

ARL-LL01CR-AO80L-M2

For CREE Multi-Color and Single-Color LEDs General purpose leads

Features

- High efficiency
- Available in 6 beam Patterns
- Optimized for uniform effects
- Lens with Housing

Typical applications

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



• Compatible Led Type :

The ARL-LL01CR-AOxxL-Mx Single lens are optimized for both Multi-Color R+G+B CREE LEDs and Single-Color Cree LEDs from Cree Opto.

• Beam Angle Type :

An optimized profile integrate different front shape enable the generation of Four different lens models different

lens models: Smallest beam (15deg), Medium beam (25deg), ultra wide beam (60-80deg) and oval beam(25*45deg).(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 :

ARL-LL01CR-AOxxL-Mx provides exceptional color uniform result with the highest efficiency through careful

engineering and precision manufacturing process.

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

Notes:

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

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General Specifications

- Lens Material Optical Grade PMMA PC
- Operating Temperature range -40°C ~ + 70°C (upper limit +80°C)
- Storage Temperature range -40°C ~ + 70°C (upper limit +80°C)
- *Average transmittance in visible spectrum 400nm~700nm > 90%

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

• CREE XR-E

| Part Number | Typical Cone Angle (degree) with CREE XR-E | | |
|-----------------------|--|--------------|-------------|
| | Red LEDs ● | Green LEDs ● | Blue LEDs ● |
| ARL-LL01CR-AO15L-Mx | 20 | 20 | 23 |
| ARL-LL01CR-AO25L-Mx | 27 | 27 | 27 |
| ARL-LL01CR-AO40L-Mx | 35 | 40 | 38 |
| ARL-LL01CR-AO60L-Mx | 70 | 75 | 75 |
| ARL-LL01CR-AO80L-Mx | 75 | 75 | 75 |
| ARL-LL01CR-AO2545L-Mx | 40*55 | 40*55 | 40*50 |

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/Im) with CREE XR-E | | |
|-----------------------|--|--------------|-------------|
| | Red LEDs ● | Green LEDs ● | Blue LEDs ● |
| ARL-LL01CR-AO15L-Mx | 400 | 1400 | 260 |
| ARL-LL01CR-AO25L-Mx | 200 | 660 | 110 |
| ARL-LL01CR-AO40L-Mx | 100 | 300 | 50 |
| ARL-LL01CR-AO60L-Mx | 55 | 225 | 35 |
| ARL-LL01CR-AO80L-Mx | 40 | 130 | 20 |
| ARL-LL01CR-AO2545L-Mx | 85 | 480 | 60 |

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.

• CREE XR-E

| Part Number | Typical Cone Angle (degree) with CREE XR-E | |
|-----------------------|--|-------------------|
| | White LEDs ○ | Warm white LEDs ● |
| ARL-LL01CR-AO15L-Mx | 15 | 13 |
| ARL-LL01CR-AO25L-Mx | 24 | 22 |
| ARL-LL01CR-AO40L-Mx | 41 | 43 |
| ARL-LL01CR-AO60L-Mx | 66 | 62 |
| ARL-LL01CR-AO80L-Mx | 72 | 76 |
| ARL-LL01CR-AO2545L-Mx | 26*46 | 25*44 |

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/Im) with CREE XR-E | |
|-----------------------|--|-------------------|
| | White LEDs ○ | Warm white LEDs ● |
| ARL-LL01CR-AO15L-Mx | 1630 | 560 |
| ARL-LL01CR-AO25L-Mx | 970 | 330 |
| ARL-LL01CR-AO40L-Mx | 270 | 150 |
| ARL-LL01CR-AO60L-Mx | 145 | 100 |
| ARL-LL01CR-AO80L-Mx | 100 | 50 |
| ARL-LL01CR-AO2545L-Mx | 420 | 120 |

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:

- 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.
- 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 cree datasheet at www.cree.com.

Mechanical Specifications

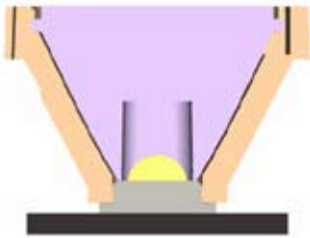
• Usage and Maintenance :

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.

