics is a high-tech enterprise dedicated to providing system solutions for LED lighting, UV curing, laser projection, AOI machine vision inspection and other applications. National Specialized, Specialized and New "Small Giant" High-tech Enterprises.

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ZHAGA
Regular Member

**HercuLux Optics** is a high-tech Specialized and Sophisticated SMEs dedicated to providing system solutions for applications such as LED lighting, UV curing, laser projection, and AOI machine vision inspection.

We have a R&D team with the background in the Institute of Optics and Electronics, Chinese Academy of Sciences, consisting of experts who have been working for decades in the fields of optics, precision optical molds and precision optical injection molding, fine chemicals and electronic control, as well as a highly efficient and passionate marketing team, which ensures fast product innovation, stable and reliable quality of the products, and fast and considerate service.

Since the start of our company, in order to address the secondary light distribution problems in many LED applications, the company has introduced products such as calculus anti-glare lens, nearly 100% efficiency of the adaptive colloidal street lamp lens, very small angle (less than 3 deg) outdoor spotlight lens, ultra-thin (thickness of less than 8mm) triple total reflection lens, the angle and spot shape of the optical lens module can be changed, efficiency of more than 90% of the zoom series, CCT changing COB can be matched full stroke high efficiency (greater than 80%) high center light intensity of the zoom optical module, MOS film, high temperature-resistant silicone materials and lens,anti-glare firefly series.

For the AOI machine vision inspection field, the introduction of photolithography plate plane shadowless light source, to fill the gaps in the domestic market; for the printing curing field, the world's first introduction of full UV (A \ B \ C) LED direct contact with the large-scale printing press curing modules and systems, not only for the printing industry to save energy, but also for the printing industry to save energy, and the printing industry to save energy. system, not only for the printing industry energy saving and environmental protection to provide a perfect solution and further enhance the printing overprint accuracy and significantly reduce the odor of printed materials due to ozone.

**National High tech Enterprise -** Established in 2013; Obtained the national high-tech enterprise qualification in 2014; Obtaining the national high-tech enterprise qualification in 2014 was the first enterprise in Sichuan to obtain the national high-tech enterprise qualification the following year after its establishment.

**Computer Software Copyright -** To ensure the perfect presentation of design theoretical values on actual products, Herculux has independently developed specialized optical conversion software and injection molding analysis precision compensation software.

**Patents -** The company has applied for more than 330 patents and has obtained 222 patent authorizations, including 11 authorized invention patents, 106 utility model patents, 105 appearance patents, and is currently applying for 3 PCT patents.

**R & D capabilities -** The R&D team of the company is composed of a team of experts with a background in the Institute of Optoelectronics, Chinese Academy of Sciences. There are 32 R&D personnel, accounting for 26.45% of the total number of employees. Among them, there are 8 full-time optical design engineers, including one senior engineer, three master's, and four undergraduate students.





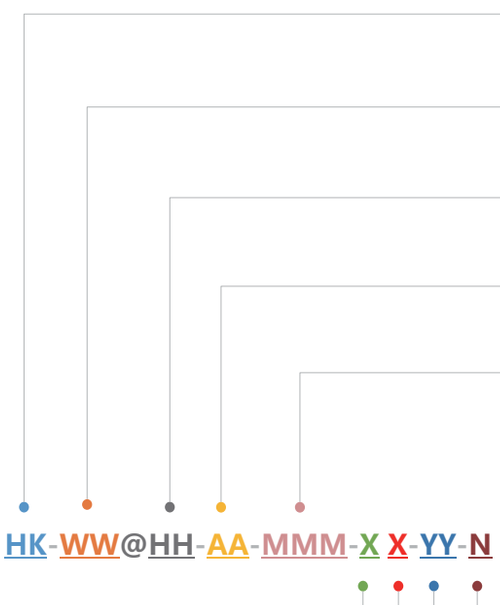

## KIRIN OPTICAL PLATFORM


008 DARK
012 GEMINI
016 MOONY
020 GLARELESS
024 PEAK
028 FILMY
032 RAINBOW
036 V SERIES
040 ZOOM MODULE
044 MAVIC & MAVIC PRO
048 KA PRO
052 MOONY PRO
054 PEAK PRO
056 SOFTY
058 FIREFLY-KIRIN
062 COB HOLDER
064 LENS HOLDER
066 LIGHT FILTER
070 LIGHT HOOD


## INDOOR


076 PHOTON
080 KA
084 CHAMELEON
086 BLACK HOLE
090 INFINITY
094 FOCUS
096 POLAROID
100 SUNFLOWER
102 WARTERFALL
104 DIAMOND
108 NEBULA
110 CUSTOMIZED SOLUTIONS

# Products Code Rule




**HK:** Herculux Optics abbreviations

**WW:** Lens diameter or length

**HH:** Lens height

**AA:** FWHM(beam angle)

**MMM:** Applicable LED light source luminous surface size

**N:** "1" means single lens, "2" means 2 in 1, "3" means 3 in 1, and so on

**YY:** With or without glue, "0" means with glue, "1" means without glue

**X:** Emitting surface futures: "0"means mirror surface, "1"means ommateum, "2"means matte surface, "3"means cylindrical surface, "#"means other surface treatment

**X:** Reflective surface features: "0"means squama, "1"means single layer squama, "2"means double layer squama, "#"means no reflective surfaces

# KIRIN OPTICAL PLATDORM × ZHAGA Regular Member



## Small Hole Hood




## Wall Washing Hood




## Shadow Hood



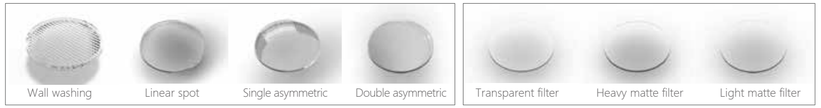

## Oblique Hood




## Filter Holder



## Light Filter




Pin-pin replacement; COB holder: Same outer diameter,
Screw position is consistent, Rotating interface is consistent.

## Lens



Dark | Gemini | Moony | Glareless | Peak | Filmy | V | Rainbow | Zoom module | Mavic | Mavic Pro | KA Pro | Moony Pro | Peak Pro | Softy | Firefly-Kirin

## Lens Holder




## COB Holder




HERCULUX | Bridgelux | BJB | DOB

# DARK SERIES

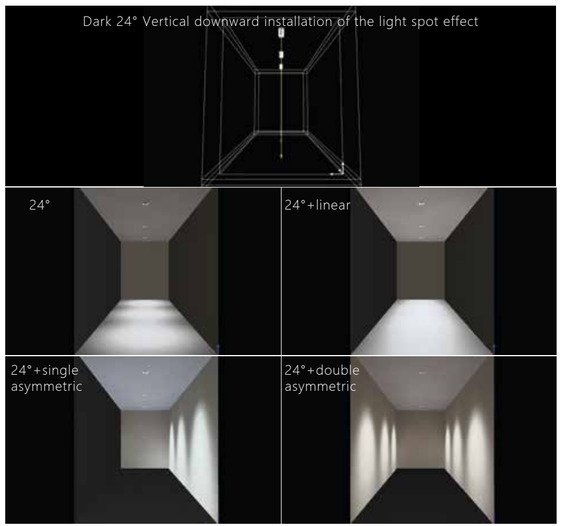
A lens for the high-efficiency spot of the hotel's deep anti-glare wall washing spotlight

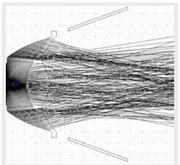


√ Surface microstructure to reduce the background light of the spot

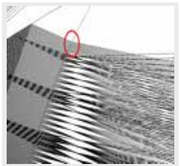
√ More uniform light spot with Fermat's spiral array

√ Better anti-glare effect with cross-light design



In the design process of the Dark series, the light on the reflective surface and the light on the refracting surface are cross-distributed to achieve the effect of deep anti-glare.

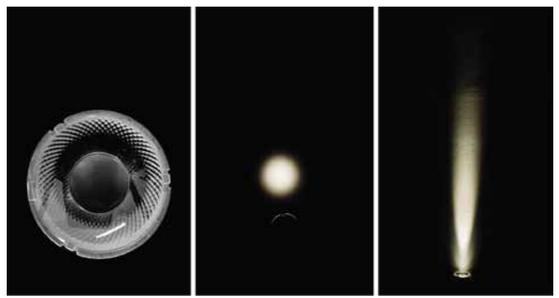


Based on the cross-light distribution design, coupled with the two-dimensional uniform light micro-structure, the light spot can be softer, while the controllable light contributes relatively little to the background light, which makes the background light of the entire light spot.



In order to achieve the best effect of the whole lamp, we will develop matching hoods on some lenses to make the optics of the lamp reach the best condition.

The unique optical design of the narrow beam angle makes the spot more concentrated while less glare.

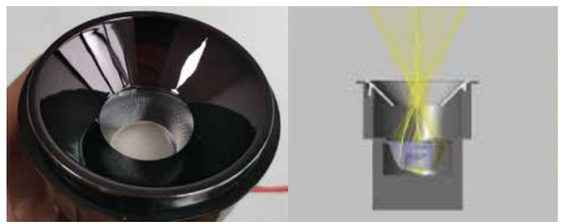


Hotel wall washer spotlight, deep anti-glare structure



## Cross-lighting for the ultimate in anti-glare

The cross-lighting design principle makes the lamps and lanterns with light holes smaller than the optical diameter, together with the small holes of the hood, hiding deeper and better control of glare, and the optical efficiency has little impact, but also to ensure that the spot effect.



Assembly size of small hole hood

| Lens dia(mm) | Hood height(mm) | Hood small hole dia(mm) | Distance from hole to lens(mm) |
|---|---|---|---|
| 25 | 13 | 17 | 6 |
| 30 | 16 | 19 | 8 |
| 35 | 16 | 23 | 9 |
| 45 | 21 | 29 | 12 |
| 50 | 24 | 35 | 14 |
| 55 | 25 | 38 | 19 |
| 62 | 30 | 46 | 20 |
| 68 | 32 | 48 | 22 |
| 75 | 35 | 52 | 25 |
| 83 | 40 | 65 | 29 |



Small hole hood perfectly solves the phenomenon of butterfly spots when deflecting the wall and washing the wall.



With small hole hood, when the lamp is deflected, there is no stray light

| DARK 20@11 (3535) | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23411 | 20 | 11 | 10° | 3535 | 70% | PMMA |
| | 1.01.12754 | 20 | 11 | 15° | 3535 | 91%/88% | PMMA/PC |
| | 1.01.12755 | 20 | 11 | 24° | 3535 | 91%/88% | PMMA/PC |
| | 1.01.12756 | 20 | 11 | 36° | 3535 | 91%/88% | PMMA/PC |
| | 1.01.12757 | 20 | 11 | 50° | 3535 | 91%/88% | PMMA/PC |

| DARK 20@12 (3030) | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12621 | 20 | 12 | 15° | 3030 | 91%/88% | PMMA/PC |
| | 1.01.12622 | 20 | 12 | 24° | 3030 | 91%/88% | PMMA/PC |
| | 1.01.12623 | 20 | 12 | 36° | 3030 | 91%/88% | PMMA/PC |
| | 1.01.12681 | 20 | 12 | 50° | 3030 | 91%/88% | PMMA/PC |

| Dark 25@13 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23219 | 25 | 13 | 10° | D2.5 | 70% | PMMA |
| | 1.01.92131 | 25 | 13 | 15° | D4 | 91%/88% | PMMA/PC |
| | 1.01.92022 | 25 | 13 | 24° | D4 | 91%/88% | PMMA/PC |
| | 1.01.92065 | 25 | 13 | 36° | D4 | 91%/88% | PMMA/PC |
| | 1.01.92005 | 25 | 13 | 50° | D4 | 91%/88% | PMMA/PC |

| Dark 30@16 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12627 | 30 | 16 | 10° | D3.5 | 70% | PMMA |
| | 1.01.92013 | 30 | 16 | 15° | D4 | 91%/88% | PMMA/PC |
| | 1.01.92014 | 30 | 16 | 24° | D4 | 91%/88% | PMMA/PC |
| | 1.01.92015 | 30 | 16 | 36° | D4 | 91%/88% | PMMA/PC |
| | 1.01.92016 | 30 | 16 | 50° | D4 | 91%/88% | PMMA/PC |

| Dark 35@16 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12624 | 35 | 16 | 10° | D3.5 | 70% | PMMA |
| | 1.01.91997 | 35 | 16 | 15° | D6 | 91%/88% | PMMA/PC |
| | 1.01.92002 | 35 | 16 | 24° | D6 | 91%/88% | PMMA/PC |
| | 1.01.92041 | 35 | 16 | 36° | D6 | 91%/88% | PMMA/PC |
| | 1.01.92182 | 35 | 16 | 50° | D6 | 91%/88% | PMMA/PC |

| Dark 40@19 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.33781 | 40 | 19 | 15° | D6 | 91% | PMMA |
| | 1.01.33617 | 40 | 19 | 24° | D9 | 91% | PMMA |
| | 1.01.33618 | 40 | 19 | 36° | D9 | 91% | PMMA |
| | 1.01.44709 | 40 | 19 | 50° | D9 | 91% | PMMA |

| Dark 45@21 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02456 | 45 | 21 | 10° | D4 | 91% | PMMA |
| | 1.01.91887 | 45 | 21 | 15° | D6 | 91%/88% | PMMA/PC |
| | 1.01.91831 | 45 | 21 | 24° | D6/ | 91%/88% | PMMA/PC |
| | 1.01.91889 | 45 | 21 | 36° | D6/ | 91%/88% | PMMA/PC |
| | 1.01.92073 | 45 | 21 | 50° | D6/ | 91%/88% | PMMA/PC |
| | 1.01.23269 | 45 | 21 | 60° | D9 | 91%/88% | PMMA/PC |

| Dark 50@24 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12626 | 50 | 24 | 10° | D6 | 91% | PMMA |
| | 1.01.92006 | 50 | 24 | 15° | D9 | 91%/88% | PMMA/PC |
| | 1.01.92007 | 50 | 24 | 24° | D9 | 91%/88% | PMMA/PC |
| | 1.01.92062 | 50 | 24 | 36° | D9 | 91%/88% | PMMA/PC |
| | 1.01.92150 | 50 | 24 | 50° | D9 | 91%/88% | PMMA/PC |
| | 1.01.02442 | 50 | 24 | 50° | D6 | 91% | PMMA |
| | 1.01.23389 | 50 | 24 | 80° | D9 | 91% | PMMA |

| Dark 55@25 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12632 | 55 | 25 | 10° | D6 | 91% | PMMA |
| | 1.01.92028 | 55 | 25 | 15° | D9 | 91%/88% | PMMA/PC |
| | 1.01.92029 | 55 | 25 | 24° | D9 | 91%/88% | PMMA/PC |
| | 1.01.92074 | 55 | 25 | 36° | D9 | 91%/88% | PMMA/PC |
| | 1.01.92046 | 55 | 25 | 50° | D9 | 91%/88% | PMMA/PC |

| Dark 62@30 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12634 | 62 | 30 | 10° | D6 | 91% | PMMA |
| | 1.01.92023 | 62 | 30 | 15° | D9 | 91%/88% | PMMA/PC |
| | 1.01.92040 | 62 | 30 | 24° | D9 | 91%/88% | PMMA/PC |
| | 1.01.92072 | 62 | 30 | 36° | D9 | 91%/88% | PMMA/PC |
| | 1.01.92180 | 62 | 30 | 50° | D9 | 91%/88% | PMMA/PC |
| | 1.01.23393 | 62 | 30 | 80° | D9 | 91% | PMMA |

| Dark 68@32 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12630 | 68 | 32 | 10° | D9 | 91% | PMMA |
| | 1.01.92018 | 68 | 32 | 15° | D9 | 91% | PMMA |
| | 1.01.92019 | 68 | 32 | 24° | D12 | 91% | PMMA |
| | 1.01.92055 | 68 | 32 | 36° | D12 | 91%/88% | PMMA/PC |
| | 1.01.92177 | 68 | 32 | 50° | D12 | 91% | PMMA |
| | 1.01.23289 | 68 | 32 | 60° | D12 | 91% | PMMA |

| Dark 75@35 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12628 | 75 | 35 | 10° | D9 | 91% | PMMA |
| | 1.01.92024 | 75 | 35 | 15° | D12 | 91% | PMMA |
| | 1.01.92025 | 75 | 35 | 24° | D14 | 91%/88% | PMMA/PC |
| | 1.01.92068 | 75 | 35 | 36° | D14 | 91%/88% | PMMA/PC |
| | 1.01.92080 | 75 | 35 | 50° | D14 | 91%/88% | PMMA/PC |
| | 1.01.12854 | 75 | 35 | 70° | CLU038 | 91% | PMMA |

| Dark 83@40 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12629 | 83 | 40 | 10° | D14 | 91% | PMMA |
| | 1.01.02480 | 83 | 40 | 15° | D19 | 91%/88% | PMMA/PC |
| | 1.01.02441 | 83 | 40 | 24° | D19 | 91%/88% | PMMA/PC |
| | 1.01.02481 | 83 | 40 | 36° | D19 | 91%/88% | PMMA/PC |
| | 1.01.02491 | 83 | 40 | 50° | D19 | 91%/88% | PMMA/PC |
| | 1.01.12848 | 83 | 40 | 70° | CLU038 | 91% | PMMA |

# GEMINI SERIES

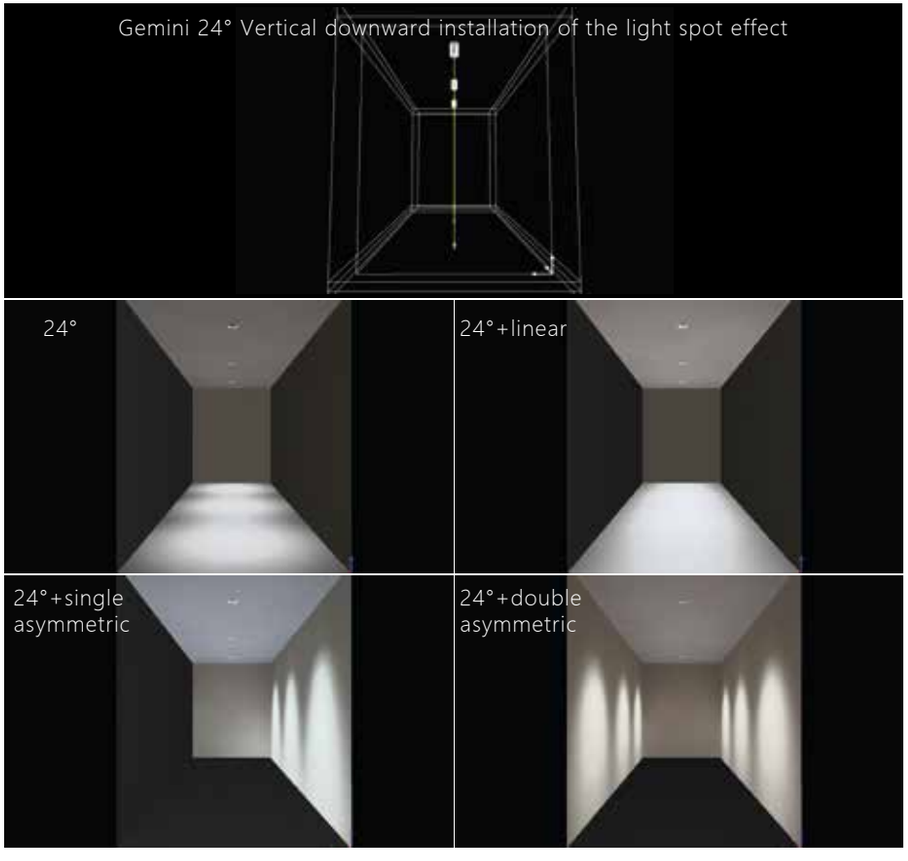
A reflector combines with a lens



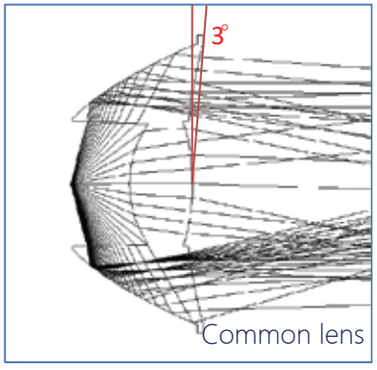
√ Vacuum plating, metal texture, and the dust-free workshop with 100,000-level air cleanliness makes the adhesion and surface of the product achieve the best effect

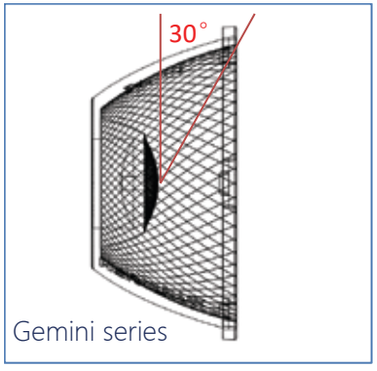
√ Complete integrated injection molding easy to install

√ With deep anti-glare effect

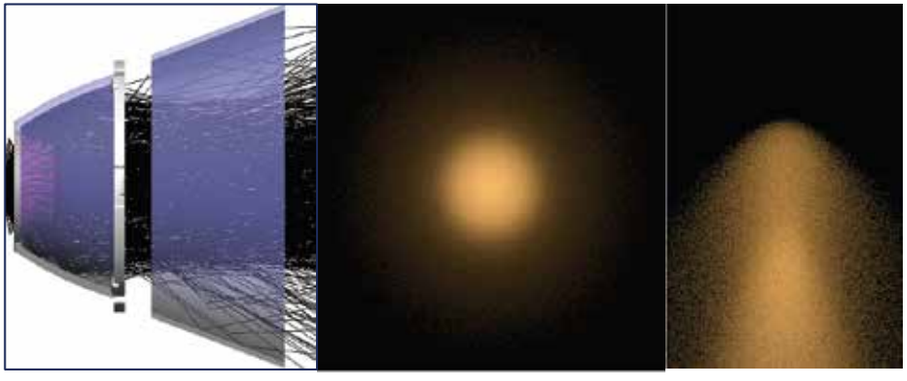



Comes with 30° anti-glare angle




Through the cross light distribution and the control of the proportion of the intermediate light, the wall washing light spot is also relatively clean.



Cross light control, reasonable light control

The cavity hole of the lens is conducive to the heat dissipation of the cavity, while the diameter of the corresponding hole on the end face of the light exit surface is less than 2mm to prevent mosquitoes and other insects from entering the cavity.



| Gemini 25@13 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.02242 | 25 | 13 | 18° | D4 | 80% | Vaccum Aluminum Plating PC |
| | 1.08.02243 | 25 | 13 | 24° | D4 | 80% | |
| | 1.08.02244 | 25 | 13 | 36° | D4 | 80% | |
| | 1.08.12625 | 25 | 13 | 50° | D4 | 80% | |

| Gemini 30@16 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.02305 | 30 | 16 | 15° | D4 | 80% | Vaccum Aluminum Plating PC |
| | 1.08.02323 | 30 | 16 | 24° | D4 | 80% | |
| | 1.08.02325 | 30 | 16 | 36° | D4 | 80% | |
| | 1.08.02334 | 30 | 16 | 50° | D4 | 80% | |

| Gemini 35@16 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.02251 | 35 | 16 | 15° | D6 | 80% | Vaccum Aluminum Plating PC |
| | 1.08.02257 | 35 | 16 | 24° | D6 | 80% | |
| | 1.08.02273 | 35 | 16 | 36° | D6 | 80% | |
| | 1.08.02276 | 35 | 16 | 50° | D6 | 80% | |

| Gemini 45@21 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.92151 | 45 | 21 | 15° | D6 | 80% | Vaccum Aluminum Plating PC |
| | 1.08.92115 | 45 | 21 | 24° | D6 | 80% | |
| | 1.08.02203 | 45 | 21 | 36° | D6 | 80% | |
| | 1.08.02196 | 45 | 21 | 50° | D6 | 80% | |

| Gemini 50@24 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.02204 | 50 | 24 | 15° | D9 | 80% | Vaccum Aluminum Plating PC |
| | 1.08.02209 | 50 | 24 | 24° | D9 | 80% | |
| | 1.08.02216 | 50 | 24 | 36° | D9 | 80% | |
| | 1.08.02217 | 50 | 24 | 50° | D9 | 80% | |

| Gemini 55@25 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.02205 | 55 | 25 | 15° | D9 | 80% | Vaccum Aluminum Plating PC |
| | 1.08.02210 | 55 | 25 | 24° | D9 | 80% | |
| | 1.08.02264 | 55 | 25 | 36° | D9 | 80% | |
| | 1.08.02265 | 55 | 25 | 50° | D9 | 80% | |

| Gemini 62@30 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.02218 | 62 | 30 | 15° | D9 | 80% | Vaccum Aluminum Plating PC |
| | 1.08.02315 | 62 | 30 | 24° | D9 | 80% | |
| | 1.08.02322 | 62 | 30 | 36° | D9 | 80% | |
| | 1.08.02307 | 62 | 30 | 50° | D9 | 80% | |

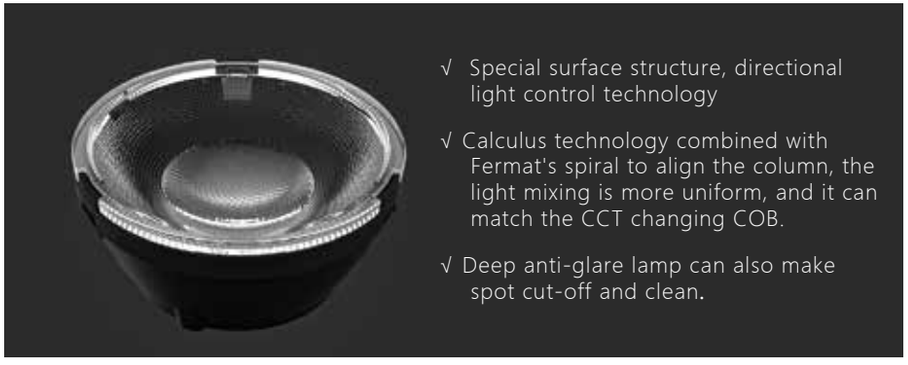
| Gemini 68@32 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.02222 | 68 | 32 | 15° | D9 | 80% | Vaccum Aluminum Plating PC |
| | 1.08.02241 | 68 | 32 | 24° | D12 | 80% | |
| | 1.08.02317 | 68 | 32 | 36° | D12 | 80% | |
| | 1.08.02331 | 68 | 32 | 50° | D12 | 80% | |

| Gemini 75@35 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.02283 | 75 | 35 | 15° | D12 | 80% | Vaccum Aluminum Plating PC |
| | 1.08.02284 | 75 | 35 | 24° | D14 | 80% | |
| | 1.08.02311 | 75 | 35 | 36° | D14 | 80% | |
| | 1.08.02342 | 75 | 35 | 50° | D14 | 80% | |

| Gemini 83@40 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.12704 | 83 | 40 | 15° | D19 | 80% | Vaccum Aluminum Plating PC |
| | 1.08.12696 | 83 | 40 | 24° | D19 | 80% | |
| | 1.08.12703 | 83 | 40 | 36° | D19 | 80% | |
| | 1.08.12708 | 83 | 40 | 50° | D19 | 80% | |

# MOONY SERIES

## A clean wall washer lens can match with CCT changing COB



√ Special surface structure, directional light control technology

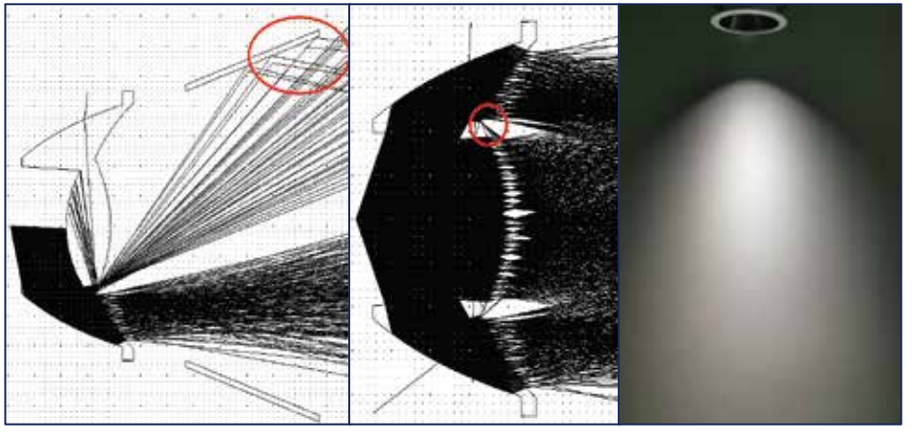
√ Calculus technology combined with Fermat's spiral to align the column, the light mixing is more uniform, and it can match the CCT changing COB.

