

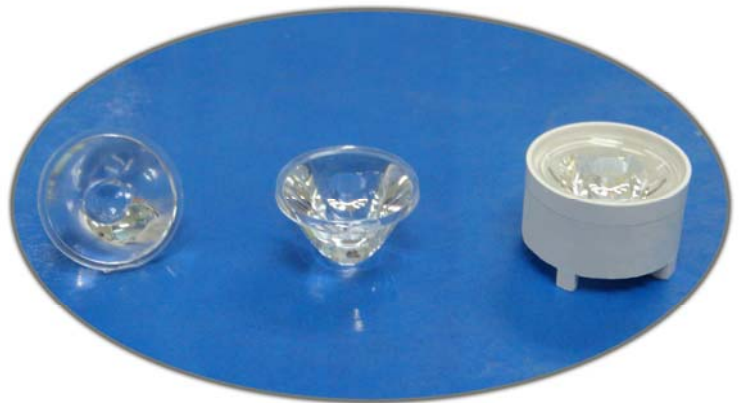
LL01OS-AXxxL-Mx Single Color Lens

Datasheet

For Osram Multi-Color and Single-Color LEDs

Features:

- High efficiency
- Available in 3 beam Patterns
- Optimized for uniform effects
- Lens with Housing



Typical applications :

- Stage Lighting
- Street Lights
- Decorative Light
- Architectural Lighting
- Down Light



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General Information

• Compatible Led Type :

The LL01OS-AXxxL-Mx Single lens are optimized for both Multi-Color R,G,B Osram LEDs and Single-Color

• Beam Angle Type :

An optimized profile integrate different front shape enable the generation of three different lens models different lens models:Medium beam (20deg), wide beam (40deg), ultra wide beam (60deg) .⁽¹⁾

• The Way to Assembly :

The Lens should be assembled to the PCB board or MCPCB by set its housing upon LEDs which provides the most appropriate related position, so as to achieve the best uniform results.

*** Manually installation or if necessary thermal glue are recommended.**

• Function :

LL01OS-AXxxL-Mx provides exceptional color uniform result with the highest efficiency through careful engineering and precision manufacturing process.

*Lens housings (holders) are available in white,black and clear.

Notes:

(1) Typical beam divergence will be affected by different color of LEDs.

General Specifications

- Lens Material Optical Grade PMMA PC
- Operating Temperature range $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$ (upper limit $+80^{\circ}\text{C}$)
- Storage Temperature range $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$ (upper limit $+80^{\circ}\text{C}$)
- *Average transmittance in visible spectrum 400nm~700nm > 90%

Optical Specifications [Typical beam Angle and intensity (cd/lm) of LL01 lenses]

- OSRAM Single Color R.G.B

Part Number	Typical Cone Angle (degree) ⁽²⁾ with OSRAM R.G.B			
	Red LEDs ●	Green LEDs ●	Blue LEDs ●	RGB ●
LL01OS-AX20L-Mx	19	21	22	
LL01OS-AX40L-Mx	42	45	46	
LL01OS-AX60L-Mx	61	66	63	

The typical cone angle measures where the luminous intensity is 90% of the peak value of intensity. This typical cone varies with LED color due to different chip size and chip position tolerance.

Part Number	Typical on axis intensity (cd/lm) ⁽³⁾ with OSRAM R.G.B			
	Red LEDs ●	Green LEDs ●	Blue LEDs ●	RGB ●
LL01OS-AX20L-Mx	1400	1620	280	
LL01OS-AX40L-Mx	620	630	120	
LL01OS-AX60L-Mx	410	450	70	

Luminous intensity depends on the flux binning and tolerance of the LEDs. Please refer to the LEDs datasheet for more details on flux binning and mechanical tolerance.

- OSRAM LW W5AM KY-7K LED

Part Number	Typical Cone Angle (degree) ⁽²⁾ with LW W5AM KY-7K	
	White LEDs ○	Warm white LEDs ●
LL01OS-AX20L-Mx	20	22
LL01OS-AX40L-Mx	42	45
LL01OS-AX60L-Mx	61	64

The typical cone angle the full angle measured where the luminous intensity is 90% of the peak value of intensity. That typical cone varies with LED color due to different chip size and chip position tolerance.

Part Number	Typical on axis intensity (cd/lm) ⁽³⁾ with LW W5AM KY-7K	
	White LEDs ○	Warm white LEDs ●
LL01OS-AX20L-Mx	1700	1750
LL01OS-AX40L-Mx	680	720
LL01OS-AX60L-Mx	420	510

Luminous intensity depends on the flux binning and tolerance of the LEDs. Please refer to the LEDs datasheet for more detail on flux binning and mechanical tolerance.