√ Deep anti-glare lamp can also make spot cut-off and clean.

Moony series can achieve similar wall wash effect of reflector, with clean edge cutoff, even transition and no delamination, and can also be matched with CCT changing COB for smart lighting applications.



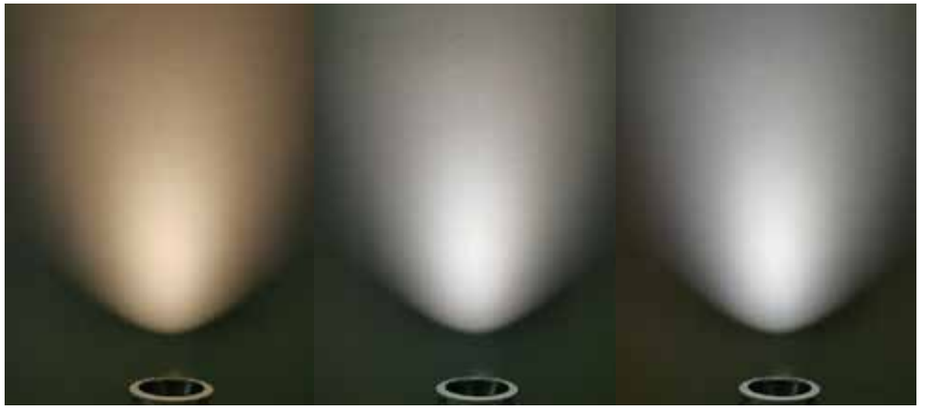
By strengthening the light on the receiving surface of the light emitting surface, this part of the light is forcibly cut off by the anti glare cover when passing through it, resulting in a clear cut-off line when washing the wall.



## CCT changing COB can be matched

The light is split and concentrated through the microstructure of the lens, so that the color mixing of the light spot is more uniform.





| Moony 25@13 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12959 | 25 | 13 | 18° | D4 | 91%/88% | PMMA/PC |
| | 1.01.12818 | 25 | 13 | 24° | D4 | 91%/88% | PMMA/PC |
| | 1.01.12869 | 25 | 13 | 36° | D4 | 91%/88% | PMMA/PC |

| Moony 30@15 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12774 | 30 | 15 | 15° | D6 | 88% | PC |
| | 1.01.12775 | 30 | 15 | 24° | D6 | 88% | PC |
| | 1.01.12776 | 30 | 15 | 36° | D6 | 88% | PC |
| | 1.01.13064 | 30 | 15 | 50° | D6 | 88% | PC |

| Moony 35@16 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12736 | 35 | 16 | 15° | D6 | 88% | PC |
| | 1.01.12700 | 35 | 16 | 24° | D6 | 88% | PC |
| | 1.01.12746 | 35 | 16 | 36° | D6 | 88% | PC |
| | 1.01.12927 | 35 | 16 | 50° | D6 | 88% | PC |

| Moony 40@19 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.33934 | 40 | 19 | 15° | D6 | 88% | PC |
| | 1.01.33639 | 40 | 19 | 24° | D9 | 88% | PC |
| | 1.01.33644 | 40 | 19 | 36° | D9 | 88% | PC |
| | 1.01.33645 | 40 | 19 | 50° | D9 | 88% | PC |

| Moony 45@21 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12734 | 45 | 21 | 15° | D6 | 88% | PC |
| | 1.01.12658 | 45 | 21 | 24° | D6 | 88% | PC |
| | 1.01.12747 | 45 | 21 | 36° | D6 | 88% | PC |
| | 1.01.12956 | 45 | 21 | 50° | D6 | 88% | PC |

| Moony 50@24 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12743 | 50 | 24 | 15° | D9 | 88% | PC |
| | 1.01.12724 | 50 | 24 | 24° | D9 | 88% | PC |
| | 1.01.12748 | 50 | 24 | 36° | D9 | 88% | PC |
| | 1.01.12958 | 50 | 24 | 50° | D9 | 88% | PC |

| Moony 55@25 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23168 | 55 | 25 | 15° | D9 | 88% | PC |
| | 1.01.13010 | 55 | 25 | 24° | D9 | 88% | PC |
| | 1.01.23164 | 55 | 25 | 36° | D9 | 88% | PC |
| | 1.01.23173 | 55 | 25 | 50° | D9 | 88% | PC |

| Moony 62@30 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12980 | 62 | 30 | 15° | D9 | 88% | PC |
| | 1.01.12976 | 62 | 30 | 24° | D9 | 88% | PC |
| | 1.01.13013 | 62 | 30 | 36° | D9 | 88% | PC |
| | 1.01.13056 | 62 | 30 | 50° | D9 | 88% | PC |

| Moony 68@32 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.13003 | 68 | 32 | 15° | D12 | 88% | PC |
| | 1.01.12988 | 68 | 32 | 24° | D12 | 88% | PC |
| | 1.01.13026 | 68 | 32 | 36° | D12 | 88% | PC |
| | 1.01.13038 | 68 | 32 | 50° | D12 | 88% | PC |

| Moony 75@35 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23071 | 75 | 35 | 15° | D14 | 88% | PC |
| | 1.01.12977 | 75 | 35 | 24° | D14 | 88% | PC |
| | 1.01.13027 | 75 | 35 | 36° | D14 | 88% | PC |
| | 1.01.13037 | 75 | 35 | 50° | D14 | 88% | PC |

| Moony 83@40 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23072 | 83 | 40 | 10° | D12 | 88% | PC |
| | 1.01.12981 | 83 | 40 | 15° | D14 | 88% | PC |
| | 1.01.13030 | 83 | 40 | 24° | D14 | 88% | PC |
| | 1.01.13045 | 83 | 40 | 36° | D14 | 88% | PC |

# GLARELESS SERIES

## A lens with anti-glare effect



√ Calculus technology combined with Fermat's spiral to align the column, the light mixing is more uniform, and it can match the CCT changing COB.

√ Sinking design, better anti-glare effect

√ High temperature resistance PC material reliability

## Smooth the surface, more conducive to anti-glare

The light-emitting surface is smoothly treated, and there is no matte, sun-stripe and other structures, so that the light-emitting surface is no stray light and no glare.

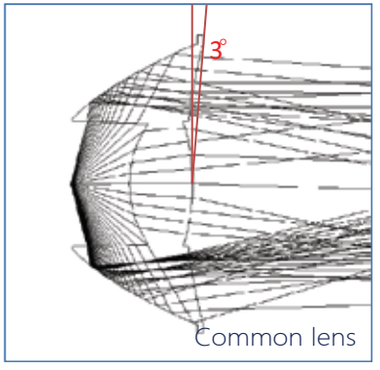


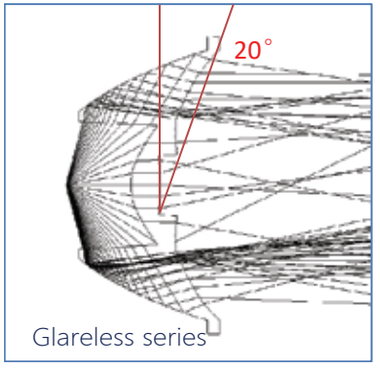






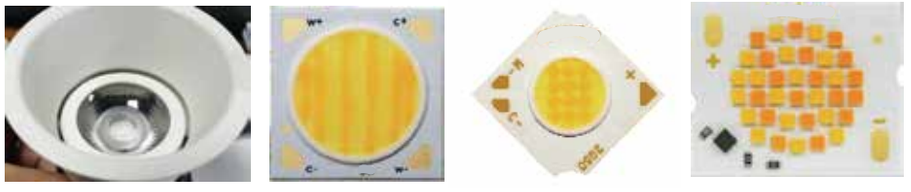
## Come with 20° anti-glare angle




## CCT changing COB can be matched

The reflective surface adopts calculus technology, so that the lens can match with CCT changing COB, and the spot is more uniform.。



## Spot effect



| Glareless 25@13 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12885 | 25 | 13 | 15° | D4 | 88% | PC |
| | 1.01.12886 | 25 | 13 | 24° | D4 | 88% | PC |
| | 1.01.12887 | 25 | 13 | 36° | D4 | 88% | PC |
| | 1.01.12888 | 25 | 13 | 60° | D4 | 88% | PC |

| Glareless 30@16 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02576 | 30 | 16 | 15° | D6 | 88% | PC |
| | 1.01.02577 | 30 | 16 | 24° | D6 | 88% | PC |
| | 1.01.02578 | 30 | 16 | 36° | D6 | 88% | PC |
| | 1.01.12853 | 30 | 16 | 60° | D6 | 88% | PC |

| Glareless 35@16 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02556 | 35 | 16 | 15° | D6 | 88% | PC |
| | 1.01.02561 | 35 | 16 | 24° | D6 | 88% | PC |
| | 1.01.02571 | 35 | 16 | 36° | D6 | 88% | PC |
| | 1.01.12804 | 35 | 16 | 60° | D6 | 88% | PC |

| Glareless 40@19 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.43938 | 40 | 19 | 15° | D6 | 88% | PC |
| | 1.01.33711 | 40 | 19 | 24° | D9 | 88% | PC |
| | 1.01.33728 | 40 | 19 | 36° | D9 | 88% | PC |
| | 1.01.33755 | 40 | 19 | 60° | D9 | 88% | PC |

| Glareless 45@21 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02559 | 45 | 21 | 15° | D6 | 88% | PC |
| | 1.01.02537 | 45 | 21 | 24° | D9 | 88% | PC |
| | 1.01.02539 | 45 | 21 | 36° | D9 | 88% | PC |
| | 1.01.12861 | 45 | 21 | 60° | D9 | 88% | PC |

| Glareless 50@24 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02581 | 50 | 24 | 15° | D9 | 88% | PC |
| | 1.01.02582 | 50 | 24 | 24° | D9 | 88% | PC |
| | 1.01.02590 | 50 | 24 | 36° | D9 | 88% | PC |
| | 1.01.12803 | 50 | 24 | 50° | D9 | 88% | PC |

| Glareless 55@25 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02551 | 55 | 25 | 15° | D9 | 88% | PC |
| | 1.01.02552 | 55 | 25 | 24° | D9 | 88% | PC |
| | 1.01.02553 | 55 | 25 | 36° | D9 | 88% | PC |
| | 1.01.12860 | 55 | 25 | 60° | D9 | 88% | PC |

| Glareless 62@30 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02566 | 62 | 30 | 15° | D12 | 88% | PC |
| | 1.01.02548 | 62 | 30 | 24° | D12 | 88% | PC |
| | 1.01.02573 | 62 | 30 | 36° | D12 | 88% | PC |
| | 1.01.12805 | 62 | 30 | 60° | D12 | 88% | PC |

| Glareless 68@32 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02560 | 68 | 32 | 15° | D12 | 88% | PC |
| | 1.01.02547 | 68 | 32 | 24° | D12 | 88% | PC |
| | 1.01.02572 | 68 | 32 | 36° | D12 | 88% | PC |
| | 1.01.23069 | 68 | 32 | 60° | D12 | 88% | PC |

| Glareless 75@35 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02562 | 75 | 35 | 15° | D14 | 88% | PC |
| | 1.01.02532 | 75 | 35 | 24° | D14 | 88% | PC |
| | 1.01.02567 | 75 | 35 | 36° | D14 | 88% | PC |
| | 1.01.12884 | 75 | 35 | 60° | D14 | 88% | PC |

| Glareless 83@40 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02563 | 83 | 40 | 15° | D14 | 88% | PC |
| | 1.01.02564 | 83 | 40 | 24° | D14 | 88% | PC |
| | 1.01.02565 | 83 | 40 | 36° | D14 | 88% | PC |
| | 1.01.12811 | 83 | 40 | 60° | D14 | 88% | PC |

# PEAK SERIES

A clean wall-washing and extremely deep anti-glare lens



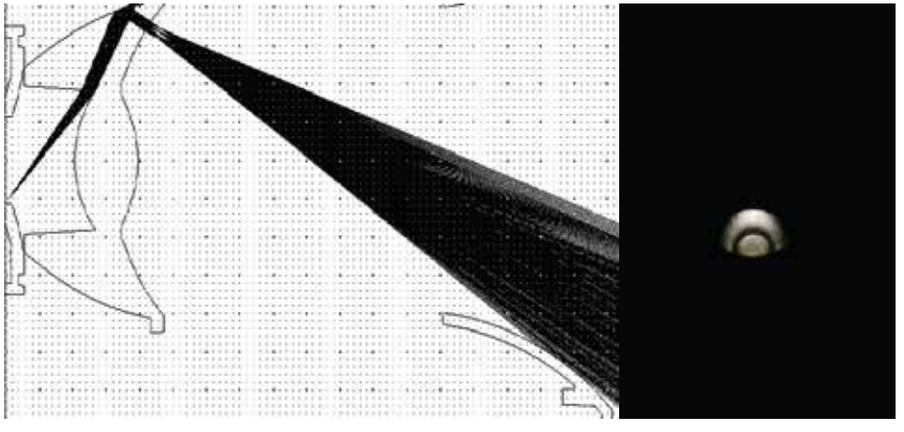
√ Surface treatment, directional light control

√ Matching with light hood to achieve ultimate anti-glare

√ More uniform light spot

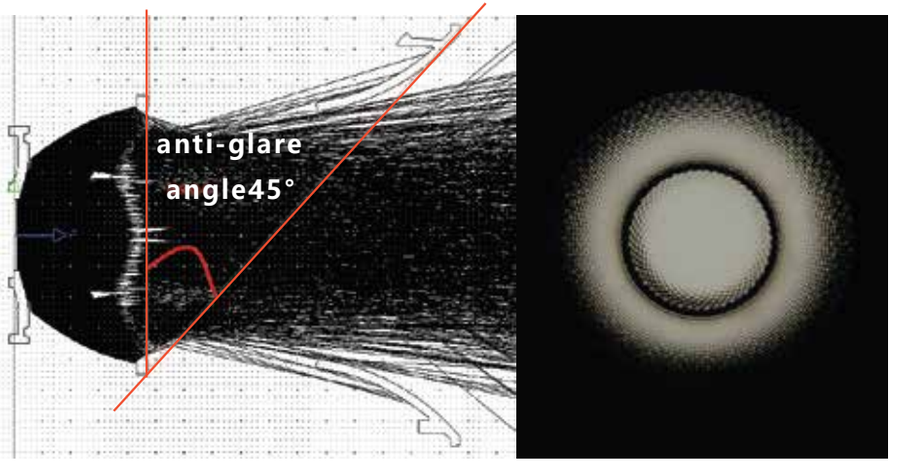
## Surface treatment, directional light control

Special treatment of the light in certain positions of the Peak series lens so that with the glare shield, some of the light just passes over the edge of the large opening of the glare shield, making it a more obvious cut-off line between light and dark when washing the wall.



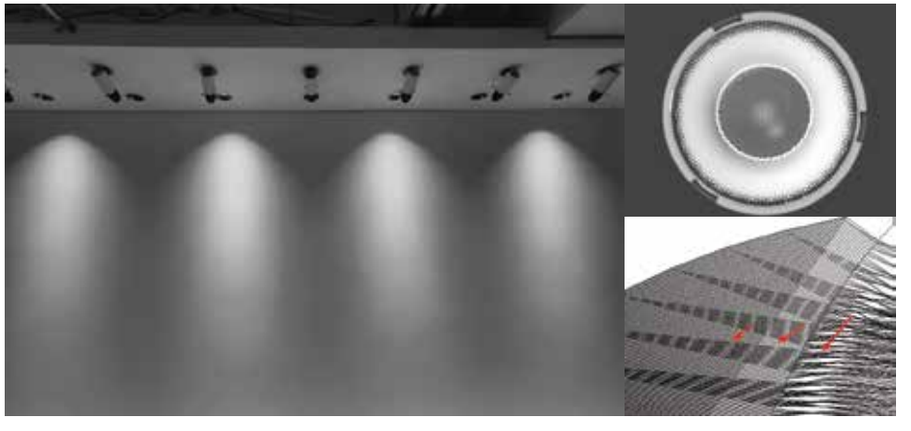
## Matching with light hood to achieve ultimate anti-glare

Adding microstructure on the surface of the lens makes the light cross-mix more evenly on the surface of the lens, and with the anti-glare cover developed by our company, the light spot of the wall washing is more even.




## More uniform light spot

The reflective surface treatment allows some of the light to cross-mix in multiple places within the lens and then mix again at the exit surface, resulting in a more uniform overall light spot.



| Peak 20@10 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23154 | 20 | 10 | 24° | D4 | 90% | PMMA |
| | 1.01.23163 | 20 | 10 | 36° | D4 | 90% | PMMA |

| Peak 25@13 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.13050 | 25 | 13 | 24° | D4 | 90% | PMMA |
| | 1.01.23143 | 25 | 13 | 36° | D4 | 90% | PMMA |
| | 1.01.23183 | 25 | 13 | 36° | D6 | 90% | PMMA |
| | 1.01.23433 | 25 | 13 | 15°V | D4 | 90% | PMMA |
| | 1.01.23378 | 25 | 13 | 24°V | D4 | 90% | PMMA |

| Peak 30@15 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.33466 | 30 | 15 | 15° | D4 | 90% | PMMA |
| | 1.01.23448 | 30 | 15 | 24° | D6 | 90% | PMMA |
| | 1.01.23139 | 30 | 15 | 36° | D6 | 90% | PMMA |

| Peak 35@16 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23222 | 35 | 16 | 15° | D6 | 90% | PMMA |
| | 1.01.12962 | 35 | 16 | 24° | D6 | 90% | PMMA |
| | 1.01.13016 | 35 | 16 | 36° | D6 | 90% | PMMA |
| | 1.01.23212 | 35 | 16 | 50° | D6 | 90% | PMMA |
| | 1.01.23354 | 35 | 16 | 15°V | D6 | 90% | PMMA |
| | 1.01.23353 | 35 | 16 | 24°V | D6 | 90% | PMMA |
| | 1.01.23432 | 35 | 16 | 36°V | D6 | 90% | PMMA |

| Peak 40@19 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23216 | 40 | 19 | 15° | D6 | 90% | PMMA |
| | 1.01.23429 | 40 | 19 | 24° | D9 | 90% | PMMA |

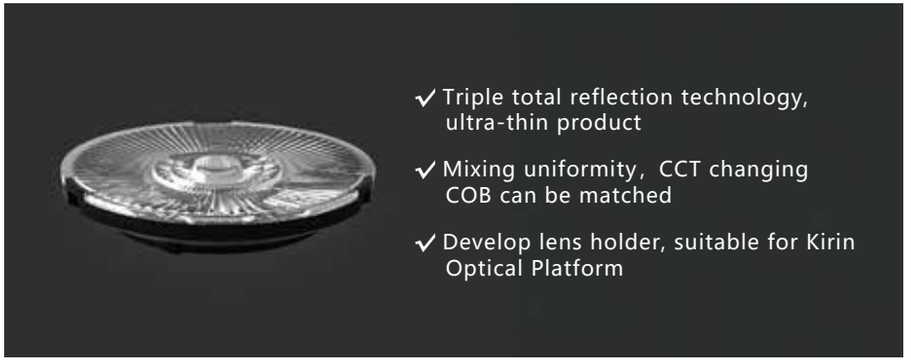
| Peak 45@21 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23307 | 45 | 21 | 15° | D6 | 90% | PMMA |
| | 1.01.12657 | 45 | 21 | 24° | D6 | 90% | PMMA |
| | 1.01.23067 | 45 | 21 | 36° | D6 | 90% | PMMA |
| | 1.01.23323 | 45 | 21 | 50° | D6 | 90% | PMMA |
| | 1.01.23096 | 45 | 21 | 24° | D9 | 90% | PMMA |
| | 1.01.23137 | 45 | 21 | 36° | D9 | 90% | PMMA |
| | 1.01.23319 | 45 | 21 | 50° | D9 | 90% | PMMA |
| | 1.01.23443 | 45 | 21 | 15°V | D6 | 90% | PMMA |
| | 1.01.23413 | 45 | 21 | 24°V | D6 | 90% | PMMA |

| Peak 55@25 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23321 | 55 | 25 | 15° | D9 | 90% | PMMA |
| | 1.01.23288 | 55 | 25 | 24° | D9 | 90% | PMMA |
| | 1.01.23300 | 55 | 25 | 36° | D9 | 90% | PMMA |

| Peak 68@32 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23312 | 68 | 32 | 24° | D14.5 | 90% | PMMA |
| | 1.01.23313 | 68 | 32 | 36° | D14.5 | 90% | PMMA |

# FILMY SERIES

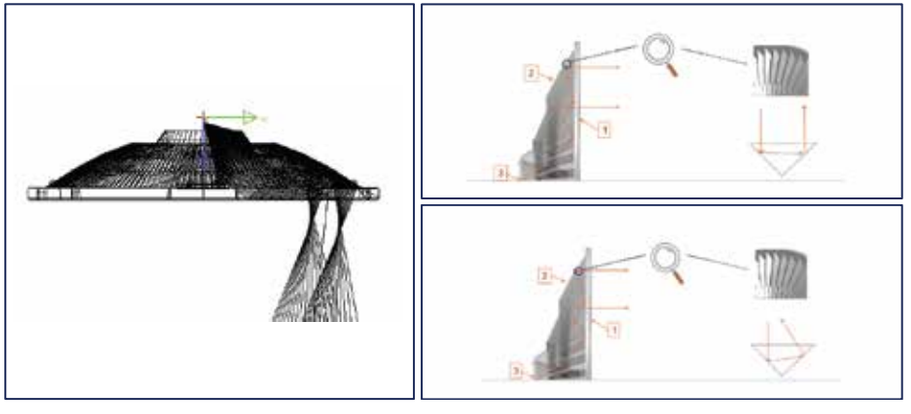
## A lens as thin as a cicada wing




## Ultra-thin design

In the limited optical space, through triple total reflection technology, the optical path is increased to control lights effectively.



## Beautiful appearance

Combining calculus with three total reflections, the lens looks like a blooming flower, which is quite exquisite as the appearance of lamps.



Triple total reflection technology: narrow angle can also match CCT changing COB

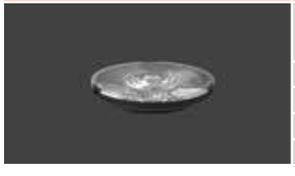




| Filmy 30@06 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23111 | 30 | 06 | 10° | D6 | 85% | Vaccum Aluminum Plating |
| | 1.01.12843 | 30 | 06 | 15° | D6 | 85% | PC |
| | 1.01.12845 | 30 | 06 | 24° | D6 | 85% | PC |
| | 1.01.12856 | 30 | 06 | 36° | D6 | 85% | PC |
| | 1.01.23214 | 30 | 06 | 60° | D6 | 85% | PC |

| Filmy 35@07 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23107 | 35 | 07 | 10° | D6 | 85% | Vaccum Aluminum Plating |
| | 1.01.02569 | 35 | 07 | 15° | D6 | 85% | PC |
| | 1.01.12728 | 35 | 07 | 24° | D6 | 85% | PC |
| | 1.01.12759 | 35 | 07 | 36° | D6 | 85% | PC |
| | 1.01.12772 | 35 | 07 | 60° | D6 | 85% | PC |

| Filmy 40@08 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.33648 | 40 | 08 | 15° | D9 | 85% | PC |
| | 1.01.33649 | 40 | 08 | 24° | D9 | 85% | PC |
| | 1.01.33650 | 40 | 08 | 36° | D9 | 85% | PC |
| | 1.01.33653 | 40 | 08 | 60° | D9 | 85% | PC |

| Filmy 45@09 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.13042 | 45 | 09 | 10° | D6 | 85% | Vaccum Aluminum Plating |
| | 1.01.12660 | 45 | 09 | 15° | D6 | 85% | PC |
| | 1.01.12777 | 45 | 09 | 24° | D9 | 85% | PC |
| | 1.01.12773 | 45 | 09 | 36° | D9 | 85% | PC |
| | 1.01.13015 | 45 | 09 | 60° | D9 | 85% | PC |

| Filmy 50@10 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23309 | 50 | 10 | 10° | D6 | 85% | Vaccum Aluminum Plating |
| | 1.01.02522 | 50 | 10 | 15° | D6 | 85% | PC |
| | 1.01.12783 | 50 | 10 | 24° | D9 | 85% | PC |
| | 1.01.12758 | 50 | 10 | 36° | D9 | 85% | PC |
| | 1.01.13023 | 50 | 10 | 60° | D9 | 85% | PC |

| Filmy 55@11 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23108 | 55 | 11 | 10° | D9 | 85% | Vaccum Aluminum Plating |
| | 1.01.12866 | 55 | 11 | 15° | D9 | 85% | PC |
| | 1.01.12942 | 55 | 11 | 24° | D9 | 85% | PC |
| | 1.01.23092 | 55 | 11 | 36° | D9 | 85% | PC |
| | 1.01.23128 | 55 | 11 | 60° | D9 | 85% | PC |

| Filmy 62@13 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23104 | 62 | 13 | 10° | D9 | 85% | Vaccum Aluminum Plating |
| | 1.01.12826 | 62 | 13 | 15° | D9 | 85% | PC |
| | 1.01.12830 | 62 | 13 | 24° | D9 | 85% | PC |
| | 1.01.13036 | 62 | 13 | 36° | D9 | 85% | PC |
| | 1.01.13043 | 62 | 13 | 60° | D9 | 85% | PC |

| Filmy 68@13 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23332 | 68 | 13 | 10° | D12 | 85% | Vaccum Aluminum Plating |
| | 1.01.12932 | 68 | 13 | 15° | D12 | 85% | PC |
| | 1.01.23140 | 68 | 13 | 24° | D12 | 85% | PC |
| | 1.01.23254 | 68 | 13 | 36° | D12 | 85% | PC |
| | 1.01.23260 | 68 | 13 | 60° | D12 | 85% | PC |

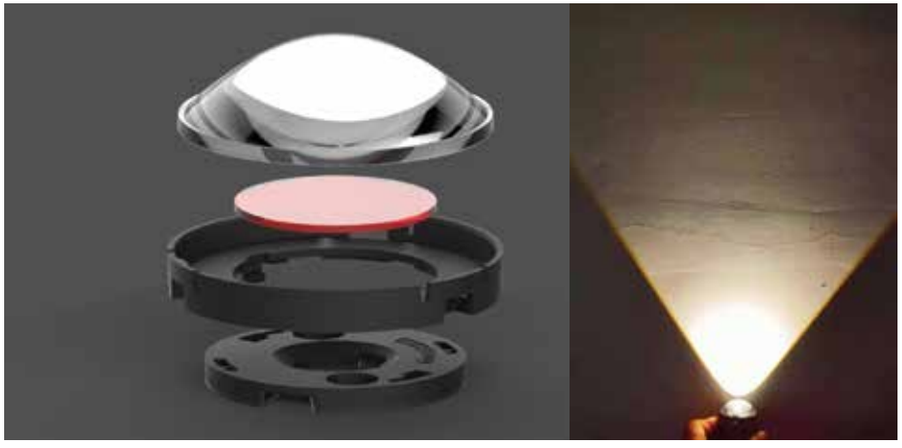
| Filmy 75@15 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23112 | 75 | 15 | 10° | D14 | 85% | Vaccum Aluminum Plating |
| | 1.01.12862 | 75 | 15 | 15° | D14 | 85% | PC |
| | 1.01.12863 | 75 | 15 | 24° | D14 | 85% | PC |
| | 1.01.13039 | 75 | 15 | 36° | D14 | 85% | PC |
| | 1.01.23221 | 75 | 15 | 60° | D14 | 85% | PC |

| Filmy 83@17 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23209 | 83 | 17 | 10° | D14 | 85% | Vaccum Aluminum Plating |
| | 1.01.12922 | 83 | 17 | 15° | D14 | 85% | PC |
| | 1.01.23245 | 83 | 17 | 24° | D14 | 85% | PC |
| | 1.01.23248 | 83 | 17 | 36° | D14 | 85% | PC |
| | 1.01.23246 | 83 | 17 | 60° | D14 | 85% | PC |

| Filmy 90@18 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23264 | 90 | 18 | 10° | D14 | 85% | Vaccum Aluminum Plating |
| | 1.01.12928 | 90 | 18 | 15° | D14 | 85% | PC |
| | 1.01.23263 | 90 | 18 | 24° | D14 | 85% | PC |
| | 1.01.23251 | 90 | 18 | 36° | D14 | 85% | PC |
| | 1.01.23262 | 90 | 18 | 60° | D14 | 85% | PC |

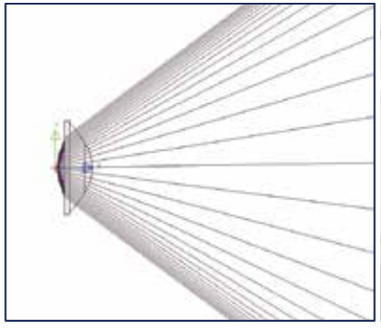
# RAINBOW SERIES

A lens like an eye

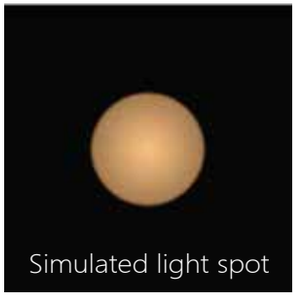


## Aspherical design:

Adjust the internal structure of the convex aspherical surface to make the light spot cut-off and uniform.













## Suitable for Kirin optical platform:

The size is from 20-83mm. By using our customized lens holders, it can be assembled on our COB holders and realize a convenient replacement. it can also match with various COB brands through the corresponding COB holders.

## Sunset effect:

By adding color filter, the color of the light spot can be changed to achieve different lighting effects.

There are three sizes of sunset red color-changing filters, which can be applied to sunset lights, wall lights, atmosphere lights, etc. You can also customize different colors filters according to your own needs.

The specific parameters of the color filters are as follows:

| Color filter | Size | Matching optics | Matching COB holder |
|---|---|---|---|
| Ø17.8 | 17.8@1.1 | Rainbow lens D20/D25 | D24 COB holder |
| Ø27 | 27@1.1 | Rainbow lens D35/D45/D50/D55/D62/D68 | D35 COB holder |
| Ø49.8 | 49.8@1.1 | Rainbow lens D83/D75 | D50 COB holder |



| Rainbow Series | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
| Rainbow 18@05 | 1.01.12910 | 18 | 05 | 75° | XPG2 | 88% | PC |
| Rainbow 25@06 | 1.01.12918 | 25 | 06 | 75° | D4.5 | 88% | PC |
| Rainbow 32@09 | 1.01.12891 | 32 | 09 | 75° | D6 | 88% | PC |
| Rainbow 42@12 | 1.01.12893 | 42 | 12 | 75° | D6 | 85% | PC |
| Rainbow 47@15 | 1.01.12897 | 47 | 15 | 75° | D9 | 88% | PC |
| Rainbow 52@15 | 1.01.12967 | 52 | 15 | 75° | D9 | 88% | PC |
| Rainbow 58@16 | 1.01.12965 | 58 | 16 | 75° | D9 | 88% | PC |
| Rainbow 58@16 | 1.01.23230 | 58 | 16 | 95° | D9 | 88% | PC |
| Rainbow 64@19 | 1.01.12969 | 64 | 19 | 75° | D12 | 88% | PC |
| Rainbow 71@18 | 1.01.12963 | 71 | 18 | 75° | D14 | 88% | PC |
| Rainbow 79@18 | 1.01.12944 | 79 | 18 | 75° | D14 | 88% | PC |

| Rainbow Series | Assembly outer diameter |
|---|---|
| Rainbow 18@05 | 20mm |
| Rainbow 25@06 | 28mm |
| Rainbow 32@09 | 35mm |
| Rainbow 42@12 | 45mm |
| Rainbow 47@15 | 50mm |
| Rainbow 52@15 | 55mm |
| Rainbow 58@16 | 62mm |
| Rainbow 58@16 | 62mm |
| Rainbow 64@19 | 68mm |
| Rainbow 71@18 | 75mm |
| Rainbow 79@18 | 83mm |

# V SERIES

## A reflector with anti-glare effect



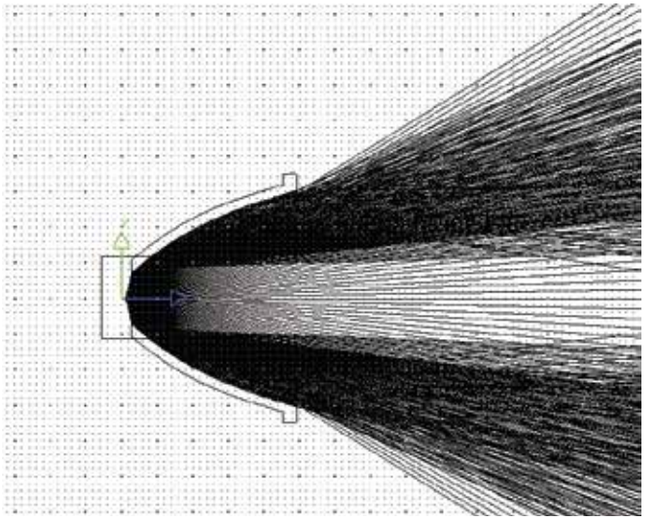
√ Pure reflector design, metal texture

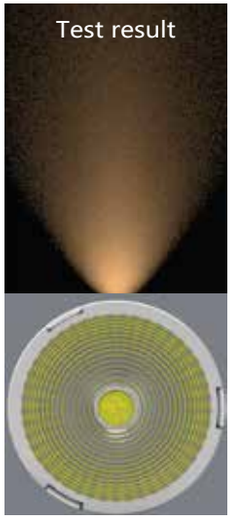
√ Develop lens holder, suitable for Kirin Optical Platform

√ Light spot cut off, excessively uniform and clean

## Distribute lights appropriately

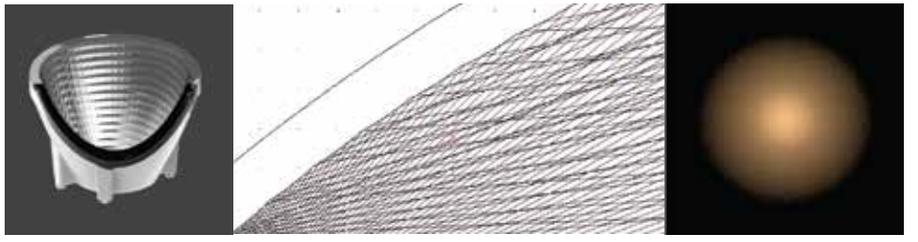
In order to uniform the wall-washing lights without delamination, for reflectors of different diameters, it's necessary to accurate the reflector's height, distribute the lights appropriately, and control the lights on the reflecting surface precisely.






## Light spot uniformity

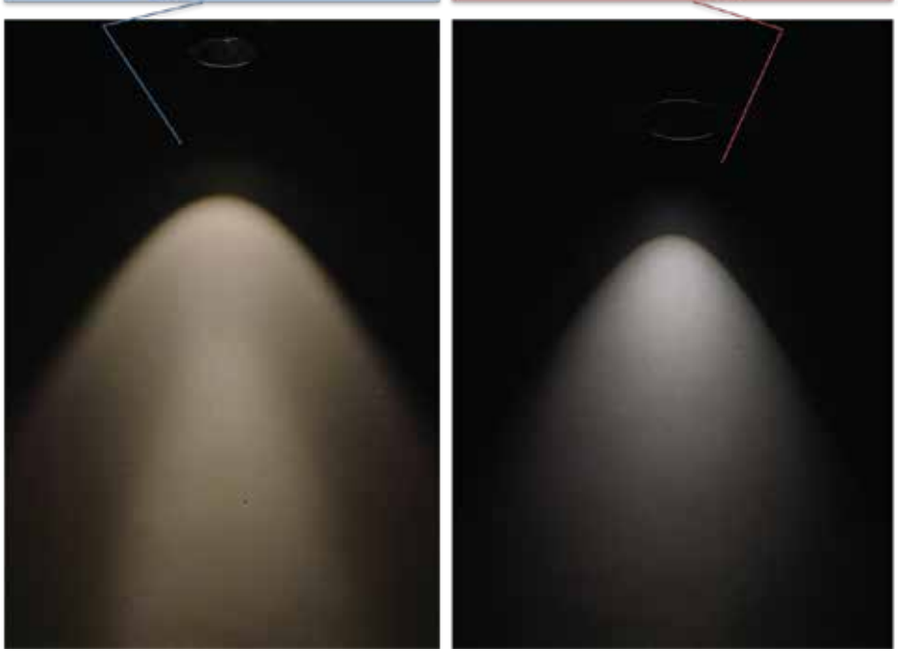
On the basis of the reasonable distribution of the middle light and the light of the reflective surface, coupled with the reflective surface of the scaled surface differential structure, the light spot becomes more soft, and at the same time, it can be accurately controlled on the light of the reflective surface to avoid the occurrence of stratification. Dark ring and other phenomena.



## Spot contrast

**Common reflector:** The transition between the main spot and the side spot is uneven and there is a dark areas

**HercuLux V series:** The transition between the main spot and the side spot is uniform, no dark areas, and the edges are cut off



| V 25@17 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.23226 | 25 | 17 | 24° | D4 | 88% | Vaccum Aluminum Plating PC |
| | 1.08.23232 | 25 | 17 | 36° | D4 | 88% | |

| V 30@19 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.02.33714 | 30 | 19 | 15° | D6 | 88% | Vaccum Aluminum Plating PC |
| | 1.08.23166 | 30 | 19 | 24° | D6 | 88% | |
| | 1.08.23167 | 30 | 19 | 36° | D6 | 88% | |
| | 1.08.33477 | 30 | 19 | 50° | D6 | 88% | |

| V 35@23 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.12722 | 35 | 23 | 15° | D6 | 88% | Vaccum Aluminum Plating PC |
| | 1.08.12706 | 35 | 23 | 24° | D6 | 88% | |
| | 1.08.12796 | 35 | 23 | 36° | D6 | 88% | |
| | 1.08.12802 | 35 | 23 | 50° | D6 | 88% | |
| | 1.08.12821 | 35 | 23 | 24° | D9 | 88% | |
| | 1.08.13035 | 35 | 23 | 36° | D9 | 88% | |

| V 40@24 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.33680 | 40 | 24 | 24° | D9 | 88% | Vaccum Aluminum Plating PC |
| | 1.08.33682 | 40 | 24 | 36° | D9 | 88% | |
| | 1.08.33686 | 40 | 24 | 50° | D9 | 88% | |

| V 45@34 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.02596 | 45 | 34 | 24° | D9 | 88% | Vaccum Aluminum Plating PC |
| | 1.08.13022 | 45 | 34 | 36° | D9 | 88% | |
| | 1.08.33473 | 45 | 34 | 50° | D9 | 88% | |

| V 50@36 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.12765 | 50 | 36 | 24° | D12 | 88% | Vaccum Aluminum Plating PC |
| | 1.08.13029 | 50 | 36 | 36° | D12 | 88% | |
| | 1.08.33481 | 50 | 36 | 50° | D12 | 88% | |

| V 55@39 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.23240 | 55 | 39 | 24° | D12 | 88% | Vaccum Aluminum Plating PC |
| | 1.08.23241 | 55 | 39 | 36° | D12 | 88% | |
| | 1.08.33475 | 55 | 39 | 50° | D12 | 88% | |

| V 62@41 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.23170 | 62 | 41 | 24° | D14.5 | 88% | Vaccum Aluminum Plating PC |
| | 1.08.23171 | 62 | 41 | 36° | D14.5 | 88% | |
| | 1.08.33480 | 62 | 41 | 50° | D14.5 | 88% | |

| V 68@45 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.23250 | 68 | 45 | 24° | D14.5 | 88% | Vaccum Aluminum Plating PC |
| | 1.08.23377 | 68 | 45 | 36° | D14.5 | 88% | |
| | 1.08.33485 | 68 | 45 | 50° | D14.5 | 88% | |

| V 75@47 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.23186 | 75 | 47 | 24° | D18 | 88% | Vaccum Aluminum Plating PC |
| | 1.08.23187 | 75 | 47 | 36° | D18 | 88% | |
| | 1.08.33482 | 75 | 47 | 50° | D18 | 88% | |

| V 83@60 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.23197 | 83 | 60 | 24° | D18 | 88% | Vaccum Aluminum Plating PC |
| | 1.08.23299 | 83 | 60 | 36° | D18 | 88% | |
| | 1.08.33486 | 83 | 60 | 50° | D18 | 88% | |

# ZOOM SERIES

## The main zoom product in the Kirin Optical Platform, zoom without changing sizes

The zoom module is composed of a lens, a lens holder, and a fixed holder, where-in the lens holder drives the lens to move back and forth in the fixed holder to realize the change of the focal length of the lens relative to the position of the LED, thereby realizing the change of the angle. In the zoom module development plan, the outer diameter is consistent with other dimensions of the Kirin Optical Platform. The total planned outer diameters are 30, 35, 45, 50, 55, 62, 75.



Structure A



Structure B

## Easy install

After the customer gets the zoom module, they only need to add a zoom connection structure and fix it on the lens holder with screws, that is, the module can be rotated on the Kirin Optical Platform holder, and the front part of the lamp can be completed by adding the lamp shell, and the structure is simple.



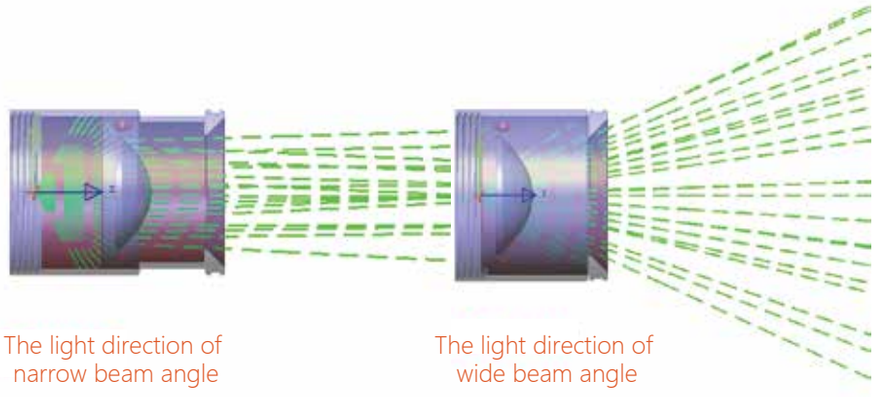
Structure A



Structure B

## Fermat microstructure design

The convex lens is partially designed with Fermat microstructure, which makes the overall light spot soft and cut off, and the transition light spot is more natural.



The light direction of narrow beam angle

The light direction of wide beam angle

## Anti-glare effect

The zoom module has an anti-glare angle of 38° itself, and the anti-glare angle remains unchanged during the entire zooming process, so that the zoom module can achieve excellent anti-glare effect at all angles. The following pictures are the real shot effect of the small, medium and large angle.



| Zoom Series | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
| Zoom 22@06 | 1.01.12997 | 22 | 06 | 15°-45° | D6 | / | PC |
| Zoom 27@08 | 1.01.13000 | 27 | 08 | 15°-50° | D6 | / | PC |
| Zoom 32@09 | 1.01.33641 | 32 | 09 | 15°-50° | D9 | / | PC |
| Zoom 37@12 | 1.01.12951 | 37 | 12 | 10°-50° | D6 | / | PC |
| Zoom 42@13 | 1.01.12994 | 42 | 13 | 15°-45° | D9 | / | PC |
| Zoom 47@15 | 1.01.13018 | 47 | 15 | 15°-45° | D9 | / | PC |
| Zoom 54@16 | 1.01.23273 | 54 | 16 | 15°-50° | D9 | / | PC |
| Zoom 58@15 | 1.01.337761 | 58 | 15 | 15°-60° | D12 | / | PC |
| Zoom 65@19 | 1.01.23398 | 65 | 19 | 10°-50° | D12 | / | PC |
| Zoom 73@19 | 1.01.33721 | 73 | 19 | 14°-60° | D14 | / | PC |



| Zoom Series | Assembly outer diameter |
|---|---|
| Zoom 22@06 | 30mm |
| Zoom 27@08 | 35mm |
| Zoom 32@09 | 40mm |
| Zoom 37@12 | 45mm |
| Zoom 42@13 | 50mm |
| Zoom 47@15 | 55mm |
| Zoom 54@16 | 62mm |
| Zoom 58@15 | 68mm |
| Zoom 65@19 | 75mm |
| Zoom 73@19 | 83mm |



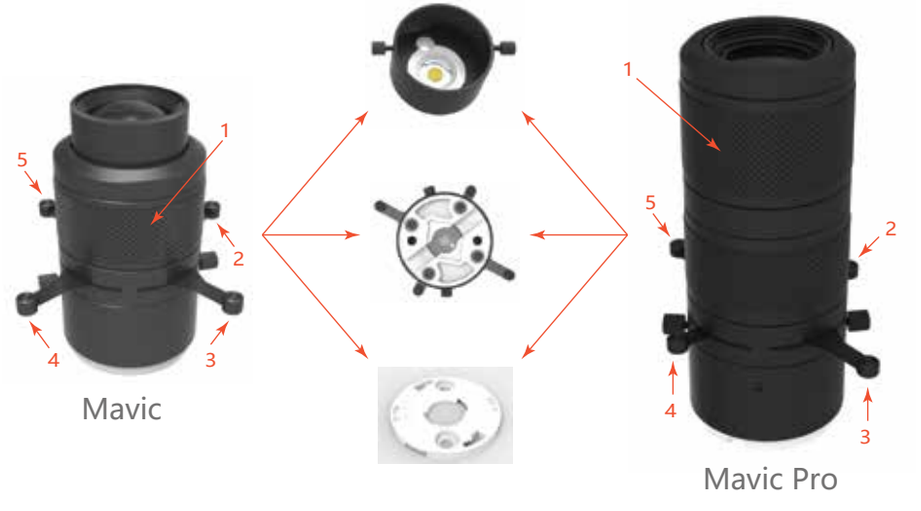
# MAVIC & MAVIC PRO SERIES

A lens with ultra small size and clean light spot



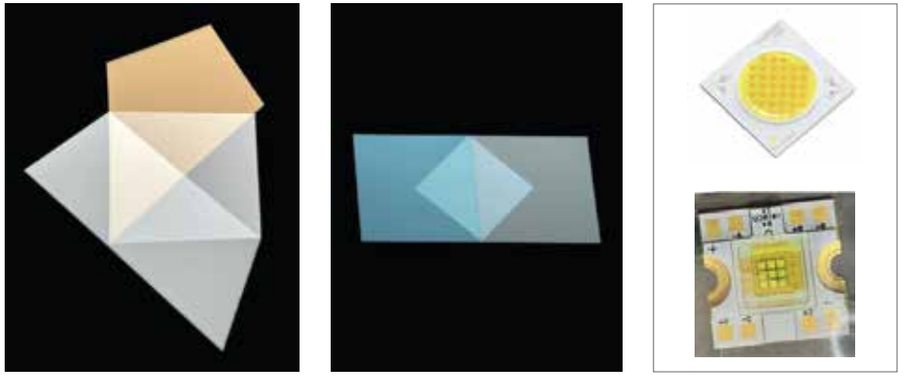
Mavic　　Mavic Pro

Same base, consistent with the screw hole position of the Kirin platform D35 light source holder.

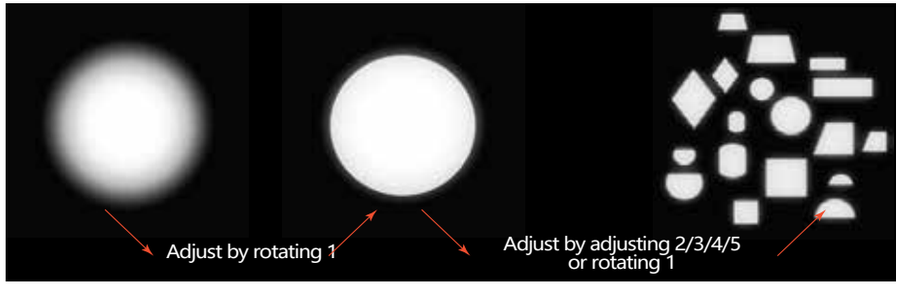



Mavic　　Mavic Pro

Suitable for normal COB and DW&TW COB smaller than 6mm.