Notes:

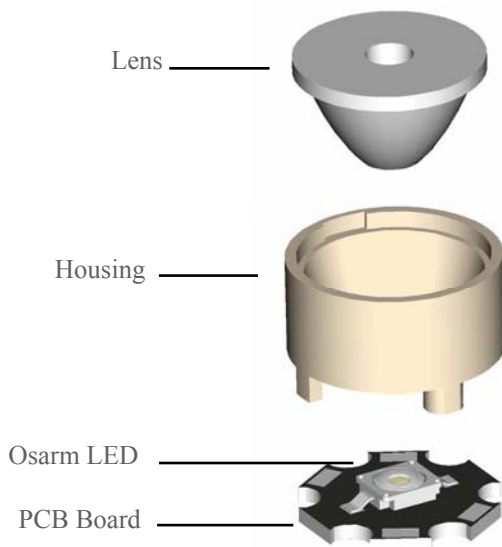
- (2) The typical divergence will be changed by different color, chip size and chip position tolerance.
 The typical total divergence is the full angle measured where the luminous intensity is half of the peak value.
- (3) The efficiency value listed above is the total value of the whole lens model, the value depends on the total flux of the LED used. Luminous intensity depends on the LEDs flux and its tolerances, for more details of LED flux, please check Osram datasheet at www.osram.com

Mechanical Specifications

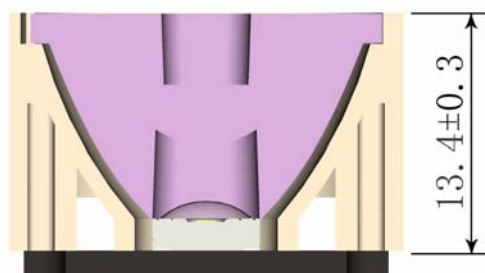
• Usage and Maintenance :

1. If necessary, clean lenses with mild soap, water and soft cloth
2. Never use any commercial cleaning solvents on lenses, like alcohol
3. Please handle or install lenses with wearing gloves, skin oils may damage lens or its optical characteristic.

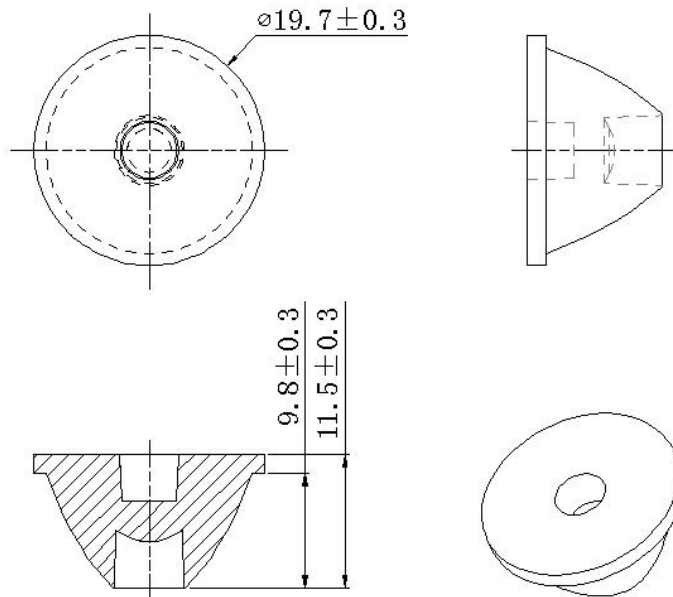
1. Lens + Leds+MCPCB assembly instruction:



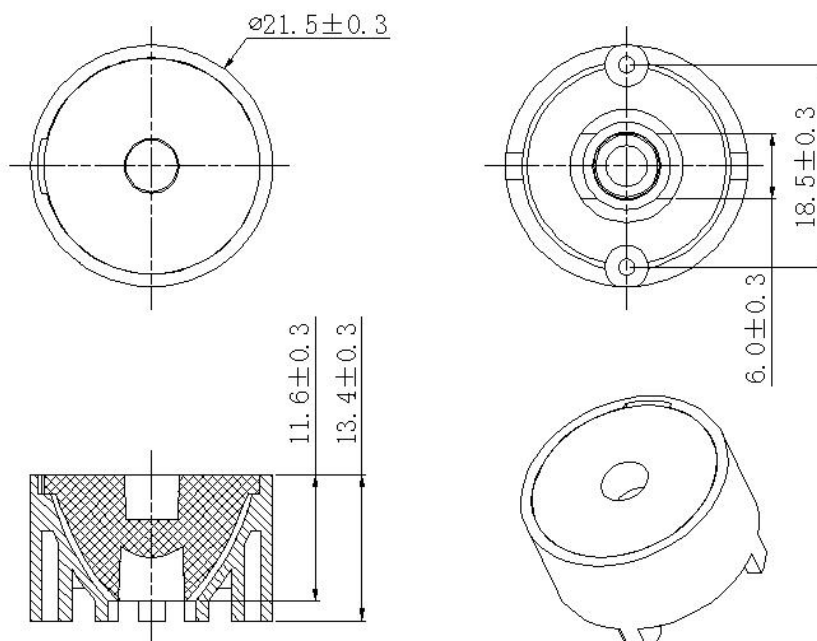
2. View assembly lens with MCPCB:



3. Lens dimensions and Top Views:



4. Lens assembly dimensions and Top Views :



Notes:

- (1) All dimensions are in mm.
- (2) Drawing not to scale.
- (3) Collimator material is PMMA.
- (4) (4) The surface of 20 degree lens is mirror surface , 40,60 degree lens are mesh point surface!

Illumination charts

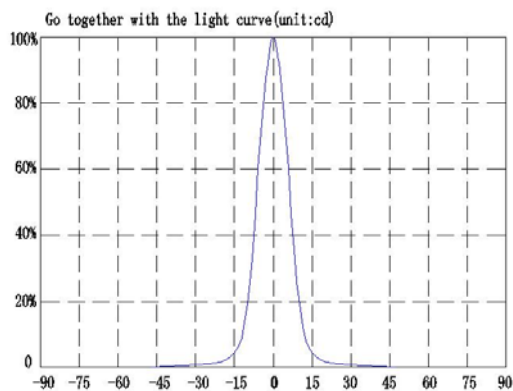
*OSARM LW W5AM KY-7K LED

LL01OS-AX20L-Mx

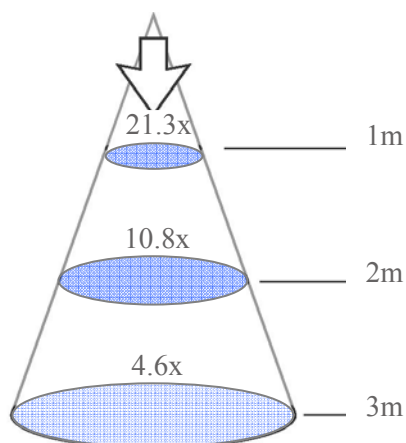
1. Beam Pattern



2. Angular Intensity Distribution



3. Shine on one degree diagram

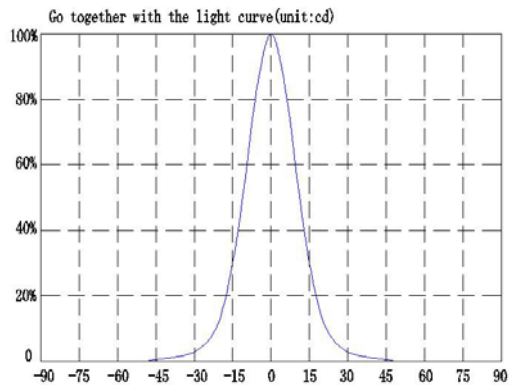


LL01OS-AX40L-Mx

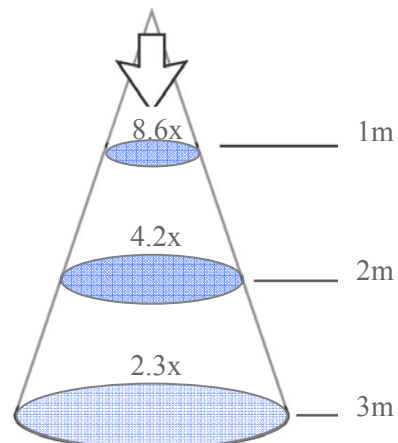
1. Beam Pattern