Can adjust to any shape and rotate 360 degrees.




High precision, can show more details.



# MAVIC & MAVIC PRO




## Easy assembly and strong compatibility

Step 1: Unscrew the screws and replace the conventional light source bracket 6.

Step 2: Install component 7 directly onto the light source and lock the screws.

Step 3: Install component 8 onto component 7, with the screws on the side of the screws.







Mavic Mavic Pro

## The lens can rotate 360 degrees and can be used for logos

Loosen the hand screws 9 on both sides, and the lamp 8 can rotate 360 ° around accessory 7, making it flexible and adaptable to the needs of multiple views and angles. It can also be used for logo lights, and the logo sheet needs to be customized separately.




Mavic Mavic Pro



| Series | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
| MAVIC 18 | 1.09.44325H | 18 | 31.2 | 35°-50° | D2.4/3535 | 43% | PC |
| MAVIC PRO 18 | 1.09.44326H | 18 | 41.2 | 35°-50° | D2.4/3535 | 43% | PC |
| MAVIC PRO 23 | 1.09.44106 | 23 | 56.0 | 35°-50° | D2.4/3535 | 35% | PC |
| MAVIC 28 | 1.09.44327H | 28 | 51.2 | 35°-50° | D2.4/D4 | 43% | PC |
| MAVIC PRO 28 | 1.09.44328H | 28 | 75.7 | 35°-50° | D2.4/D4 | 43% | PC |
| MAVIC 38 | 1.09.23380H | 38 | 68.0 | 35°-50° | D4/D6 | 43% | PC |
| MAVIC PRO 38 | 1.09.33515H | 38 | 108 | 35°-50° | D4/D6 | 43% | PC |
| MAVIC 48 | 1.09.44331H | 48 | 94.2 | 35°-50° | D6/D9 | 43% | PC |
| MAVIC PRO 48 | 1.09.44332H | 48 | 135 | 35°-50° | D6/D9 | 43% | PC |
| MAVIC 58 | 1.09.44333H | 58 | 119 | 35°-50° | D9/D12 | 45% | PC |
| MAVIC PRO 58 | 1.09.44334H | 58 | 159 | 35°-50° | D9/D12 | 48% | PC |

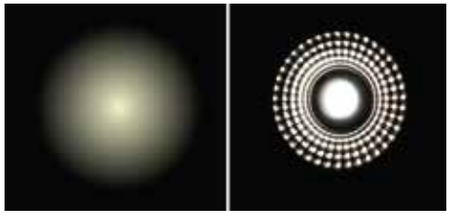
# KA PRO SERIES

The KA Pro is a major upgrade based on Calculus technology. Compared to the KA series, the KA pro offers a significant increase in main center light intensity and efficiency.



## KA Pro Product Features





√ Calculus technology with uniform spot and cut-off

√ High light intensity in the main center

√ Higher light efficiency

√ Superior color mixing ability

√ Perfectly adapted to Kirin Optical Platform

## Color mixing ability:

The reflective surface adopts calculus technology, so that the lens can match with CCT changing COB, and the spot is more uniform.

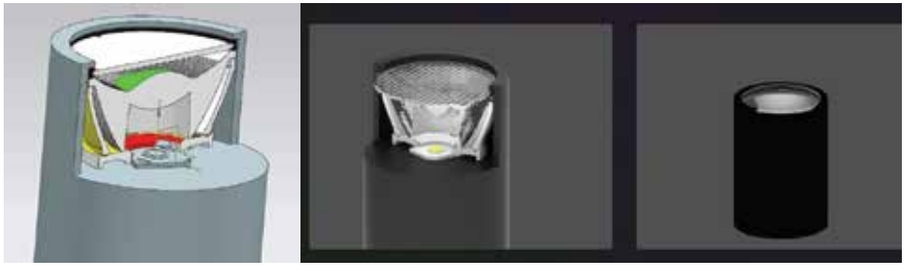


## Test Situation

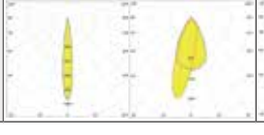
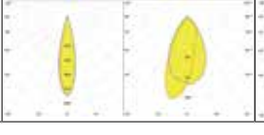
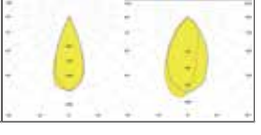
| Series | Diameter | Height | Materials | Angle | K-value | Efficiency |
|---|---|---|---|---|---|---|
| KA-Pro series | 50 | 24 | PMMA | 24° | 5.3 | 93.7% |
| KA series | | | | 24° | 4.6 | 92.8% |
| KA-Pro series | | | | 36° | 3.0 | 94.3% |
| KA series | | | | 36° | 2.5 | 91.3% |

## Matching filter

KA PRO series, matched with different variable filter to realize different lighting effects, single asymmetric, double asymmetric, linear, wall wash, transparent filter. Track light + wall washer, suitable for track light fixtures, no need to add deeper light hood.



## Comparison Application

| Luminaire spacing | 1M | 1M | 1M |
|---|---|---|---|
| Distance from wall | 1M | 1M | 1M |
| Wall height | 3.6M | 3.6M | 3.6M |
| Base lens | 12° | 24° | 36° |
| Luminaire Offset Angle | 35 | 35 | 35 |
| Light distribution curve |  |  |  |

| KA PRO 25@13 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12885_KAP | 25 | 13 | 15° | D4 | 92% | PMMA |
| | 1.01.12888_KAP | 25 | 13 | 60° | D4 | 92% | PMMA |

| KA PRO 30@16 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02576_KAP | 30 | 16 | 15° | D6 | 92% | PMMA |
| | 1.01.02577 | 30 | 16 | 24° | D6 | 92% | PMMA |
| | 1.01.02578 | 30 | 16 | 36° | D6 | 92% | PMMA |
| | 1.01.12853_KAP | 30 | 16 | 60° | D6 | 92% | PMMA |

| KA PRO 35@16 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02556_KAP | 35 | 16 | 15° | D6 | 92% | PMMA |
| | 1.01.33935 | 35 | 16 | 24° | D6 | 92% | PMMA |
| | 1.01.33936 | 35 | 16 | 36° | D6 | 92% | PMMA |
| | 1.01.12804_KAP | 35 | 16 | 60° | D6 | 92% | PMMA |

| KA PRO 40@19 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.43938_KAP | 40 | 19 | 15° | D6 | 92% | PMMA |
| | 1.01.33711 | 40 | 19 | 24° | D9 | 92% | PMMA |
| | 1.01.33728 | 40 | 19 | 36° | D9 | 92% | PMMA |
| | 1.01.33755_KAP | 40 | 19 | 60° | D9 | 92% | PMMA |

| KA PRO 45@21 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02559_KAP | 45 | 21 | 15° | D9 | 92% | PMMA |
| | 1.01.33773 | 45 | 21 | 24° | D9 | 92% | PMMA |
| | 1.01.33926 | 45 | 21 | 36° | D9 | 92% | PMMA |
| | 1.01.12861_KAP | 45 | 21 | 60° | D9 | 92% | PMMA |

| KA PRO 50@25 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02581_KAP | 50 | 25 | 15° | D9 | 92% | PMMA |
| | 1.01.33725 | 50 | 25 | 24° | D9 | 92% | PMMA |
| | 1.01.33775 | 50 | 25 | 36° | D9 | 92% | PMMA |
| | 1.01.12803_KAP | 50 | 25 | 60° | D9 | 92% | PMMA |

| KA PRO 55@25 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02551_KAP | 55 | 25 | 15° | D9 | 92% | PMMA |
| | 1.01.43948 | 55 | 25 | 24° | D12 | 92% | PMMA |
| | 1.01.43949 | 55 | 25 | 36° | D12 | 92% | PMMA |
| | 1.01.12860_KAP | 55 | 25 | 60° | D12 | 92% | PMMA |

| KA PRO 62@30 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02566_KAP | 62 | 30 | 15° | D12 | 92% | PMMA |
| | 1.01.43950 | 62 | 30 | 24° | D12 | 92% | PMMA |
| | 1.01.44050 | 62 | 30 | 36° | D12 | 92% | PMMA |
| | 1.01.12805_KAP | 62 | 30 | 60° | D12 | 92% | PMMA |

| KA PRO 68@32 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02560_KAP | 68 | 32 | 15° | D12 | 92% | PMMA |
| | 1.01.33778 | 68 | 32 | 24° | D12 | 92% | PMMA |
| | 1.01.33802 | 68 | 32 | 36° | D12 | 92% | PMMA |
| | 1.01.23069_KAP | 68 | 32 | 60° | D12 | 92% | PMMA |

| KA PRO 75@31 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02562_KAP | 75 | 31 | 15° | D14 | 92% | PMMA |
| | 1.01.33816 | 75 | 31 | 24° | D14 | 92% | PMMA |
| | 1.01.33927 | 75 | 31 | 36° | D14 | 92% | PMMA |
| | 1.01.12884_KAP | 75 | 31 | 60° | D14 | 92% | PMMA |

| KA PRO 83@40 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02563_KAP | 83 | 40 | 15° | D14 | 92% | PMMA |
| | 1.01.43946 | 83 | 40 | 24° | D14 | 92% | PMMA |
| | 1.01.44003 | 83 | 40 | 36° | D14 | 92% | PMMA |
| | 1.01.12811_KAP | 83 | 40 | 60° | D14 | 92% | PMMA |

# MOONY PRO SERIES

## Hard grazing wall

Grazing wall as a unique category (no sub-light spots, clear light and shadow, sharp spots, layered) gives users a unique experience and is loved by many users.Some users prefer hard grazing wall, but others favor soft grazing wall.

The Moony Pro Series (soft grazing wall) and Peak Pro Series (hard grazing wall) are great additions to the Kirin Optical platform, offering more beautiful designs and personalized needs for the field of home lighting without main lights.



## COB Compatible

Both regular color temperatures and dual-color temperature light sources on the market can be compatible, easily controlled.





| MOONY PRO 28@13 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.44033 | 28 | 13 | 15° | D3 | 88% | PC |
| | 1.01.33887 | 28 | 13 | 24° | D4 | 88% | PC |
| | 1.01.33892 | 28 | 13 | 36° | D4 | 88% | PC |
| | 1.01.33905 | 28 | 13 | 50° | D4 | 88% | PC |

| MOONY PRO 35@18 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.33739 | 35 | 18 | 15° | D4 | 88% | PC |
| | 1.01.33625 | 35 | 18 | 24° | D6 | 88% | PC |
| | 1.01.33724 | 35 | 18 | 36° | D6 | 88% | PC |
| | 1.01.33733 | 35 | 18 | 50° | D6 | 88% | PC |

| MOONY PRO 45@21 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.33882 | 45 | 21 | 15° | D6 | 88% | PC |
| | 1.01.33863 | 45 | 21 | 24° | D9 | 88% | PC |
| | 1.01.33870 | 45 | 21 | 36° | D9 | 88% | PC |
| | 1.01.33883 | 45 | 21 | 50° | D9 | 88% | PC |

# PEAK PRO SERIES

## Soft grazing wall

Grazing wall as a unique category (no sub-light spots, clear light and shadow, sharp spots, layered) gives users a unique experience and is loved by many users.Some users prefer hard grazing wall, but others favor soft grazing wall.

The Moony Pro Series (soft grazing wall) and Peak Pro Series (hard grazing wall) are great additions to the Kirin Optical platform, offering more beautiful designs and personalized needs for the field of home lighting without main lights.



## COB Compatible

Both regular color temperatures and dual-color temperature light sources on the market can be compatible, easily controlled.





| PEAK PRO 28@13 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.33608 | 28 | 13 | 15° | D4 | 88% | PC |
| | 1.01.33738 | 28 | 13 | 24° | D4 | 88% | PC |

| PEAK PRO 35@18 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.33924 | 35 | 18 | 15° | D4 | 88% | PC |
| | 1.01.33636 | 35 | 18 | 24° | D6 | 88% | PC |
| | 1.01.33663 | 35 | 18 | 36° | D6 | 88% | PC |
| | 1.01.33932 | 35 | 18 | 50° | D6 | 88% | PC |

| PEAK PRO 45@21 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.43979 | 45 | 21 | 15° | D4 | 88% | PC |
| | 1.01.33772 | 45 | 21 | 24° | D9 | 88% | PC |
| | 1.01.33791 | 45 | 21 | 36° | D9 | 88% | PC |

# SOFTY SERIES

## Advantages of silicone lens

√ High Temp,200°C up can be used in high-power lamps.
√ Zero InnerStress,completely prevent stress cracking.
√ High Molding Accuracy,molecular-level replication between the silicone and the mold, surface precision can achieve μ-level.
√ High toughness,the material is soft and elastic,making it easy to form and unmold complex structures.
√ High weatherability,HercuLux self-innovated silicone, high aging resistance, yellowing resistance and optical stability,ong service life.
√ Recyclable, liquid silicone can be recycled into silicone oil,environmentally friendly.
√ Same dimensions as all Kirin platform,and can be directly interchanged.

**Long service life:** In the process of synthesizing Silicone, we strictly control the content of chloride ions in the silicone resin, controlling it to be less than 1 ppm, and allow the platinum salt initiator to fully react during the synthesis. So the degree of yellowing of our silicone lenses is almost negligible!

**How to verify the yellowing resistance of silicone lens:** leave it at 150℃ for more than 240 hours to verify its anti-yellowing performance.
Comparison of HercuLux silicone lens and other brands after being placed in a 150℃ environment for 500 hours.




| SOFTY 20@11 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.43969 | 20 | 11 | 15° | 3535 | 94% | Silicone |
| | 1.01.43970 | 20 | 11 | 24° | 3535 | 94% | Silicone |
| | 1.01.43971 | 20 | 11 | 36° | 3535 | 94% | Silicone |
| | 1.01.43972 | 20 | 11 | 50° | 3535 | 94% | Silicone |

Standard products are under continuous development and can be customised.

| SOFTY 25@13 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.44076 | 25 | 13 | 24° | D6 | 94% | Silicone |
| | 1.01.44140 | 25 | 13 | 36° | D6 | 94% | Silicone |

| SOFTY 30@16 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.44210 | 30 | 16 | 15° | D4 | 94% | Silicone |
| | 1.01.44186 | 30 | 16 | 24° | D4 | 94% | Silicone |
| | 1.01.44187 | 30 | 16 | 36° | D4 | 94% | Silicone |
| | 1.01.44191 | 30 | 16 | 50° | D4 | 94% | Silicone |

| SOFTY 35@16 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.44129 | 35 | 16 | 15° | D4 | 94% | Silicone |
| | 1.01.23439 | 35 | 16 | 24° | D6 | 94% | Silicone |
| | 1.01.44114 | 35 | 16 | 36° | D6 | 94% | Silicone |
| | 1.01.44132 | 35 | 16 | 50° | D6 | 94% | Silicone |

| SOFTY 45@21 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.33885 | 45 | 21 | 10° | D4 | 94% | Silicone |
| | 1.01.33559 | 45 | 21 | 24° | D9 | 94% | Silicone |
| | 1.01.33560 | 45 | 21 | 36° | D9 | 94% | Silicone |
| | 1.01.44070 | 45 | 21 | 50° | D9.8 | 94% | Silicone |

| SOFTY 55@25 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.44089 | 55 | 25 | 24° | D12 | 94% | Silicone |
| | 1.01.44193 | 55 | 25 | 36° | D12 | 94% | Silicone |
| | 1.01.44249 | 55 | 25 | 50° | D12 | 94% | Silicone |

| SOFTY 62@30 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.44084 | 62 | 30 | 24° | D14 | 94% | Silicone |
| | 1.01.33557 | 62 | 30 | 36° | D14 | 94% | Silicone |

| SOFTY 68@32 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.44146 | 68 | 32 | 24° | D14.5 | 94% | Silicone |

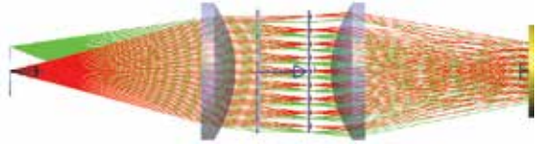
| SOFTY 83@40 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.33666 | 83 | 40 | 24° | D22 | 94% | Silicone |

# FIREFLY-KIRIN SERIES

## Development Background

Currently, in commercial lighting and hotel lighting, there are very few optics that good color mixing, especially nowadays, it is difficult to guarantee the spot quality after the color COB comes out, and secondly, the spot quality is not good, and It's very harsh.
Firefly-Kirin series, using Herculux patented "Light cone correction technology" technology. Comply with Zhaga standard, super color mixing ability.





Light cone correction technology,The design concept comes from imaging optics,which combines imaging optics with energy optics.
To achieve the following two objectives:
1: Uniform irradiance on the exit surface.
2: Expanding LEDs from point light sources to surface light sources.

## Conforms to Zhaga standards:

From the time of project approval, we require the design of the whole series of products to meet the pin to pin replacement with Kirin optical platform products, fully in line with Zhaga standards.



## Superb color mixing ability and ultra-high center light intensity:

Herculux's patented "light cone correction technology" achieves excellent color uniformity, high illuminance uniformity on the lens surface to achieve high CBCP, excellent light distribution angle and ultra-low glare performance.



## Parameter comparison:

| Test conditions | COB: 6mm Tunable CCT COB | | Power:7.1W | | | |
|---|---|---|---|---|---|---|
| Product series | Angle(50%) | Angle(10%) | LM | CBCP | K value | Efficiency |
| Firefly-Kirin φ35-24° | 23.9 | 42.7 | 564LM | 2739CD | 4.85 | 86% |
| Other brands φ35-24° | 24.9 | 44.4 | 552LM | 2251CD | 4.07 | 84% |
| Firefly-Kirin φ35-36° | 35.7 | 57 | 554LM | 1428CD | 2.57 | 85% |
| Other brands φ35-36° | 35.6 | 60.7 | 541LM | 1236CD | 2.28 | 83% |
| Firefly-Kirin φ35-60° | 59.8 | 78 | 558LM | 596CD | 1 | 85% |
| Other brands φ35-60° | 52.9 | 93.6 | 483LM | 518.8CD | 1.07 | 74% |

## Spot Comparison:

Firefly-Kirin φ45-24°




Other brands φ45-24°



| FIREFLY KIRIN 28@19 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.44030 | 28 | 19 | 24° | D6 | 87% | PMMA+Vaccum Aluminum Plating PC |
| | 1.01.44031 | 28 | 19 | 36° | D6 | 87% | |
| | 1.01.44032 | 28 | 19 | 60° | D6 | 87% | |

| FIREFLY-KIRIN 30@17 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.33912 | 30 | 17 | 24° | D6 | 87% | PMMA+Vaccum Aluminum Plating PC |
| | 1.01.44006 | 30 | 17 | 36° | D6 | 87% | |
| | 1.01.44008 | 30 | 17 | 60° | D6 | 87% | |

| FIREFLY-KIRIN 35@25 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.33742 | 35 | 25 | 24° | D9 | 87% | PMMA+Vaccum Aluminum Plating PC |
| | 1.01.33800 | 35 | 25 | 36° | D6 | 87% | |
| | 1.01.33797 | 35 | 25 | 60° | D6 | 87% | |
| | 1.01.33872 | 35 | 25 | Wall washing | D6 | 87% | |

| FIREFLY-KIRIN 40@30 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.33915 | 40 | 30 | 24° | D9 | 87% | PMMA+Vaccum Aluminum Plating PC |

| FIREFLY-KIRIN 45@34 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.33717 | 45 | 34 | 24° | D9 | 87% | PMMA+Vaccum Aluminum Plating PC |
| | 1.01.33718 | 45 | 34 | 36° | D9 | 87% | |
| | 1.01.33745 | 45 | 34 | 60° | D9 | 87% | |
| | 1.01.33873 | 45 | 34 | Wall washing | D9 | 87% | |
| | 1.01.44061 | 45 | 34 | 20°-50° | D9 | 87% | |

| FIREFLY-KIRIN 50@38 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.33741 | 50 | 38 | 24° | D9 | 87% | PMMA+Vaccum Aluminum Plating PC |
| | 1.01.33786 | 50 | 38 | 36° | D9 | 87% | |
| | 1.01.33875 | 50 | 38 | 60° | D9 | 87% | |
| | 1.01.33874 | 50 | 38 | Wall washing | D9 | 87% | |

| FIREFLY-KIRIN 55@39 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.33743 | 55 | 39 | 24° | D9 | 87% | PMMA+Vaccum Aluminum Plating PC |

# COB HOLDER

Can buckle with the lens holder; Same COB holder can match different COB Substrate size and COB brand.

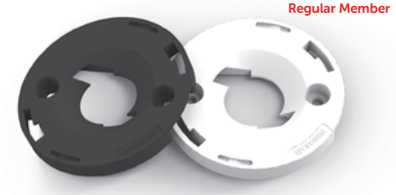


| D35 COB HOLDER | |
|---|---|
| Outer diameter | 35mm |
| Hight | 3.5mm |
| Screw holde distance | 25mm |
| Type | 18 |
| **Matchable optics** | |
| Series | Optical diameter |
| Dark series | D25/D30/D35/D45/D50/D55/D62/D68 |
| Glareless series | D25/D30/D35/D45/D50/D55/D62/D68 |
| Gemini series | D25/D30/D35/D45/D50/D55/D62/D68 |
| Moony series | D25/D30/D35/D45/D50/D55/D62/D68 |
| Peak series | D30/D35/D45/D50/D55/D62/D68 |
| Filmy series | D30/D35/D45/D50/D55/D62/D68 |
| V series | D30/D35/D45/D50/D55/D62/D68 |
| Rainbow series | D35/D45/D50/D55/D62/D68 |
| Zoom Module | D35/D45/D50 |

**Meets the assembly standards of ZHAGA.** Interchangeable with solderless holders such as BJB, with consistent outer diameter,screw positioning,and rotating interface.



| D24 COB HOLDER | |
|---|---|
| Outer diameter | 24mm |
| Hight | 3.4mm |
| Screw holde distance | 19mm |
| Type | 6 |
| **Matchable optics** | |
| Series | Optical diameter |
| Dark series | D25/D30/D35 |
| Glareless series | D25/D30/D35 |
| Gemini series | D25/D30/D35 |
| Moony series | D25/D30/D35 |
| Peak series | D25/D30/D35 |
| Filmy series | D30 |
| V series | D35 |

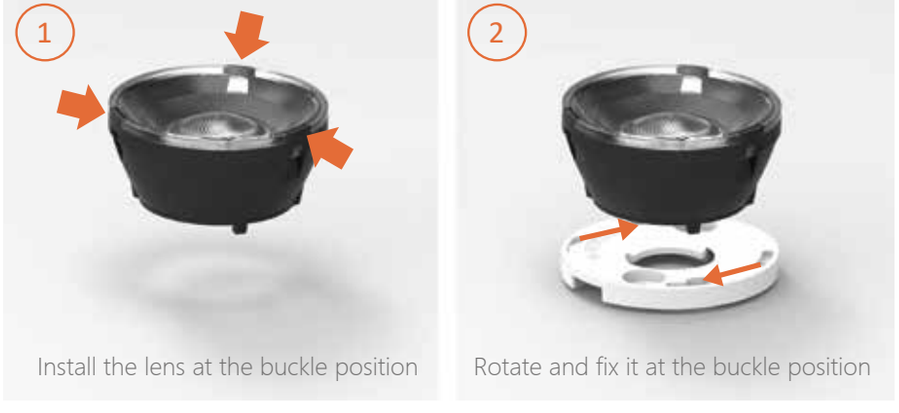


| D50 COB HOLDER | |
|---|---|
| Optical diameter | 50mm |
| Hight | 5.2mm |
| Screw holde distance | 35mm |
| Type | 13 |
| **Matchable optics** | |
| Series | Optical diameter |
| Dark series | D75/D83 |
| Glareless series | D75/D83 |
| Gemini series | D75/D83 |
| Moony series | D75/D83 |
| Peak series | D75/D83 |
| Filmy series | D75/D83 |
| V series | D75/D83 |
| Rainbow series | D75/D83 |
| Zoom Module | D75/D83 |

# LENS HOLDER

Twisting method, can be rotated with BJB solderless holder and other **ZHAGA** solderless holders.Three colours,different colours,different effects.
Size: φ45/φ50/φ55/φ62/φ68/φ75






Install the lens at the buckle position

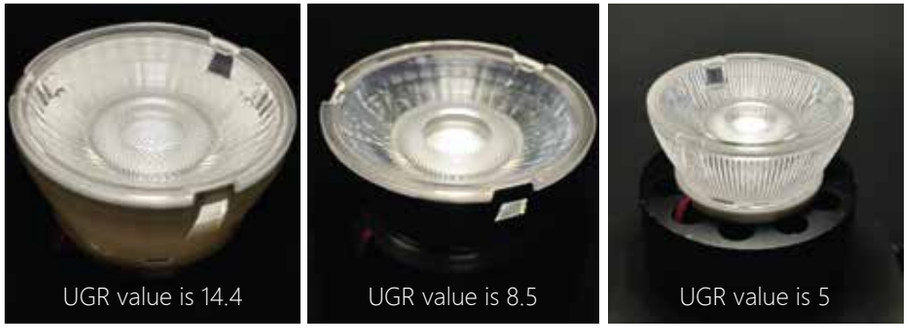
Rotate and fix it at the buckle position

## Test Comparison:

Test condition: φ45; Test COB: φ9

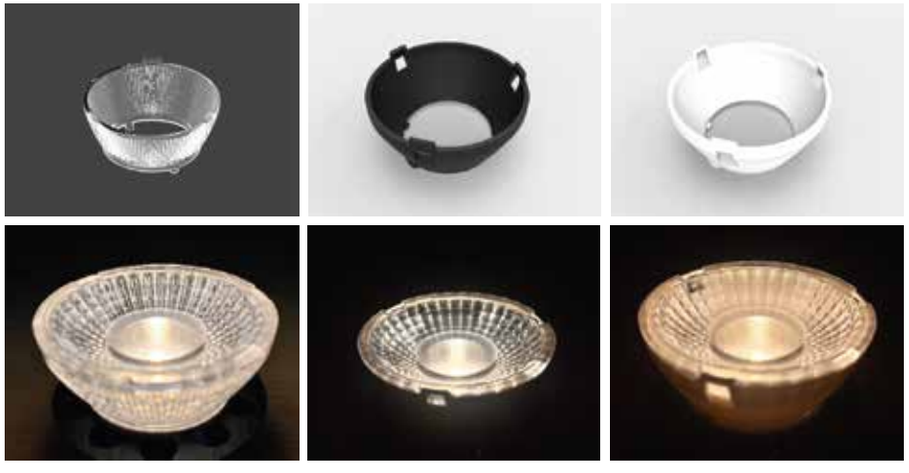
| | Black | White | Crystal | Black | White | Crystal | Black | White | Crystal | Black | White | Crystal | Black | White | Crystal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Standard angle(°) | 10 | | | 15 | | | 24 | | | 36 | | | 50 | | |
| Measured angle(°) | 18.1 | 18.1 | 17.9 | 18.8 | 18.7 | 18.4 | 23.3 | 23.2 | 22.9 | 35.9 | 35.9 | 35.4 | 51.9 | 51 | 50.4 |
| K value(cd/lm) | 8.04 | 6.97 | 7.01 | 6.68 | 6.25 | 6.26 | 5.35 | 5.09 | 5.18 | 2.74 | 2.62 | 2.69 | 1.36 | 1.37 | 1.38 |
| Effiniency | 63.85% | 74.33% | 73.13% | 90.61% | 92.59% | 91.37% | 90.61% | 95.63% | 94.81% | 88.71% | 93.17% | 92.32% | 88.81% | 94% | 92.34% |

UGR Comparison:





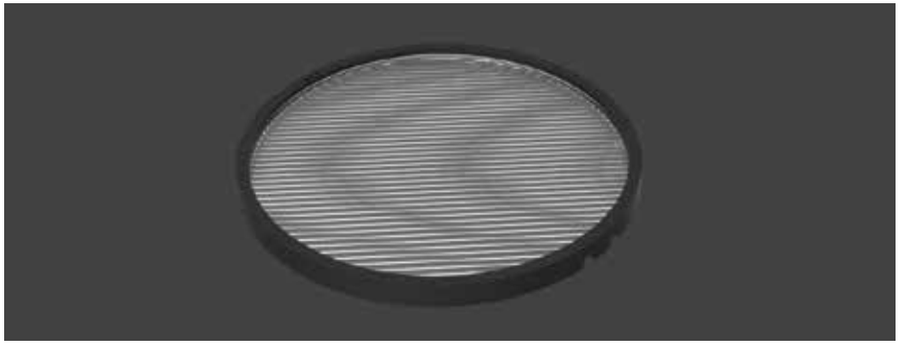

Glare Comparison:



# LIGHT FILTER

## 6 types of Filter for the Kirin platform

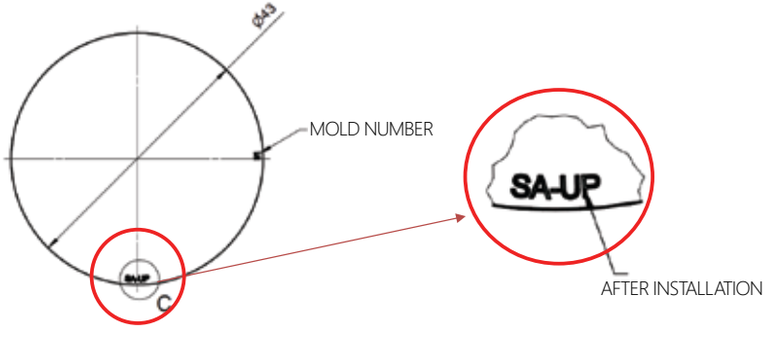
Linear/ Single Asymmetric/ Double Asymmetric/ Wall Washing/ Transparent / Heavy/Light Matte



## Identification of Filter

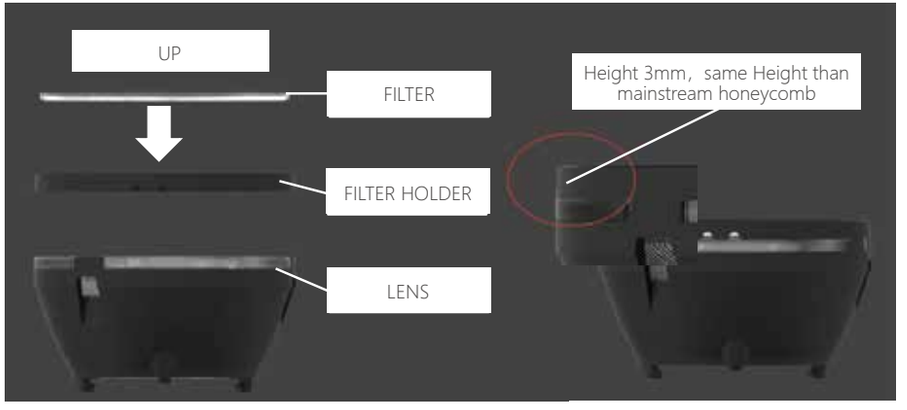
Filter can be identified by the naked eye. Transparent: has a smooth and shiny surface on both sides. Light /Heavy Matte: while the soft has a smooth and shiny surface on both sides. Single Asymmetric: has the words "SA-UP" marked on the surface. Double Asymmetric: the double polarizer has the words "DA-UP" marked on the surface. Linear: has the words "60XX-UP" marked on the surface. Wall washing: has the words "XQ" marked on the surface.

| transparent surface | Matte surface | SA-UP | DA-UP | 60XX-UP | XQ |
|---|---|---|---|---|---|
| Transparent | Light Matte | Single Asymmetric | Double Asymmetric | Linear | Wall washing |




## Installation method

The transparent and light&heavy matte without optical structure can be installed directly, while Linear, Asymmetric, double Asymmetric, and wall washing filter with optical structure need to be installed with the smooth surface facing up, and the direction with the words SA-UP/DA-UP/60XX-UP-/XQ is the direction of the light spot .



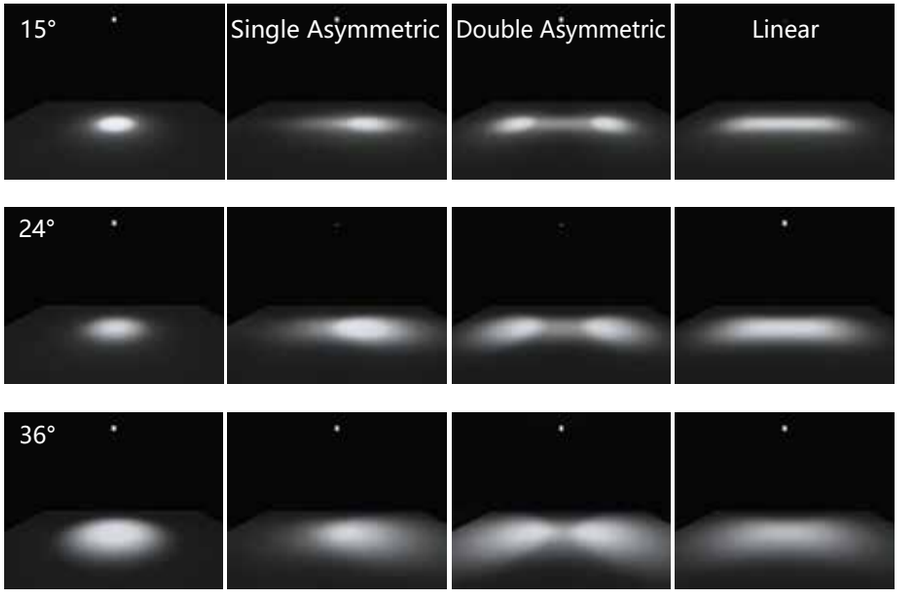

## Application






# LIGHT FILTER

Different filters with different lenses will get different spot effects.

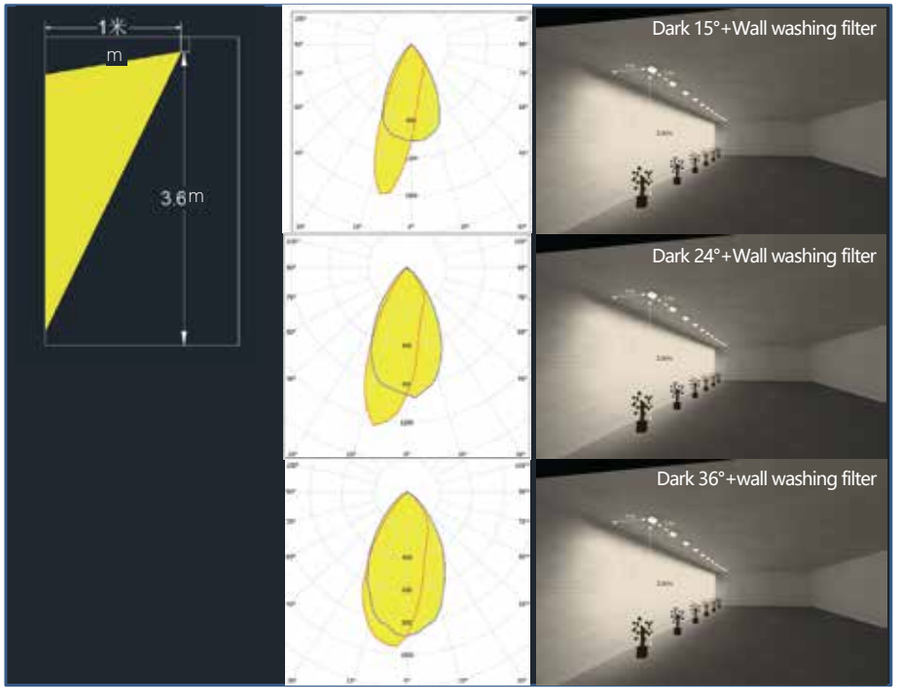



## Wall washing filter

Suitable for track lighting fixtures without deepened anti-glare louver.



## Lens Effects




## Size

For the Kirin Optical Platform series products, corresponding size-variable lenses have been developed. Specific sizes include: φ25, φ30, φ35, φ45, φ50, φ55, φ62, φ68, φ75, and φ83, with support for customized development. The embedded ring height for variable lenses of different sizes is 3mm. The actual diameter and height of the variable lenses are slightly smaller than the corresponding embedded ring sizes.



# LIGHT HOOD

## Various types are choosable

Small hole hood, oblique hole hood, flat hood, wall washing hood Various forms of hoods, switch at will. The installation method is the same,can be switched at will.





Flat hood | Small hole hood | Oblique hole | Wall washing hood | Square hood

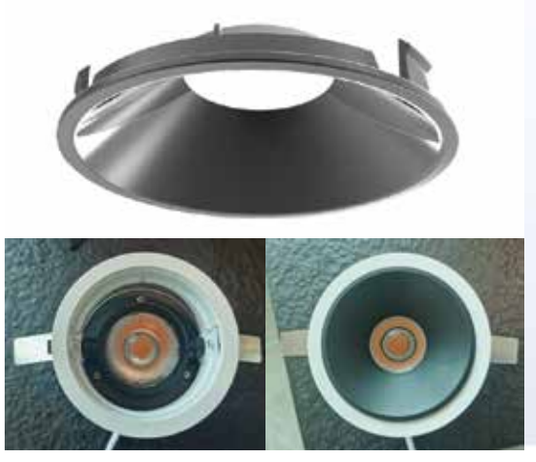
## Multiple colors available and customizable

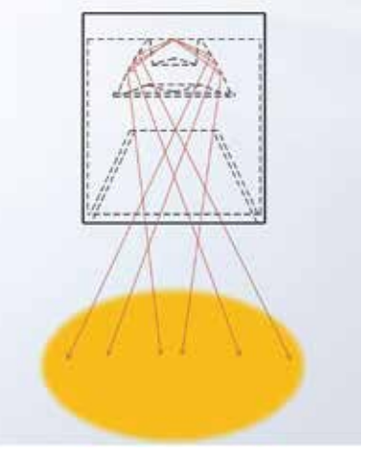
There are currently four colors available: bright black, bright gold, bright silver, and matte black. Customization of other colors is also acceptable.



## Small hole hood

The cross-light design principle makes the light output hole of the lamp smaller than the optical diameter. With the small hole hood, it can be hidden deeper, the glare can be better controlled, and the optical efficiency has little effect, and the light spot effect can be guaranteed. The small hole hood perfectly solves the phenomenon of butterfly spots when deflecting the wall and washing the wall.



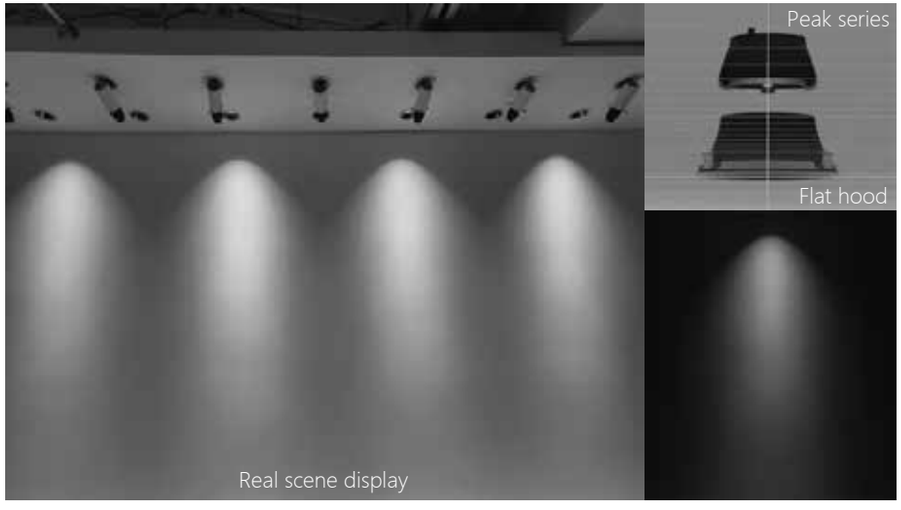


| Types & Color | Size | Distance between light-hood & lens | Small hole Diameter | Adaptable lens | Adaptable filter |
|---|---|---|---|---|---|
| **Oblique:** Matte Black/ Bright Black/ Bright Gold/ Bright Silver | D：33.5mm<br>H：10.68mm | h：5.2mm | / | Dark25/Gemini25/ Moony25/Peak25 | Single asymmetric/ Double asymmetric/ Linear spot/ Matte filter |
| | D：50mm<br>H：9.65mm | h：12mm | / | Dark30/Gemini30/ Moony30/Peak30 | |
| | D：50mm<br>H：17.89mm | h：5.2mm | / | Dark35/Gemini35/ Moony35/Peak35 | |
| | D：68mm<br>H：23.45mm | h：5mm | / | Dark35/Gemini35/ Moony35/Peak35 | |
| | D：68mm<br>H：25mm | h：5.17mm | / | Dark45/Gemini45/ Moony45/Peak45 | |
| | D：70mm<br>H：28mm | h：5.2mm | / | Dark50/Gemini50/ Moony50/Peak50 | |
| | D：100mm<br>H：36.3mm | h：7mm | / | Dark55/Gemini55/ Moony55/Peak55 | |
| | D：100mm<br>H：37mm | h：8mm | / | Dark62/Gemini62/ Moony62/Peak62 | |
| | D：145mm<br>H：50.9mm | h：8mm | / | Dark68/Gemini68/ Moony68/Peak68 | |
| | D：145mm<br>H：52.07mm | h：10mm | / | Dark75/Gemini75/ Moony75/Peak75 | |
| **Small hole:** Matte Black/ Bright Black/ Bright Gold/ Bright Silver | D：68mm<br>H：20.77mm | h：9mm | d：23mm | Dark35/Gemini35/ Moony35/Peak35 | |
| | D：68mm<br>H：17.77mm | h：12.4mm | d：29mm | Dark45/Gemini45/ Moony45/Peak45 | |

# LIGHT HOOD

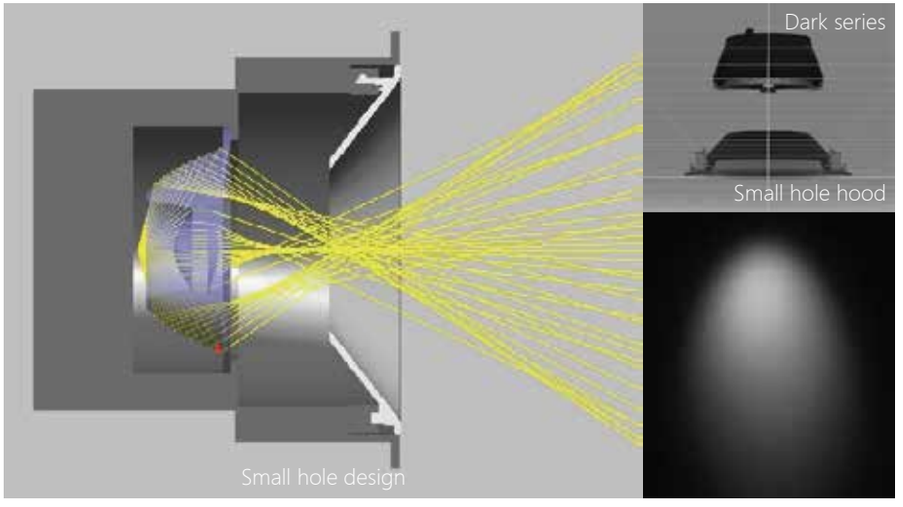
## Peak series lens & Flat hood

Kirin Optical Platform Peak series lens with flat hood Wall washing is clean, without delamination, and the light spot is uniform.

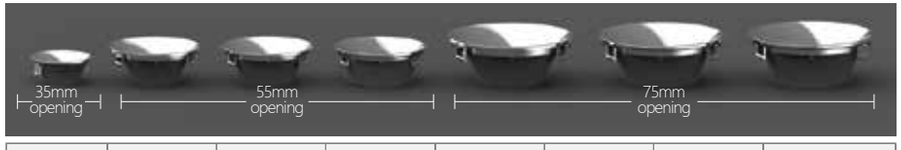



## Dark series lens & Small hole hood

Kirin Optical Platform Dark series lens with small hole hood Uniform light spot, deeper anti-glare.




## Flat hood matching information sheet




| MN | 1.07.23184 | 1.07.23141 | 1.07.23142 | 1.07.23190 | 1.07.23161 | 1.07.23217 | 1.07.23083 |
|---|---|---|---|---|---|---|---|
| Flat Hood Diameter | 33.5 | 50 | 50 | 50 | 68 | 68 | 68 |
| Peak Diameter | PEAK 20@10 | PEAK 25@13 | PEAR 30@15 | PEAK 35@16 | | PEAK 40@19 | PEAK 45@21 |
| 15° | | | | 1.01.23222 | | | 1.01.23307(D6) |
| 24° | 1.01.23154 | 1.01.13050 | 1.01.13021 | 1.01.12962 | | 1.01.23216 | 1.01.12657(D6)<br>1.01.23096(D9) |
| 36° | 1.01.23163 | 1.01.23143 | 1.01.23139 | 1.01.13016 | | | 1.01.23067(D6)<br>1.01.23137(D9) |
| 50° | | | | 1.01.23212 | | | 1.01.23319(D6)<br>1.01.23319(D9) |

## Small hole hood matching information sheet

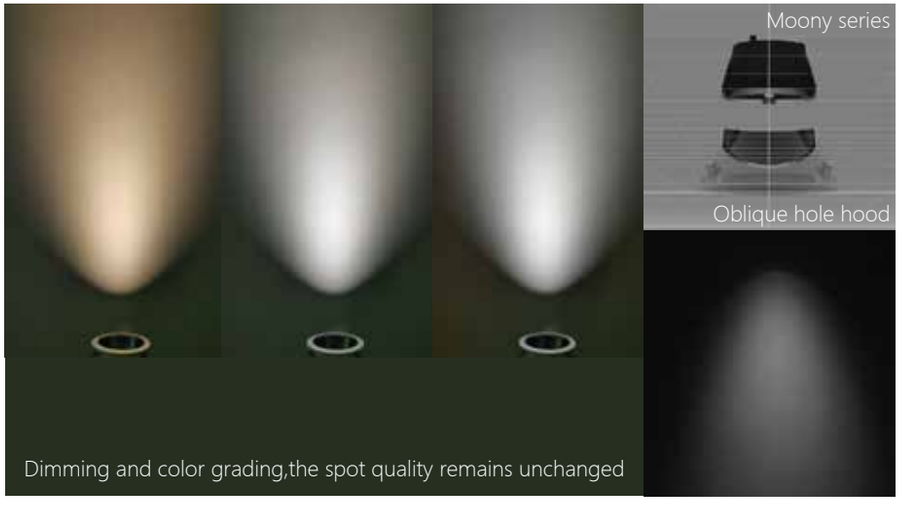


| Hood Diameter | 33.5 | 50 | 50 | 68 | 68 | 68 | 70 | 100 | 90 | 100 | 145 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hood MN | 1.07.12752 | 1.07.12663 | 1.07.12745 | 1.07.02471 | 1.07.92058 (D6) | 1.07.12764 (D9) | 1.07.23079 | 1.07.12670 | 1.07.12813 | 1.07.12665 | 1.07.12731 |
| Matching Dark Diameter | 25 | 30 | 35 | 35 | 45 | 45 | 50 | 55 | 62 | 62 | 68 |

# LIGHT HOOD

## Dark/Moony & Oblique hood

Kirin Optical Platform Moony/Dark series lenses with oblique hole hood, The edge of the spot is cut off cleanly and the transition is even.

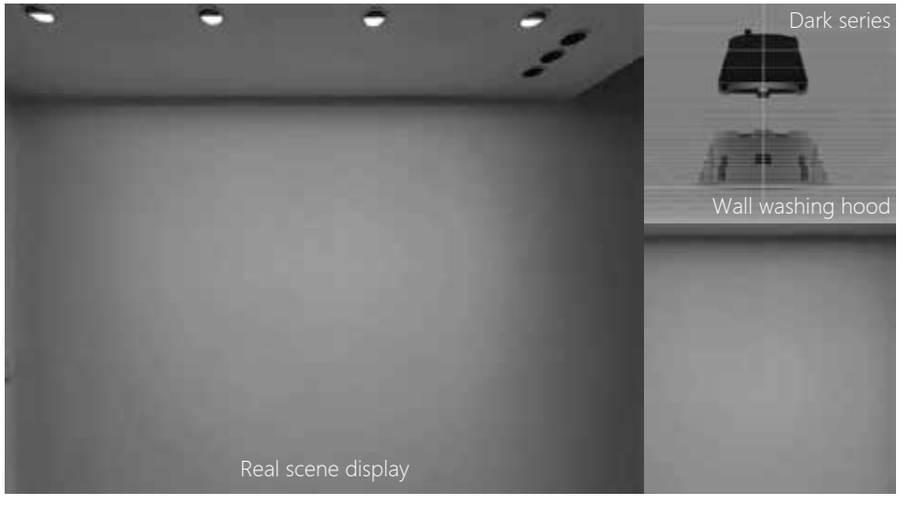



## Oblique hole hood matching information sheet

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Hood Diameter** | 50 | 68 | 68 | 70 | 100 | 100 | 145 | 145 |
| **Hood MN** | 1.07.92096 | 1.07.02440 | 1.07.02335 | 1.07.92097 | 1.07.92135 | 1.07.92104 | 1.07.92118 | 1.07.92102 |
| **Matching Dark/ Moony diameter** | 35 | 35 | 45 | 50 | 55 | 62 | 68 | 75 |

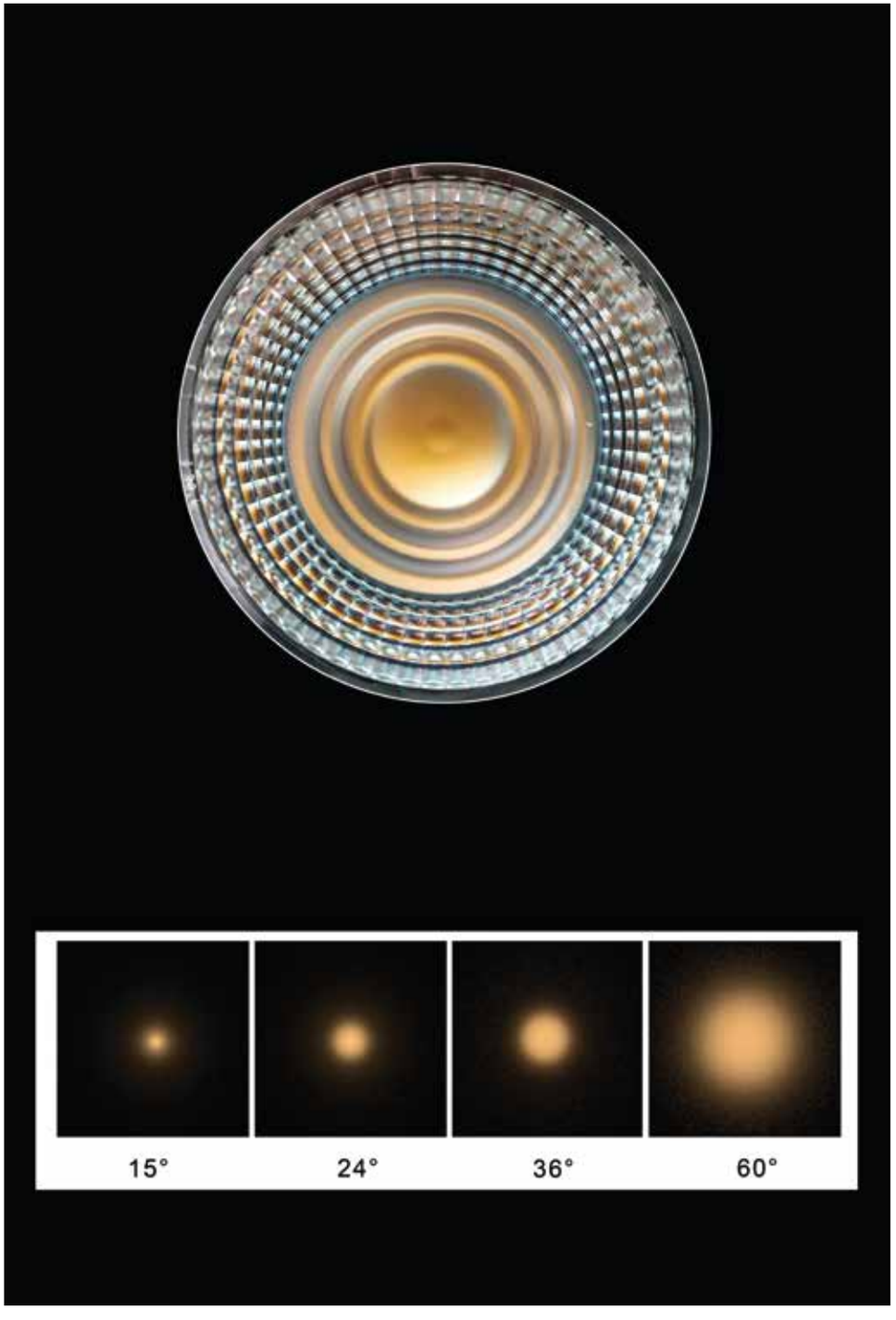
## Dark series lens & Wall washing hood solution

Kirin Optical Platform Dark series lenses with wall washing  hood, The entire wall has uniform brightness and the skyline is clear.