2. Angular Intensity Distribution



3. Shine on one degree diagram



Illumination charts

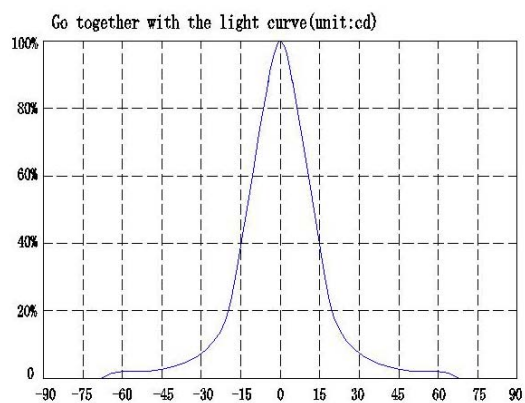
*OSARM LW W5AM KY-7K LED

LL01OS-AX60L-Mx

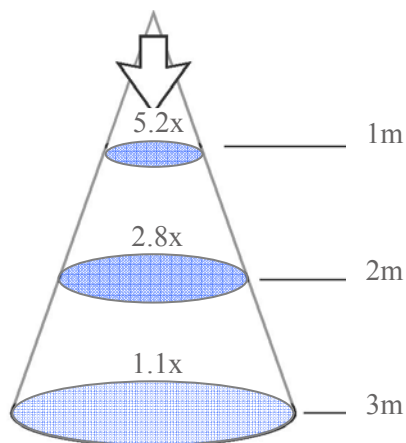
1. Beam Pattern



2. Angular Intensity Distribution



3. Shine on one degree diagram



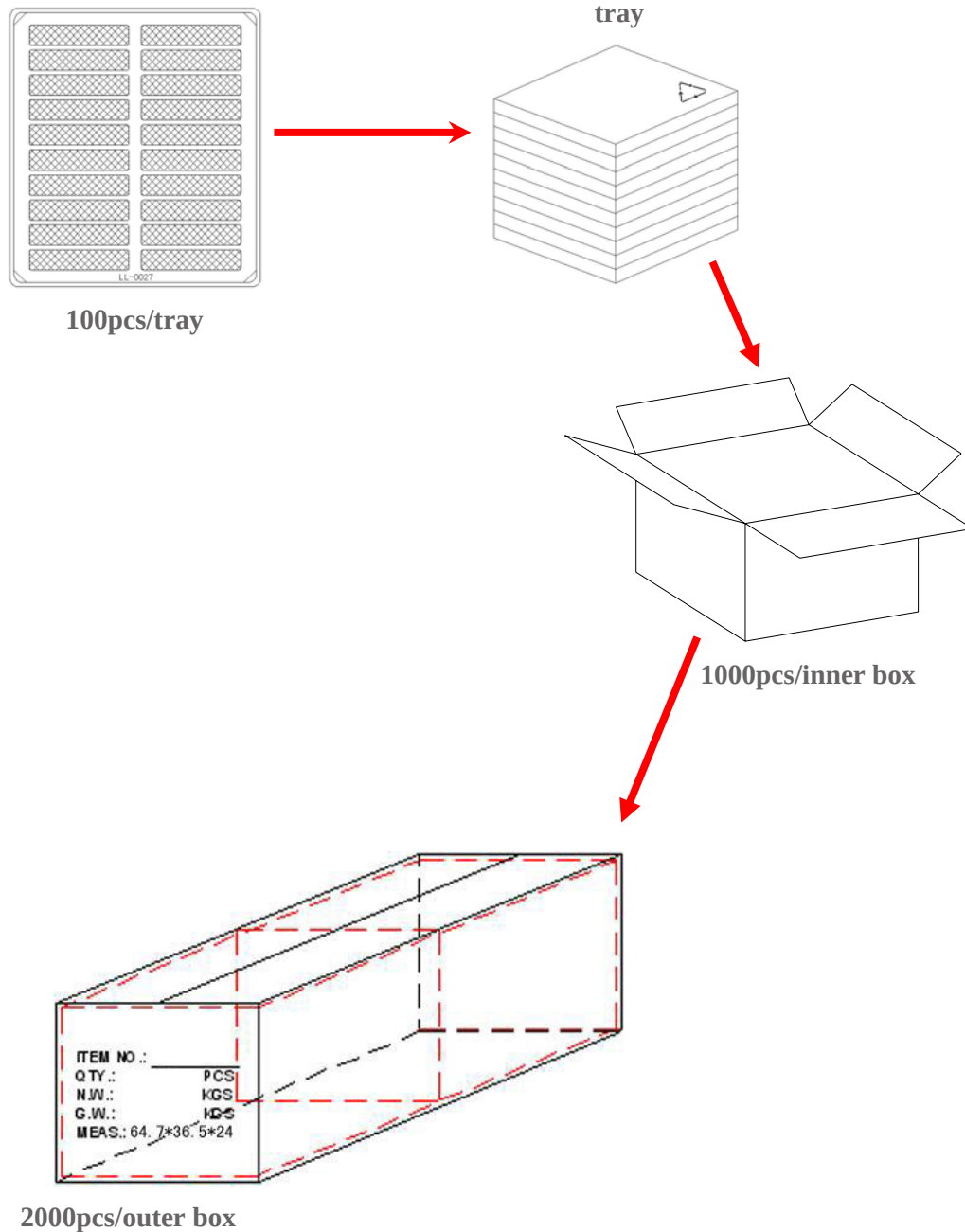
1. Beam Pattern

2. Angular Intensity Distribution

3. Shine on one degree diagram

Package

Item	Quantity	Total	Size (long * width * high)
Tray	10	100pcs	34*30*3.5 cm
Inner box	10tray/box	1000pcs	35*31*21 cm
Outer box	2 inner box/outer box	2000pcs	64.7*36.5*24 cm



Product Nomenclature