## Recommended wall washing hood solution

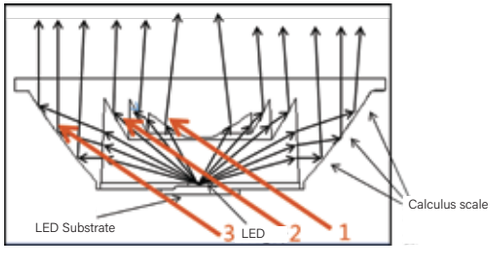
| | 35 Opening scheme | 55 Opening scheme | 75 Opening scheme | 95 Opening scheme |
|---|---|---|---|---|
| **Wall Washing Hood MN** | 1.07.23206 /1.07.23206 | 1.07.23295_A /1.07.23295_B | 1.07.23130 | 1.01.23310 |
| **Recommended optics** | Dark D25-15° 1.01.92131 | Dark D35-15° 1.01.91997 | Dark D45-15° 1.01.91887 | Dark D50-15° 1.01.92006 |




# PHOTON SERIES

## Principle

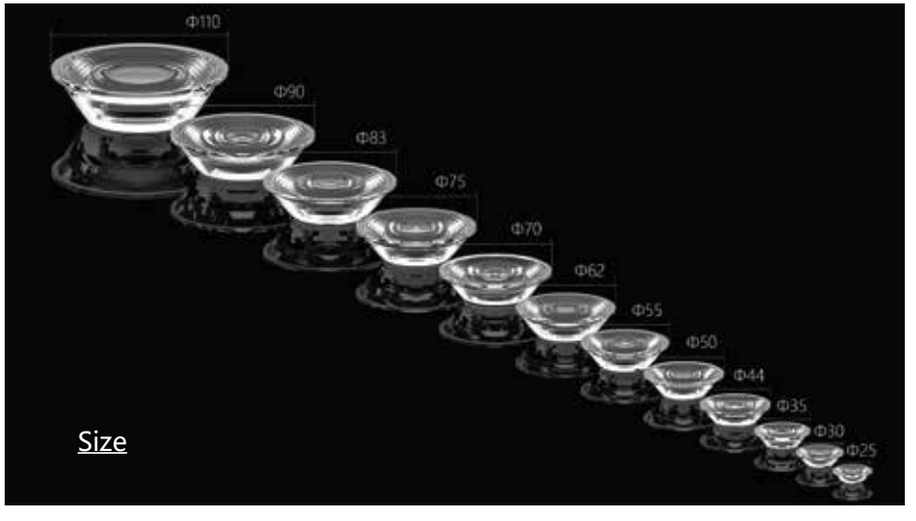
Photon Lens designed by one refracting surface and several fully reflecting surfaces, can control the light distribution well by lower lens height.




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

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

To sum up, the lens of the Photon series divides the light of the light source into several parts, and then optimizes each part. In case of light spot cut-off, the central light intensity is high.



| PHOTON 25@07 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02505 | 25 | 07 | 15° | D4 | 85% | PC |
| | 1.01.02506 | 25 | 07 | 24° | D6 | 85% | PC |
| | 1.01.02507 | 25 | 07 | 36° | D6 | 85% | PC |
| | 1.01.02508 | 25 | 07 | 60° | D6 | 85% | PC |
| | 1.01.23086 | 25 | 07 | 36°(WW) | D6 | 85% | PC |
| | 1.01.23203 | 25 | 07 | 60°(WW) | D6 | 85% | PC |

| PHOTON 30@08 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02523 | 30 | 08 | 15° | D4 | 85% | PC |
| | 1.01.02524 | 30 | 08 | 24° | D6 | 85% | PC |
| | 1.01.02525 | 30 | 08 | 36° | D6 | 85% | PC |
| | 1.01.02526 | 30 | 08 | 60° | D6 | 85% | PC |

| PHOTON 35@10 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12960 | 35 | 10 | 10° | D3.5 | 85% | PC |
| | 1.01.6803 | 35 | 10 | 15° | D6 | 85% | PC |
| | 1.01.6782 | 35 | 10 | 24° | D6 | 85% | PC |
| | 1.01.6784 | 35 | 10 | 36° | D6 | 85% | PC |
| | 1.01.33503 | 35 | 10 | 45° | D6 | 85% | PC |
| | 1.01.71149 | 35 | 10 | 60° | D6 | 85% | PC |
| | 1.01.12824 | 35 | 10 | 15°(WW) | D6 | 85% | PC |
| | 1.01.12841 | 35 | 10 | 24°(WW) | D6 | 85% | PC |
| | 1.01.12842 | 35 | 10 | 24°(CM) | D6 | 85% | PC |
| | 1.01.23074 | 35 | 10 | 36°(CM) | D9 | 85% | PC |
| | 1.01.23179 | 35 | 10 | 36°(WW) | D6 | 85% | PC |
| | 1.01.23138 | 35 | 10 | 60°(WW) | D9 | 85% | PC |
| | 1.01.23459 | 35 | 10 | DA | D6 | 85% | PC |
| | 1.01.23460 | 35 | 10 | SA | D6 | 85% | PC |

| PHOTON 44@10 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.12954 | 44 | 10 | 30°X40° (WW) | D9 | 85% | PC |

| PHOTON 44@11 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.6752 | 44 | 11 | 15° | D3.5 | 85% | PC |
| | 1.01.6753 | 44 | 11 | 24° | D6 | 85% | PC |
| | 1.01.12654 | 44 | 11 | 24° | D6 | 85% | PC |
| | 1.01.6754 | 44 | 11 | 36° | D6 | 85% | PC |
| | 1.01.12655 | 44 | 11 | 36° | D6 | 85% | PC |
| | 1.01.02606 | 44 | 11 | 45° | D6 | 85% | PC |
| | 1.01.81383 | 44 | 11 | 60° | D6 | 85% | PC |
| | 1.01.23388 | 44 | 11 | 60° | D6 | 85% | PC |
| | 1.01.23194 | 44 | 11 | 15°(CM) | D6 | 85% | PC |
| | 1.01.12838 | 44 | 11 | 24°(CM) | D9 | 85% | PC |
| | 1.01.23180 | 44 | 11 | 15°(WW) | D6 | 85% | PC |
| | 1.01.12841 | 44 | 11 | 24°(WW) | D9 | 85% | PC |
| | 1.01.23077 | 44 | 11 | 36°(WW) | D6 | 85% | PC |
| | 1.01.23176 | 44 | 11 | 60°(WW) | D6 | 85% | PC |

DA - Double asymmetric SA - Asymmetric WW - Wall washing CM - Color mixing



| PHOTON 50@14 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.6582 | 50 | 14 | 12° | D6 | 85% | PC |
| | 1.01.6637 | 50 | 14 | 24° | D6 | 85% | PC |
| | 1.01.6638 | 50 | 14 | 36° | D6 | 85% | PC |
| | 1.01.33502 | 50 | 14 | 45° | D6 | 85% | PC |
| | 1.01.81364 | 50 | 14 | 60° | D9 | 85% | PC |
| | 1.01.23199 | 50 | 14 | 15°(CM) | D6 | 85% | PC |
| | 1.01.12839 | 50 | 14 | 24°(CM) | D6 | 85% | PC |
| | 1.01.12920 | 50 | 14 | 36°(CM) | D6 | 85% | PC |
| | 1.01.23461 | 50 | 14 | SA | D9 | 85% | PC |
| | 1.01.23462 | 50 | 14 | DA | D9 | 85% | PC |

| PHOTON 55@15 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02360 | 55 | 15 | 12° | D6 | 85% | PC |
| | 1.01.02361 | 55 | 15 | 24° | D9 | 85% | PC |
| | 1.01.02362 | 55 | 15 | 36° | D9 | 85% | PC |
| | 1.01.02363 | 55 | 15 | 60° | D9 | 85% | PC |

| PHOTON 62@18 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.6900 | 62 | 18 | 15° | D9 | 85% | PC |
| | 1.01.6907 | 62 | 18 | 24° | D9 | 85% | PC |
| | 1.01.6906 | 62 | 18 | 36° | D9 | 85% | PC |
| | 1.01.81515 | 62 | 18 | 60° | D9 | 85% | PC |

| PHOTON 70@19 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.6837 | 70 | 19 | 15° | D9 | 85% | PC |
| | 1.01.6735 | 70 | 19 | 24° | D9 | 85% | PC |
| | 1.01.6736 | 70 | 19 | 36° | D9 | 85% | PC |
| | 1.01.33505 | 70 | 19 | 45° | D11 | 85% | PC |
| | 1.01.81365 | 70 | 19 | 60° | D9 | 85% | PC |

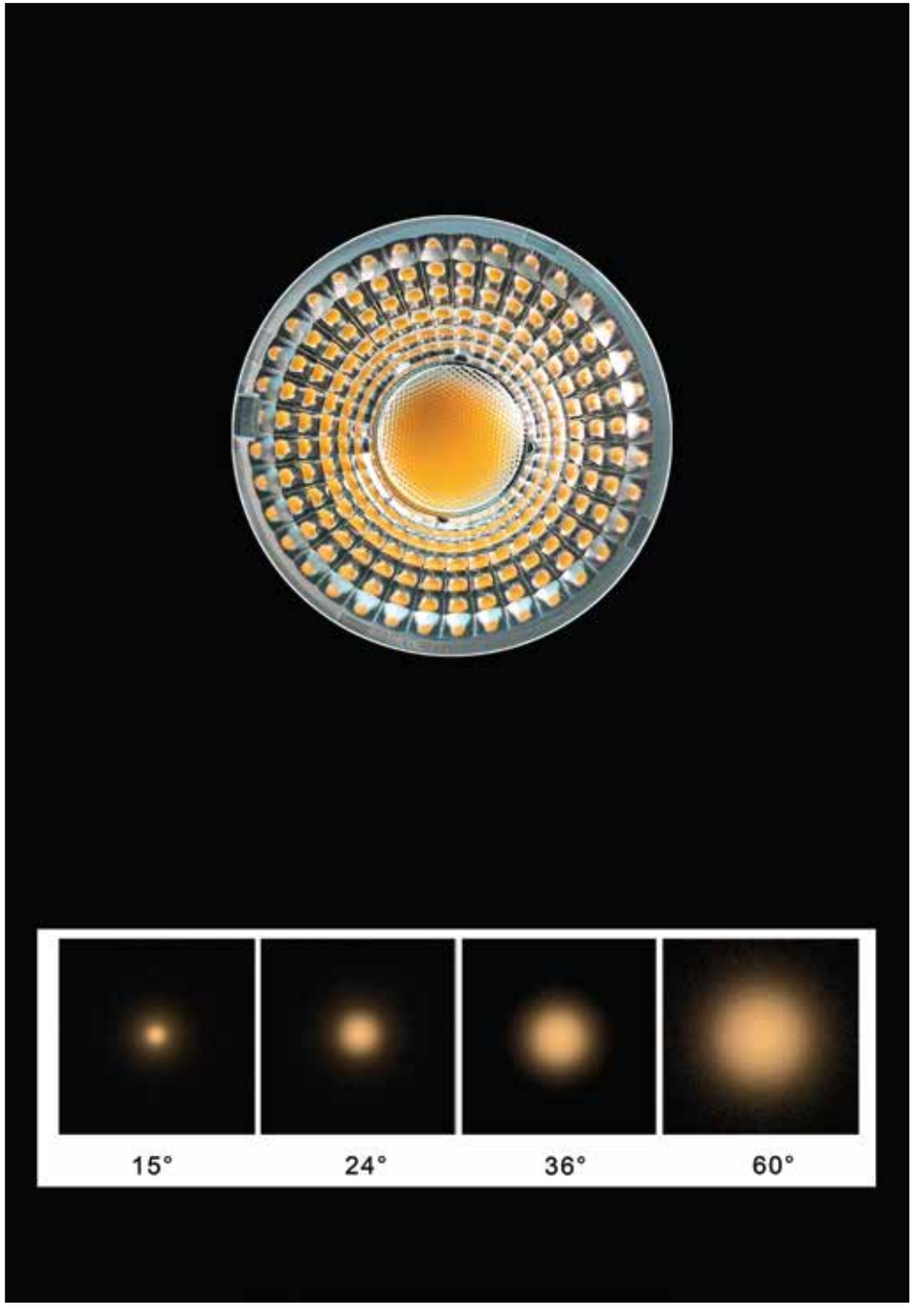
| PHOTON 75@21 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.6599 | 75 | 21 | 12° | D9 | 85% | PC |
| | 1.01.6646 | 75 | 21 | 24° | D9 | 85% | PC |
| | 1.01.6647 | 75 | 21 | 36° | D9 | 85% | PC |
| | 1.01.81606 | 75 | 21 | 60° | D9 | 85% | PC |

| PHOTON 83@22 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.6874 | 83 | 22 | 15° | D12 | 85% | PC |
| | 1.01.6875 | 83 | 22 | 24° | D12 | 85% | PC |
| | 1.01.6876 | 83 | 22 | 36° | D12 | 85% | PC |
| | 1.01.33504 | 83 | 22 | 45° | D12 | 85% | PC |
| | 1.01.81516 | 83 | 22 | 60° | D12 | 85% | PC |

| PHOTON 90@22 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.6598 | 90 | 22 | 12° | D12 | 85% | PC |
| | 1.01.6642 | 90 | 22 | 24° | D12 | 85% | PC |
| | 1.01.6645 | 90 | 22 | 36° | D12 | 85% | PC |
| | 1.01.7992 | 90 | 22 | 65° | D19 | 85% | PC |

| PHOTON 110@32 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02312 | 110 | 32 | 15° | D14 | 85% | PC |
| | 1.01.02313 | 110 | 32 | 24° | D14 | 85% | PC |
| | 1.01.92129 | 110 | 32 | 36° | D14 | 85% | PC |
| | 1.01.92091 | 110 | 32 | 60° | D14 | 85% | PC |

# KA SERIES




## Light spot performance




## Commercial lighting application





| KA 35@16 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.91863_PMMA | 35 | 16 | 10° | XHP35 | 90% | PC |
| | 1.01.81566_PMMA | 35 | 16 | 15° | D6 | 90% | PC |
| | 1.01.81567_PMMA | 35 | 16 | 24° | D6 | 90% | PC |
| | 1.01.81568_PMMA | 35 | 16 | 36° | D6 | 90% | PC |
| | 1.01.81581_PMMA | 35 | 16 | 60° | D6 | 90% | PC |
| | 1.01.91863_PC | 35 | 16 | 10° | XHP35 | 88% | PC |
| | 1.01.81566_PC | 35 | 16 | 15° | D6 | 88% | PC |
| | 1.01.81567_PC | 35 | 16 | 24° | D6 | 88% | PC |
| | 1.01.81568_PC | 35 | 16 | 36° | D6 | 88% | PC |
| | 1.01.81581_PC | 35 | 16 | 60° | D6 | 88% | PC |

| KA 40@20 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.92160 | 40 | 20 | 15° | D6 | 90% | PMMA |
| | 1.01.92161 | 40 | 20 | 24° | D9 | 90% | PMMA |
| | 1.01.92162 | 40 | 20 | 36° | D9 | 90% | PMMA |
| | 1.01.92181 | 40 | 20 | 60° | D9 | 90% | PMMA |
| | 1.01.92162_PC | 40 | 20 | 36° | D9 | 88% | PC |

| KA 43@19 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.91844_PMMA | 43 | 19 | 10° | D4 | 90% | PMMA |
| | 1.01.81392_PMMA | 43 | 19 | 18° | D9 | 90% | PMMA |
| | 1.01.81393_PMMA | 43 | 19 | 24° | D9 | 90% | PMMA |
| | 1.01.81394_PMMA | 43 | 19 | 36° | D9 | 90% | PMMA |
| | 1.01.81395_PMMA | 43 | 19 | 60° | D9 | 90% | PMMA |
| | 1.01.91844_PC | 43 | 19 | 10° | D4 | 88% | PC |
| | 1.01.81392_PC | 43 | 19 | 18° | D9 | 88% | PC |
| | 1.01.81393_PC | 43 | 19 | 24° | D9 | 88% | PC |
| | 1.01.81394_PC | 43 | 19 | 36° | D9 | 88% | PC |
| | 1.01.81395_PC | 43 | 19 | 60° | D9 | 88% | PC |

| KA 45@21 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.71248 | 45 | 21 | 15° | D6 | 90% | PMMA |
| | 1.01.71217 | 45 | 21 | 24° | D6 | 90% | PMMA |
| | 1.01.71252 | 45 | 21 | 36° | D6 | 90% | PMMA |
| | 1.01.81522 | 45 | 21 | 60° | D6 | 90% | PMMA |

| KA 50@25 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.81640 | 50 | 25 | 12° | D6 | 90% | PMMA |
| | 1.01.81641 | 50 | 25 | 24° | D6 | 90% | PMMA |
| | 1.01.81642 | 50 | 25 | 36° | D6 | 90% | PMMA |
| | 1.01.12837 | 50 | 25 | 45° | CLU028 | 90% | PMMA |
| | 1.01.91671 | 50 | 25 | 60° | D6 | 90% | PMMA |

| KA 55@21 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.5498 | 55 | 21 | 15° | D9 | 90% | PMMA |
| | 1.01.5495 | 55 | 21 | 20° | D9 | 90% | PMMA |
| | 1.01.7990 | 55 | 21 | 24° | D9 | 90% | PMMA |
| | 1.01.7991 | 55 | 21 | 36° | D9 | 90% | PMMA |
| | 1.01.81457 | 55 | 21 | 60° | D9 | 90% | PMMA |

| KA 55@24 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.91904 | 55 | 24 | 10° | D6 | 90% | PC |
| | 1.01.71024 | 55 | 24 | 15° | D9 | 90% | PC |
| | 1.01.71045 | 55 | 24 | 24° | D9 | 90% | PC |
| | 1.01.23317 | 55 | 24 | 24° | D9 | 90% | PC |
| | 1.01.71046 | 55 | 24 | 36° | D9 | 90% | PC |
| | 1.01.91785 | 55 | 24 | 60° | D9 | 90% | PC |

| KA 55@30 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23084 | 55 | 30 | 15° | D9 | 90% | PMMA |
| | 1.01.13028 | 55 | 30 | 24° | D9 | 90% | PMMA |
| | 1.01.23085 | 55 | 30 | 36° | D9 | 90% | PMMA |

| KA 62@31 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.71155 | 62 | 31 | 15° | D9 | 90% | PMMA |
| | 1.01.71186 | 62 | 31 | 24° | D9 | 90% | PMMA |
| | 1.01.71187 | 62 | 31 | 36° | D9 | 90% | PMMA |
| | 1.01.12840 | 62 | 31 | 45° | D9 | 90% | PMMA |
| | 1.01.81485 | 62 | 31 | 60° | D9 | 90% | PMMA |

| KA 66@35 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.23320 | 66 | 35 | 15° | D9 | 90% | PMMA |
| | 1.01.23322 | 66 | 35 | 24° | D9 | 90% | PMMA |
| | 1.01.23324 | 66 | 35 | 36° | D9 | 90% | PMMA |
| | 1.01.23338 | 66 | 35 | 60° | D9 | 90% | PMMA |

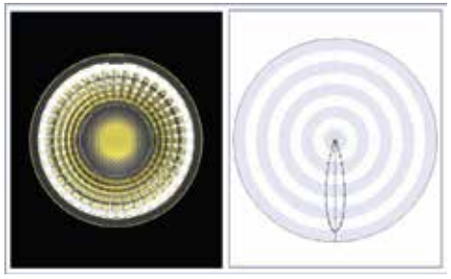
| KA 69@30 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.91834 M | 69 | 30 | 15° | D10 | 90% | PMMA |
| | 1.01.91834 | 69 | 30 | 15° | D10 | 90% | PMMA |
| | 1.01.91842 | 69 | 30 | 24° | D10 | 90% | PMMA |
| | 1.01.91888 | 69 | 30 | 36° | D10 | 90% | PMMA |
| | 1.01.02346 | 69 | 30 | 60° | D10 | 90% | PMMA |

| KA 72@33 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.6914 | 72 | 33 | 12° | D9 | 90% | PMMA |
| | 1.01.6771 | 72 | 33 | 24° | D9 | 90% | PMMA |
| | 1.01.6878 | 72 | 33 | 36° | D9 | 90% | PMMA |
| | 1.01.81460 | 72 | 33 | 60° | D9 | 90% | PMMA |

| KA 75@31 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.6823 | 75 | 31 | 15° | D12 | 90% | PMMA |
| | 1.01.6833 | 75 | 31 | 24° | D12 | 90% | PMMA |
| | 1.01.6834 | 75 | 31 | 38° | D12 | 90% | PMMA |
| | 1.01.81470 | 75 | 31 | 60° | D12 | 90% | PMMA |

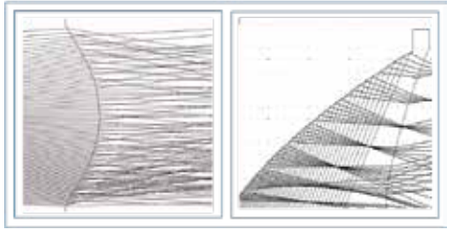
# CHAMELEON SERIES

Principle of Design



The reflecting surface of the lens uses the principle of differential and integration. The light emitted by the light source is differentiated by a large number of scales, and the light source is divided into several sub-light sources (differential). Each sub-light source is presented separately on the illumination light field, and by rearranging and overlapping the centers, rotating and superimposing (integration), the light of different color temperatures is cross-distributed to achieve a mixed light effect. Differential redistribution of the light source not only makes the light more finely distributed and achieves a good light mixing effect, but also the brightness of the light emitting surface is uniform and even. The area reduces the glare of the lens.

The transmission surface of the lens is arranged in a microstructure and a function array to control the intermediate light reasonably, and then the light from the light source is differentiated and superimposed in an orderly manner, thereby solving the problem of uneven mixing of light transmitted through the lens.



Product Characteristics

Using calculus total reflection combined with local directional differential technology, while the color temperature and brightness of the light source changing, the angle and color of the light spot are not affected.

Using the principle of calculus lens, the reflected light is differentiated to effectively mix light. Add a surface differential structure to the incident and exit convex surfaces, so that the transmitted light is evenly distributed, and the color is uniform.

Chameleon Series, Size: 55@21, 24°Lens Spot



| CHAMELEON 35@16 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.92088 | 35 | 16 | 24° | D6 | 90% | PMMA |
| | 1.01.12829 | 35 | 16 | 36° | D6 | 90% | PMMA |
| | 1.01.81581 | 35 | 16 | 60° | D6 | 90% | PMMA |

| CHAMELEON 43@19 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02282 | 43 | 19 | 24° | D9 | 80% | PC |
| | 1.01.81394 | 43 | 19 | 36° | D9 | 90% | PMMA |
| | 1.01.81395 | 43 | 19 | 60° | D9 | 90% | PMMA |

| CHAMELEON 44@20 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.92057 | 44 | 20 | 24° | D9 | 80% | PC |
| | 1.01.4357 | 44 | 20 | 36° | D9 | 80% | PC |
| | 1.01.4358 | 44 | 20 | 60° | D9 | 80% | PC |

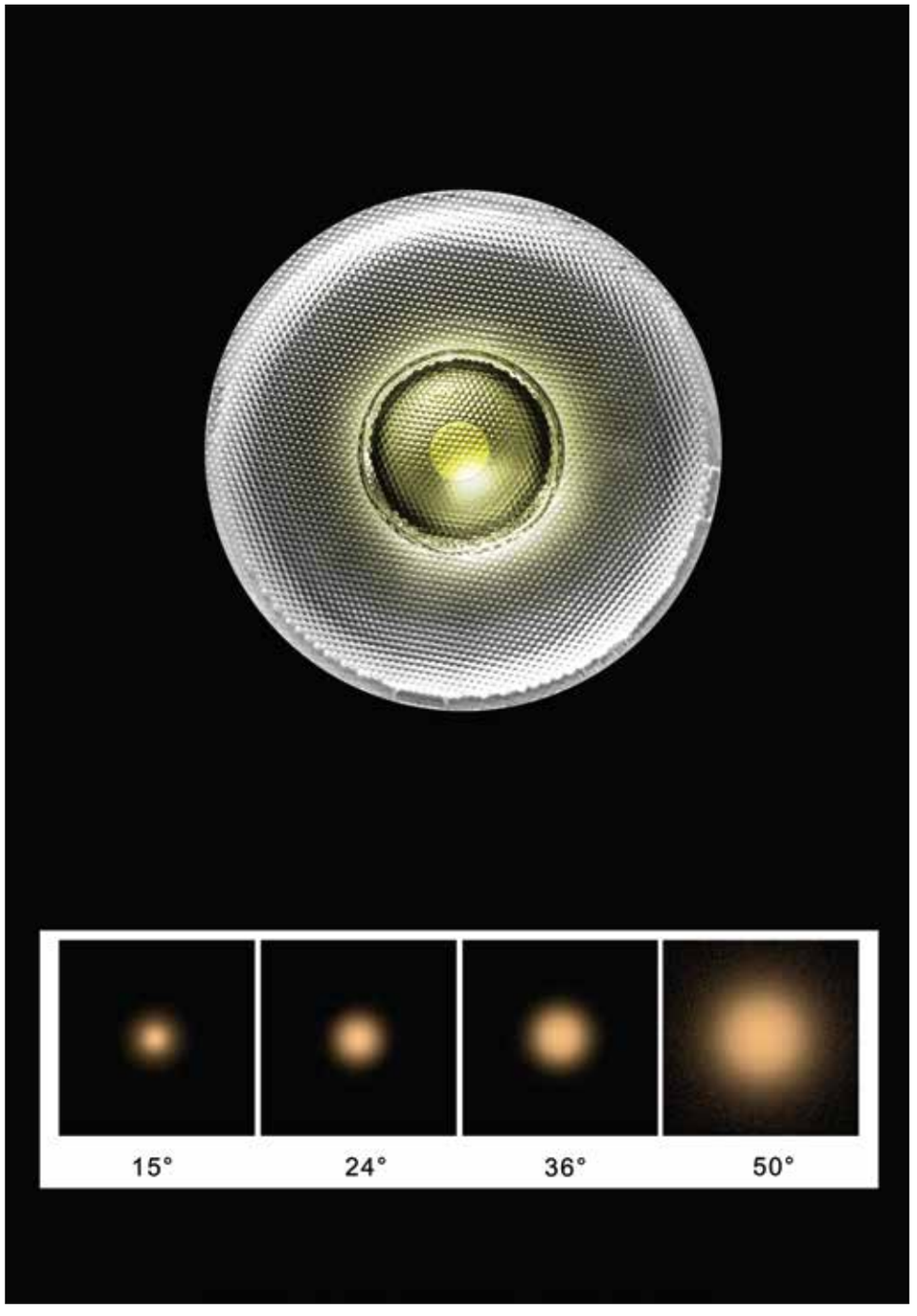
| CHAMELEON 55@21 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.91993 | 55 | 21 | 24° | D9 | 90% | PMMA |
| | 1.01.02540 | 55 | 21 | 36° | D9 | 90% | PMMA |
| | 1.01.81457 | 55 | 21 | 60° | D9 | 90% | PMMA |

| Chameleon 55@24 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02274 | 55 | 24 | 24° | D9 | 90% | PMMA |
| | 1.01.02541 | 55 | 24 | 36° | D9 | 90% | PMMA |
| | 1.01.91785 | 55 | 24 | 60° | D9 | 90% | PMMA |

| Chameleon 62@31 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02327 | 62 | 31 | 24° | D9 | 90% | PMMA |
| | 1.01.71187 | 62 | 31 | 36° | D9 | 90% | PMMA |
| | 1.01.81485 | 62 | 31 | 60° | D9 | 90% | PMMA |

| Chameleon 72@33 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.92093 | 72 | 33 | 24° | D15 | 90% | PMMA |
| | 1.01.02535 | 72 | 33 | 36° | D12 | 90% | PMMA |
| | 1.01.81460 | 72 | 33 | 60° | D9 | 90% | PMMA |

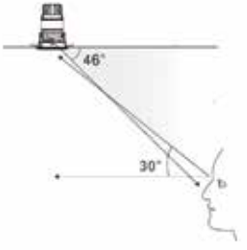
| Chameleon 75@31 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.02326 | 75 | 31 | 24° | D15 | 90% | PMMA |
| | 1.01.02536 | 75 | 31 | 36° | D12 | 90% | PMMA |
| | 1.01.81470 | 75 | 31 | 60° | D12 | 90% | PMMA |



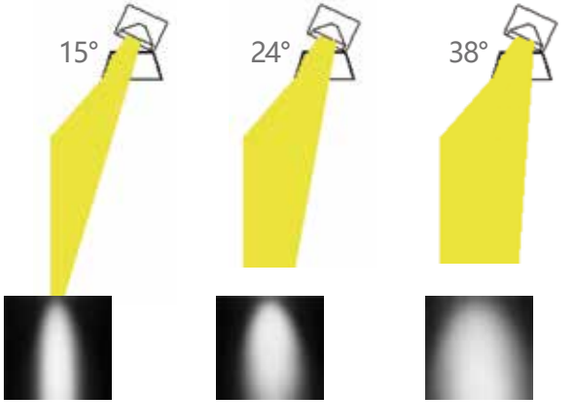

# BLACK HOLE SERIES

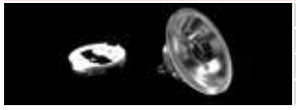
## Introduction

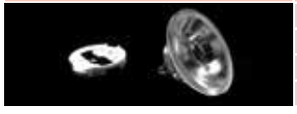
The Max shielding angle of the LED lamp is 46°, can avoid the glare effectively. The most accepted shielding angle of the human visual is area always more than 30°, the other light in this area will occur the glare. So when the shielding angle of the LED lamp more than 30°, Black Hole will control the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



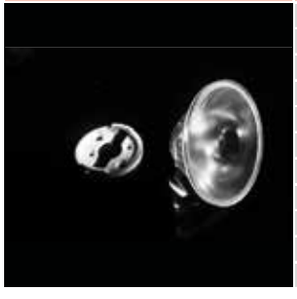

The polarized light wash wall lamp should have the drift angle, normally have the problem of stratified facula because of the antiglare visor interfered the facula. Hercu-Lux Black Hole family is specially designed for the hotel, considered the effect of the front ring of the antiglare visor before designing,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



| BLACK HOLE 28@14 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.91835 | 28 | 14 | 15° | D4 | 85% | PC |
| | 1.01.91836 | 28 | 14 | 24° | D4 | 85% | PC |
| | 1.01.91840 | 28 | 14 | 36° | D4 | 85% | PC |
| | 1.01.02343 | 28 | 14 | 60° | D4 | 85% | PC |

| BLACK HOLE 30@15 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.91816 | 30 | 15 | 15° | D4 | 85% | PC |
| | 1.01.91817 | 30 | 15 | 24° | D6 | 85% | PC |
| | 1.01.91818 | 30 | 15 | 36° | D6 | 85% | PC |
| | 1.01.91979 | 30 | 15 | 50° | D6 | 85% | PC |

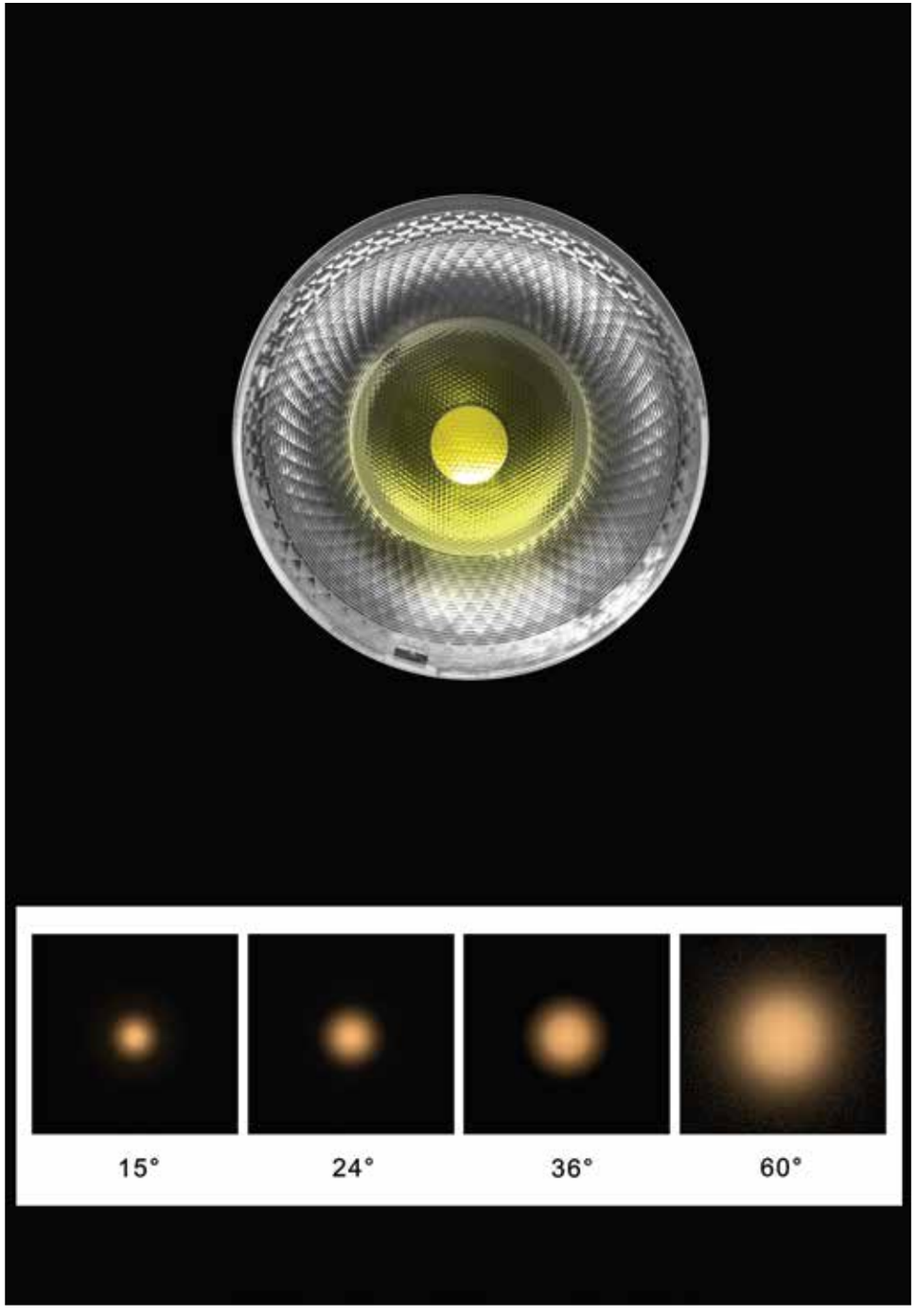
| BLACK HOLE 35@18 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.7935 | 35 | 18 | 15° | D4.5 | 85% | PC |
| | 1.01.7936 | 35 | 18 | 24° | D4.5 | 85% | PC |
| | 1.01.7937 | 35 | 18 | 36° | D4.5 | 85% | PC |
| | 1.01.81535 | 35 | 18 | 60° | D4.5 | 85% | PC |
| | 1.01.02195 | 35 | 18 | 24° | D6 | 85% | PC |

| BLACK HOLE 45@24 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.6879 | 45 | 24 | 10° | XHP35 | 85% | PC |
| | 1.01.81303 | 45 | 24 | 10° | D4 | 85% | PC |
| | 1.01.91864 | 45 | 24 | 15° | D6 | 85% | PC |
| | 1.01.6575 | 45 | 24 | 24° | D6 | 85% | PC |
| | 1.01.81537 | 45 | 24 | 24° | D6 | 85% | PC |
| | 1.01.6576 | 45 | 24 | 34° | D6 | 85% | PC |
| | 1.01.71228 | 45 | 24 | 60° | D6 | 85% | PC |
| | 1.01.33586 | 45 | 24 | 15° | D9 | 85% | PC |
| | 1.01.33587 | 45 | 24 | 24° | D9 | 85% | PC |
| | 1.01.33588 | 45 | 24 | 36° | D9 | 85% | PC |
| | 1.01.33589 | 45 | 24 | 50° | D9 | 85% | PC |

| BLACK HOLE 50@24 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.71114 | 50 | 24 | 15° | D9 | 85% | PC |
| | 1.01.71263 | 50 | 24 | 24° | D9 | 85% | PC |
| | 1.01.71264 | 50 | 24 | 36° | D9 | 85% | PC |
| | 1.01.81616 | 50 | 24 | 50° | D9 | 85% | PC |

| BLACK HOLE 62@24 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.81439 | 62 | 24 | 15° | D9 | 85% | PC |
| | 1.01.81561 | 62 | 24 | 24° | D9 | 85% | PC |
| | 1.01.81562 | 62 | 24 | 36° | D9 | 85% | PC |
| | 1.01.81559 | 62 | 24 | 60° | D14 | 85% | PC |

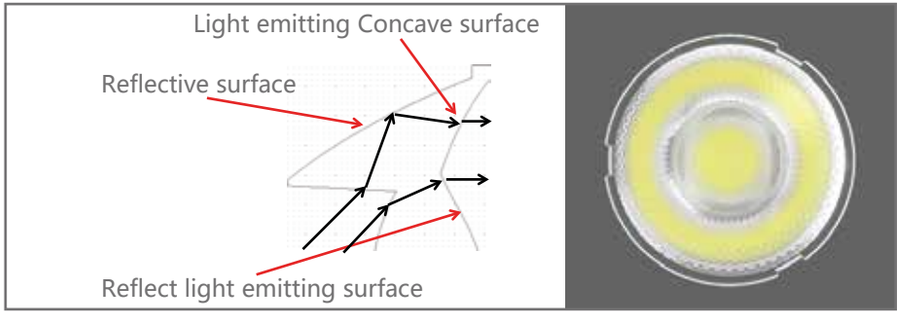





# INFINITY SERIES

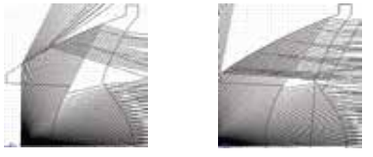
## High efficiency (90%)

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.



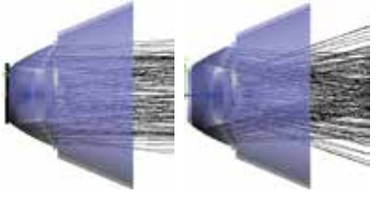
## Nice cutoff and fulfilled spot center (strong zoom capability):

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; Especially for the wide beam angle central spot, it has a certain compensation effect, making the center of the wide beam angle spot full.

## 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.



| INFINITY 35 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.91754 | 35 | 15 | 15°_36° | D4 | 90%-92% | PMMA |
| | 1.01.91949 | 35 | 14 | 35°_60° | D4 | 90%-92% | PMMA |

| INFINITY 45 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.91678 | 45 | 20 | 15°_36° | D9 | 90%-92% | PMMA |
| | 1.01.91948 | 45 | 18 | 35°_60° | D6 | 90%-92% | PMMA |

| INFINITY 55 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.91665 | 55 | 25 | 15°_36° | D9 | 90%-92% | PMMA |
| | 1.01.91947 | 55 | 23 | 35°_60° | D9 | 90%-92% | PMMA |

| INFINITY 62 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.81657 | 62 | 28 | 15°_36° | D9 | 90%-92% | PMMA |
| | 1.01.91943 | 62 | 26 | 35°_60° | D9 | 90%-92% | PMMA |

| INFINITY 72 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.81656 | 72 | 33 | 15°_36° | D12 | 90%-92% | PMMA |
| | 1.01.91946 | 72 | 29 | 35°_60° | D12 | 90%-92% | PMMA |

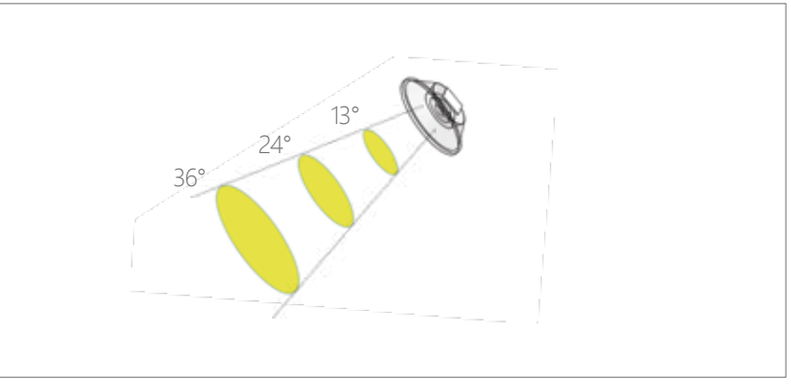
| INFINITY 75 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.81403 | 75 | 34 | 15°_36° | D12 | 90%-92% | PMMA |
| | 1.01.91730 | 75 | 30 | 35°_60° | D12 | 90%-92% | PMMA |

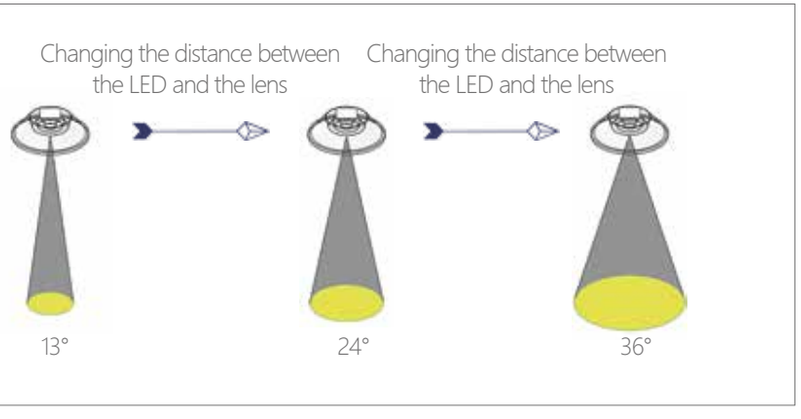


# FOCUS SERIES

## Introduction

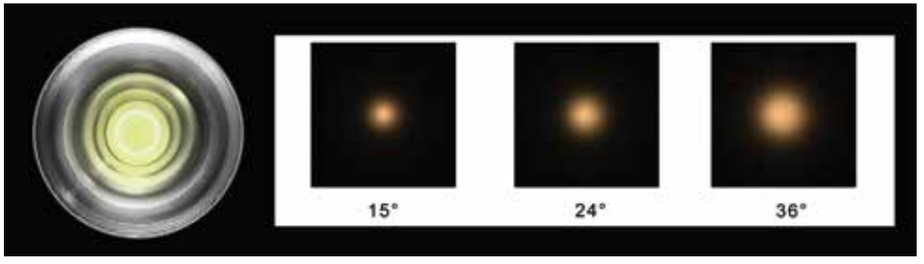
Different with the traditional convex lens, Focus family can keep the same efficiency when zooming. By the special optical designing, each reflection surfaces have the same uniform energy to achieve good uniformity without the dark in the middle.




## Product characteristics

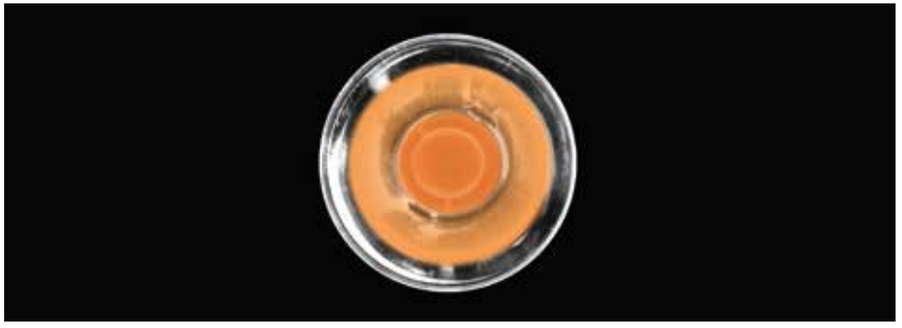
Fresnel lens has unique optical properties, which can change the optical angle and the size of the spot by changing the distance between light source and lens.




| Focus Series | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
| FOCUS 35 | 1.01.91799 | 35 | 10 | 15°-36° | D4 | 85% | PC |
| FOCUS 44 | 1.01.91774 | 44 | 13 | 15°-36° | D6 | 85% | PC |
| FOCUS 50 | 1.01.7921 | 50 | 14 | 13°-40° | D6 | 85% | PC |
| FOCUS 62 | 1.01.91797 | 62 | 17 | 15°-36° | D9 | 85% | PC |
| FOCUS 72 | 1.01.91791 | 72 | 20 | 15°-36° | D9 | 85% | PC |
| FOCUS 75 | 1.01.6920 | 75 | 19 | 13°-40° | D9 | 85% | PC |
| FOCUS 90 | 1.01.6913 | 90 | 24 | 13°-40° | D12 | 85% | PC |

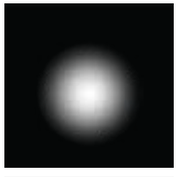
# POLAROID SERIES

## Lens front view



## Facula shape

Polaroid Filter A: 25°



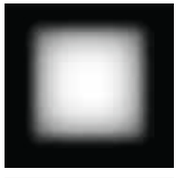
Polaroid Filter B: 36°



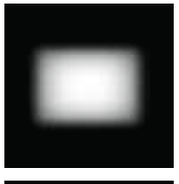
Polaroid Filter C: 25°×25°



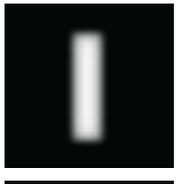
Polaroid Filter D: 36°×36°



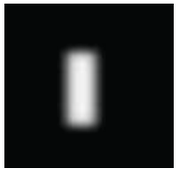
Polaroid Filter E: 25°×36°



Polaroid Filter F: 10°×25°



Polaroid Filter G: 10°×36°



Polaroid Filter H: 4°×36°

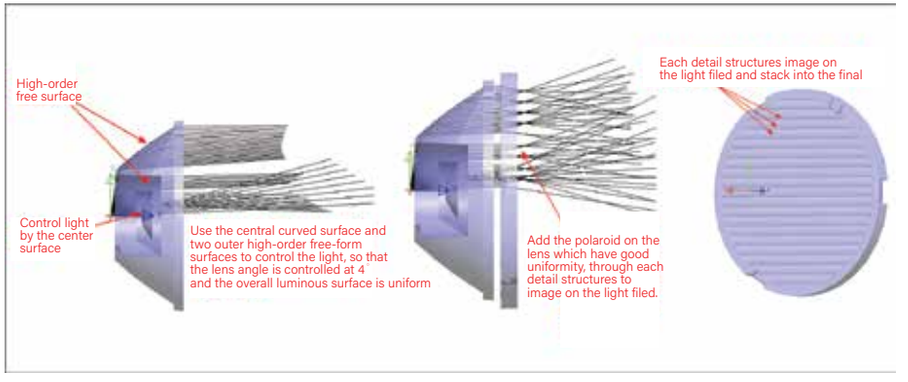


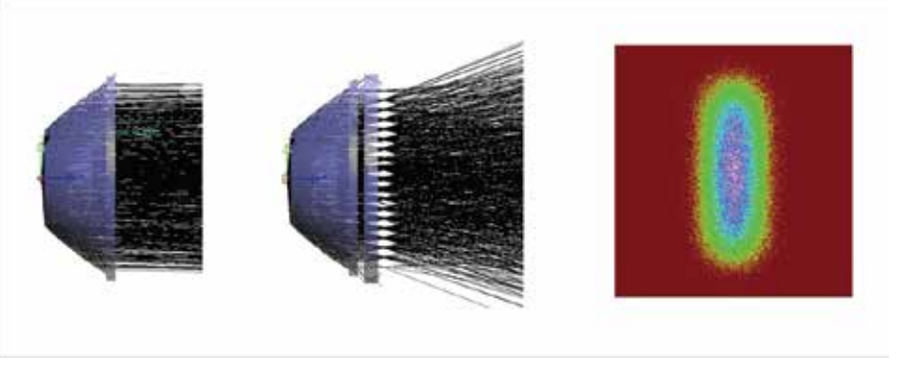
## Introduction

Polaroid means using the normally narrow beam angle circle optics to achieve different beam angle, different shape of the light spot. 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.



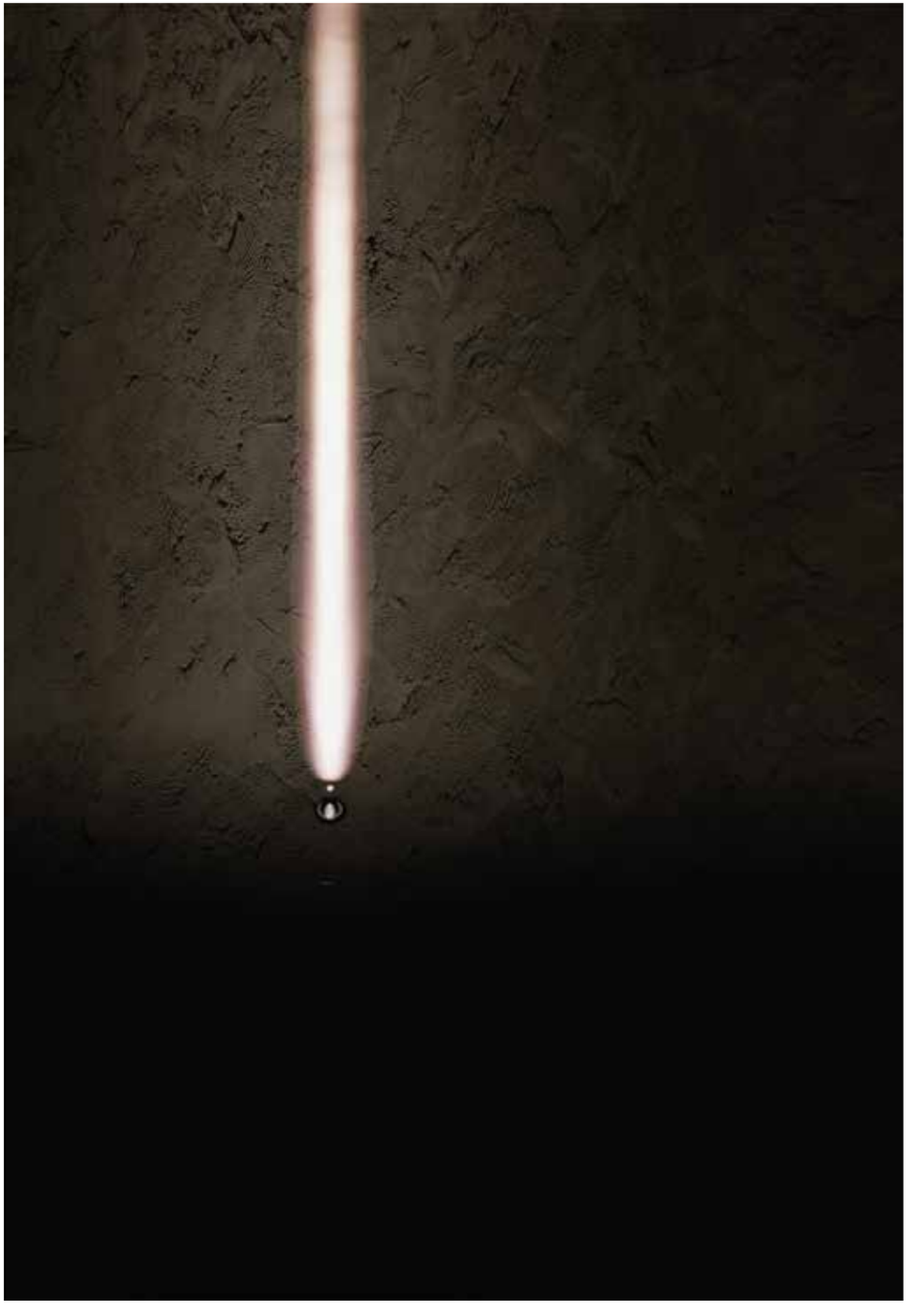



| POLAROID 30 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.71270 | 30 | 11 | 6° | 3535 | 90% | PC |

| POLAROID 35 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.81496 | 35 | 21 | 7° | 3535 | 90% | PC |

| POLAROID 40 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.6723 | 40 | 15 | 4° | 3535 | 90% | PC |

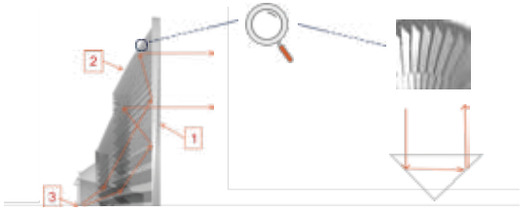
| POLAROID 50 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.71272 | 50 | 18 | 3° | 3535 | 90% | PC |



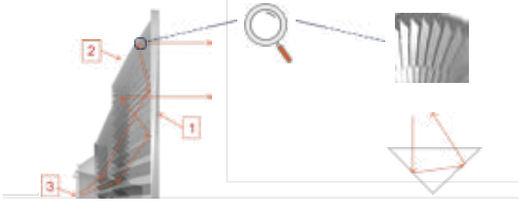
# SUNFLOWER SERIES

## Design Principle

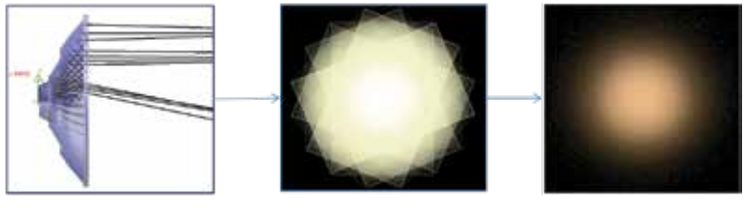
Triple-Reflection technology is a great innovation based on Calculus technology, greatly reduced the lens height compare with the original calculus lens, let the light reflect three times inside the lens, make sure get good light distribution with lower height lens.

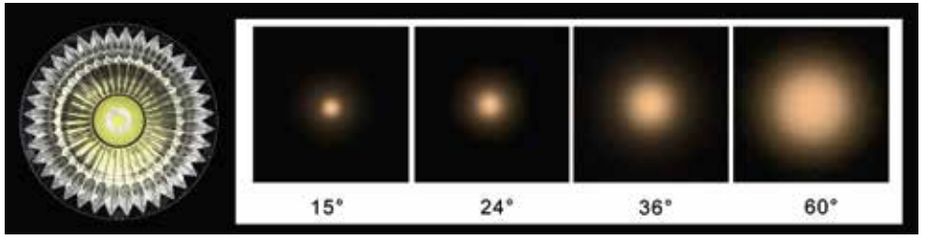



Graphic 1 is a fully reflecting surface and a optical emitting surface, light from graphic 3(LED) fully reflected to graphic 2(included angle) by the surface 1, then totally reflect two times in the included angle, at last all lights emit out from surface 1 by total three times reflection.




The reflect surfaces of included angle 2 are all fully reflecting surface, control the lens angle by adjust the surface shape. Ultrathin thickness 8mm, thinner than thinner, save more space for designer. Application: MR16/GU10/Downlight/Par20.






| | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
| SUNFLOWER 45@08 | 1.01.6793 | 45 | 08 | 12° | 7070 | 88% | PC |
| | 1.01.6794 | 45 | 08 | 24° | 7070 | 88% | PC |
| | 1.01.6795 | 45 | 08 | 36° | 7070 | 88% | PC |
| | 1.01.81435 | 45 | 08 | 60° | 7070 | 88% | PC |
| | 1.01.91955 | 45 | 08 | 10° | D4 | 88% | PC |
| | 1.07.91956 | 8 | 2 | / | / | / | PC |

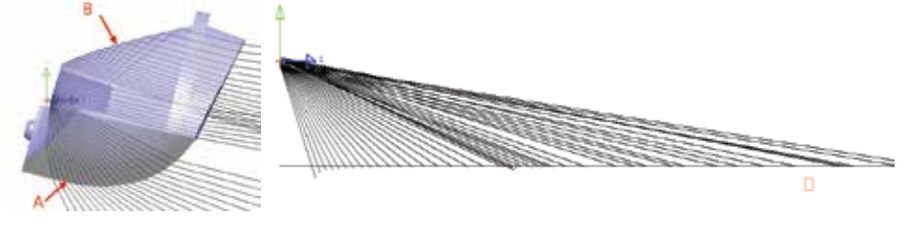
# WATERFALL SERIES



## Product characteristics

High wall washing height, uniform light spot, high efficiency, applicable to low-pole lighting such as indoor wall washing and outdoor guardrail lights.

## Light distribution




Using a combined light distribution, the optics at the top and bottom of the wall can be separated. The optical part of the lens is separated into part A (transmission type) and part B (total reflection type). The two parts are combined with light distribution to achieve wall washing lighting. The combination of the transmissive surface and the reflective surface makes the wall wash height high, close to the wall, and wide horizontal distance.

## Structure design

The structure of the lens is matched with the design method of the lens, and the holder design has its own anti-glare function. (Due to the inconsistency of different lamps, HercuLux can provide design reference for the holder)



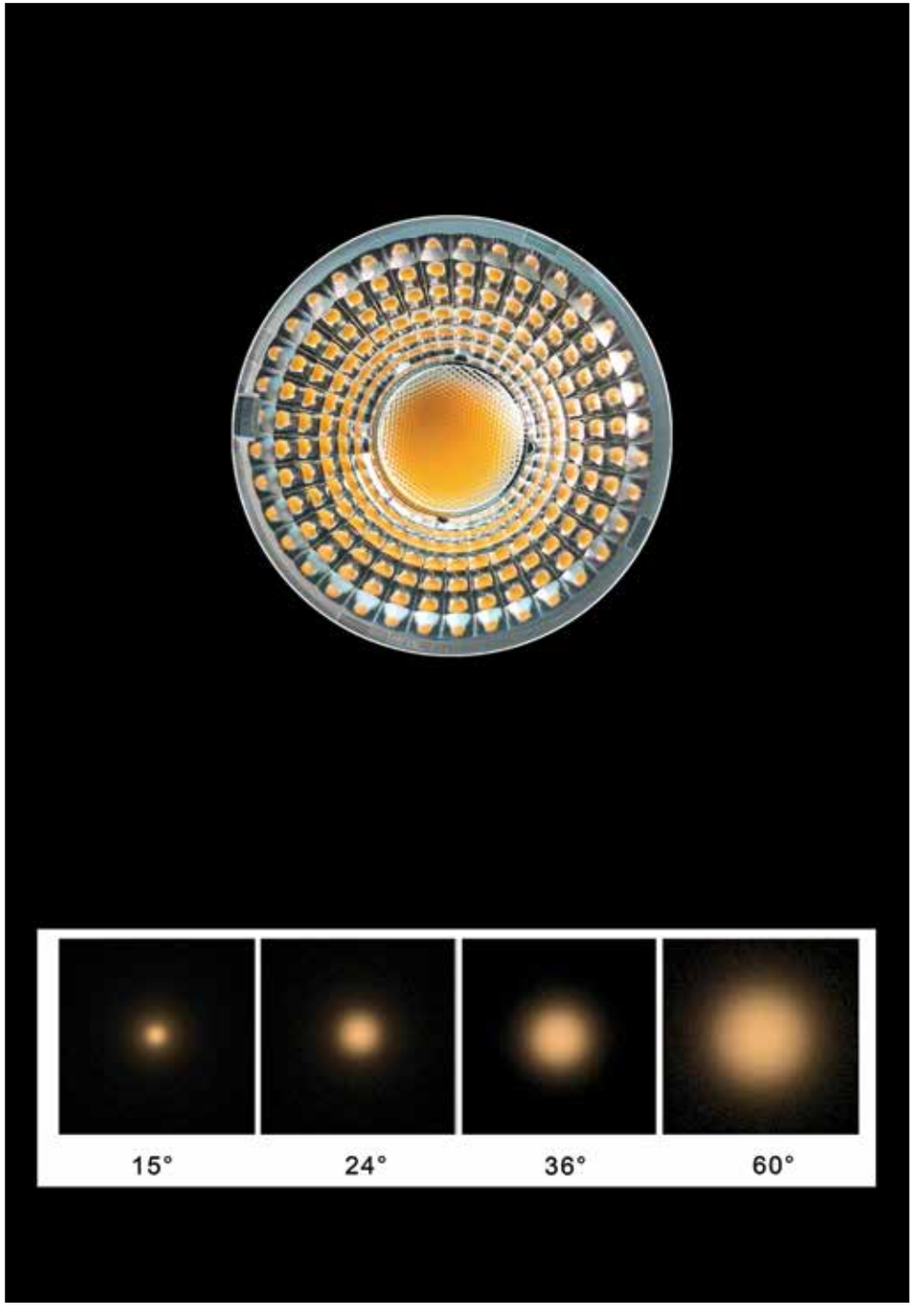


| WATERFALL 35 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.02.02355 | 35 | 23 | WW | D4 | 80% | PC |

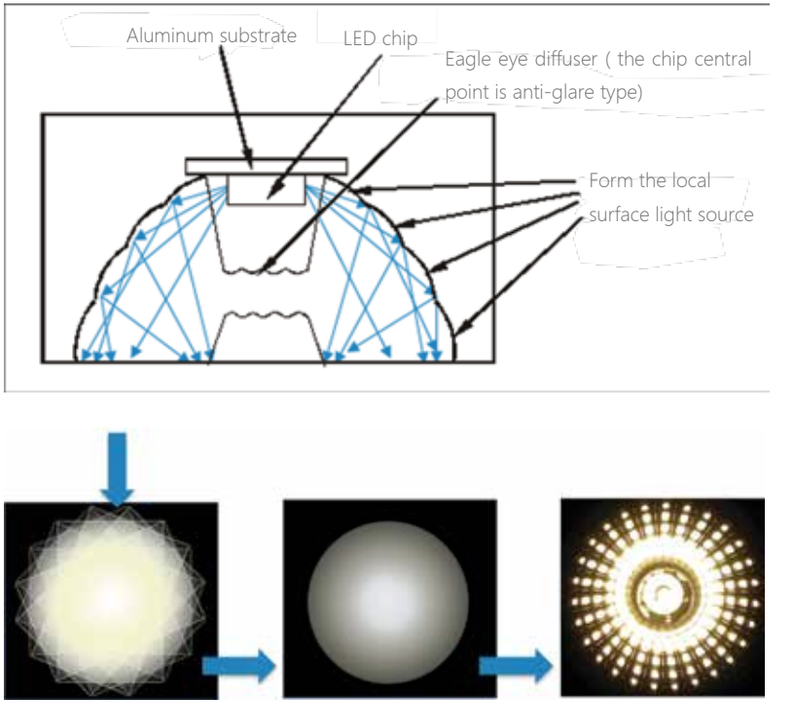
| WATERFALL 47 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.02.02208 | 47 | 38 | WW | D6 | 80% | PC |

WW - Wall washing

# DIAMOND SERIES




Principle




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);

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;

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 35@12.4 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.3111 | 35 | 12.4 | 24° | D6 | 92% | PMMA |
| | 1.01.3112 | 35 | 12.4 | 38° | D6 | 92% | PMMA |

| DIAMOND 35@17 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.3018 | 35 | 17 | 15° | D6 | 92% | PMMA |
| | 1.01.3019 | 35 | 17 | 24° | D6 | 92% | PMMA |
| | 1.01.3020 | 35 | 17 | 38° | D6 | 92% | PMMA |
| | 1.01.3056 | 35 | 17 | 60° | D6 | 92% | PMMA |

| DIAMOND 43@22.8 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.3046 | 43 | 22.8 | 10° | D9 | 92% | PMMA |
| | 1.01.3039A | 43 | 22.8 | 24° | D9 | 92% | PMMA |
| | 1.01.3002A | 43 | 22.8 | 38° | D9 | 92% | PMMA |
| | 1.01.3042A | 43 | 22.8 | 60° | D9 | 92% | PMMA |
| | 1.01.3029A | 43 | 22.8 | 90° | D9 | 92% | PMMA |
| | 1.01.4214 | 43 | 22.8 | 120° | D9 | 92% | PMMA |

| DIAMOND 44@18 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.3113 | 44 | 18 | 24° | D9 | 92% | PMMA |
| | 1.01.3114 | 44 | 18 | 38° | D9 | 92% | PMMA |

| DIAMOND 44@20 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.5423 | 44 | 20 | 15° | D9 | 90% | PC |
| | 1.01.5413 | 44 | 20 | 24° | D9 | 90% | PC |
| | 1.01.4357 | 44 | 20 | 24° | D9 | 90% | PC |
| | 1.01.4358 | 44 | 20 | 36° | D9 | 90% | PC |

| DIAMOND 46@24 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.5398 | 46 | 24 | 10° | D6 | 90% | PC |

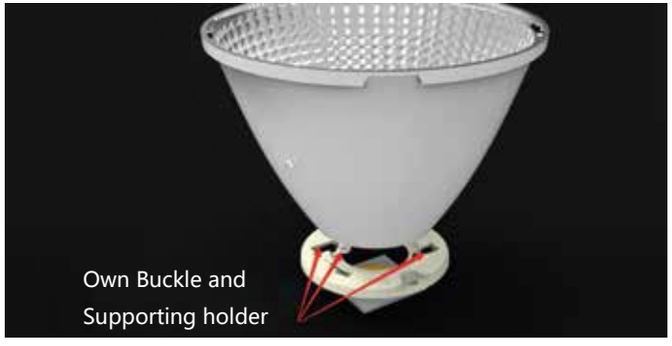
| DIAMOND 52@25 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.4286 | 52 | 25 | 15° | D6 | 90% | PC |
| | 1.01.4288 | 52 | 25 | 24° | D6 | 90% | PC |
| | 1.01.5429 | 52 | 25 | 35° | D6 | 90% | PC |

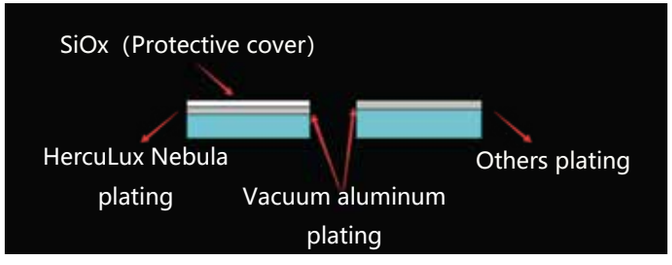
| DIAMOND 62@22 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.01.4260 | 62 | 22 | 30° | D18 | 92% | PMMA |
| | 1.01.3026 | 62 | 22 | 38° | D18 | 92% | PMMA |
| | 1.01.3033 | 62 | 22 | 60° | D18 | 92% | PMMA |
| | 1.01.3052 | 62 | 22 | 90° | D18 | 92% | PMMA |



# NEBULA SERIES

Features




1、Assembly:

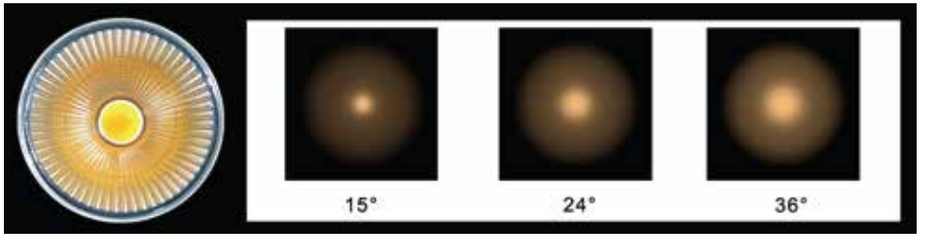
Easy assembling own buckle design and supporting holder design, easy for assembling and precise positioning

2、Flexible replacement:

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、Coating technology:

SiOx plating Automotive-glade reflective glass vacuum Plating technology of aluminum and SiOx, separate air and the aluminum plating, Superior anti-corrosion performance, can pass NaOH Alkali solution testing.




| NEBULA 44@20 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.6603 | 44 | 20 | 15° | D9 | 90% | Vaccum Aluminum Plating PC |
| | 1.08.6604 | 44 | 20 | 24° | D9 | 90% | |
| | 1.08.6605 | 44 | 20 | 36° | D9 | 90% | |
| | 1.07.6618 | 41 | 1 | / | / | / | PC |

| NEBULA 50@35 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.6606 | 50 | 35 | 15° | D9 | 90% | Vaccum Aluminum Plating PC |
| | 1.08.6607 | 50 | 35 | 24° | D9 | 90% | |
| | 1.08.6608 | 50 | 35 | 36° | D9 | 90% | |
| | 1.07.6619 | 48 | 2 | / | / | / | PC |

| NEBULA 69@46 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.6609 | 69 | 46 | 15° | D12 | 90% | Vaccum Aluminum Plating PC |
| | 1.08.6610 | 69 | 46 | 24° | D12 | 90% | |
| | 1.08.6611 | 69 | 46 | 36° | D12 | 90% | |
| | 1.07.6620 | 66 | 2 | / | / | / | PC |

| Nebula 75@54 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.6612 | 75 | 54 | 18° | D18 | 90% | Vaccum Aluminum Plating PC |
| | 1.08.6613 | 75 | 54 | 24° | D18 | 90% | |
| | 1.08.6614 | 75 | 54 | 36° | D18 | 90% | |
| | 1.07.6621 | 72 | 2 | / | / | / | PC |

| Nebula 95@64 | PN | φ | H | FWHM | LES | Eff. | Mat. |
|---|---|---|---|---|---|---|---|
|  | 1.08.6615 | 95 | 64 | 15° | D18 | 90% | Vaccum Aluminum Plating PC |
| | 1.08.6616 | 95 | 64 | 24° | D18 | 90% | |
| | 1.08.6617 | 95 | 64 | 36° | D18 | 90% | |
| | 1.07.6622 | 90 | 2 | / | / | / | PC |

# CUSTOMIZED SOLUTIONS

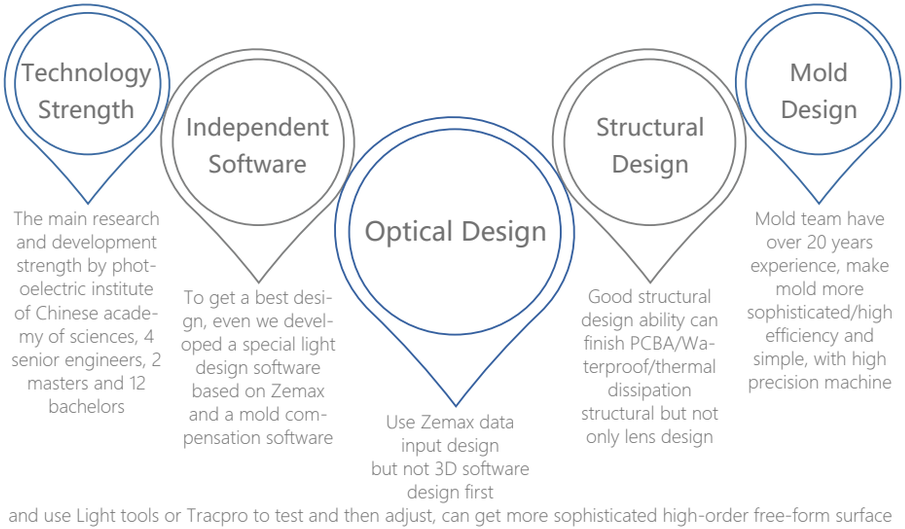
In addition to the standard mold products introduced in the catalogue, HercuLux can also provide customized solution services. With a professional design team and a complete industrial chain, tailor-made for customers, seeking the best solution for the project.

## *Extended Polynomial Lens*

**The Extended Polynomial surface shape is defined by:**

$$z = \frac{cr^2}{1+\sqrt{1-(1+k)c^2r^2}} + \sum_{i=1}^{N} A_i E_i(x,y).$$

HercuLux adopts imaging optical design software: ZEmax to do data input level design to achieve more accurate chip level design.




and use Light tools or Tracpro to test and then adjust, can get more sophisticated high-order free-form surface

Quick response for Design: Optical design → Structural design → Optical simulation → Mold assess → Injection molding analysis

Optical design, structural design, mold design, injection molding production, quality inspection, HercuLux has a complete industrial chain to ensure that optical products can be independently controlled in each link, so that product quality, appearance, performance and other aspects are the best state!

## Custom Process

**Kindly provide detail requirements:**

1. Lens size requirement; 2. Optical requirement(FWHM),Target IES will be better; 3. Lens Efficiency; 4. Assembly drawing sharing; 5. LED; 6. Material: PC or PMMA; 7. Application; 8. Other special information.

**Optical Design Report:**

Our R&D will process to optical designing according to your optical requirement, designing in 2-5 days and we will share you the design report.

**Structure Design:**

If you are satisfied with the optical report, we could process to structure designing. Please kindly provide the assembly drawing, structure drawing and any file is helpful for us to design structure.

**Structure Confirm:**

Confirm the structure (Step file): 1. Whether the lens structure conflict with the PCB; 2. Whether the lens structure conflict with the Lamp's structure; 3. Whether the lens structure conflict with the component location; 4. etc.

**Quotation:**

Quotation for Mold and product: 1. It depends on the mold size and its complexity; 2. Quotation includes Test Mold fee and Final Mold fee and price for unit product. (Test Mold is not absolutely necessary, it is according to the complexity of the mold.)

**Customer PO Arrangement:**

After you confirm the quotation, please kindly share your PO.

**PI and Payment Arrangement:**

We will arrange PI and we process to payment issue. After payment is done, we will process to mold producion.

**Mold Production:**

We need 30-35 working days to produce the mold, then will send you the samples which mold produce when the mold finished.

**Confirm The Simples:**

Whether the simples is same with the optical design and structure design.

**Mass Producion:** If the samples checking is OK, Procedure as below: 1. Your mass order; 2. Our PI arrangement; 3. Your payment arrangement; 4. Mass producion。

Self-built 20000 $m^2$ HercuLux park




More than 100 precision injection machines



Complete mold processing chain with a constant temp precision processing area




Self-built PC Vaccum Aluminum Plating workshop, One Spraying Production Line, Two Vacuum Plating Machine, 100000 Level Purification Workshop