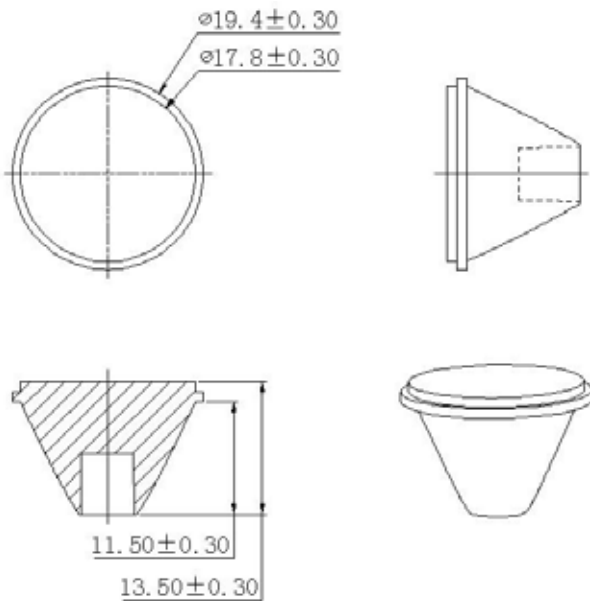
1. Lens + Leds+MCPCB assembly instruction:



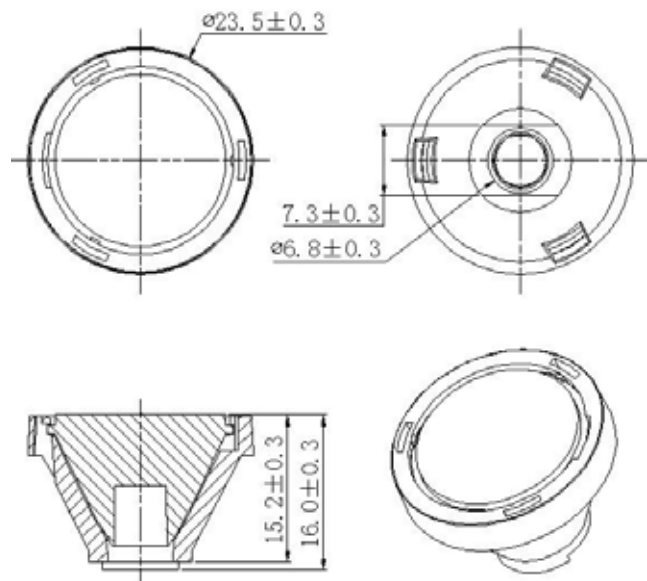
2. View assembly lens with MCPCB:



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.

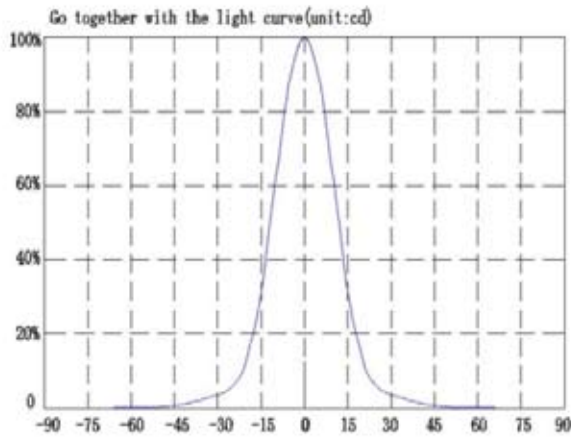
Illumination charts

*CREE single white LED: CREE XR-E
ARL-LL01CR-AO40L-Mx

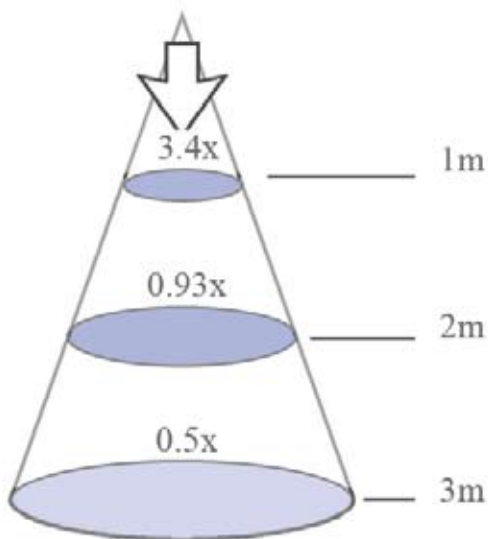
1. Beam Pattern



2. Angular Intensity Distribution



3. Shine on one degree diagram

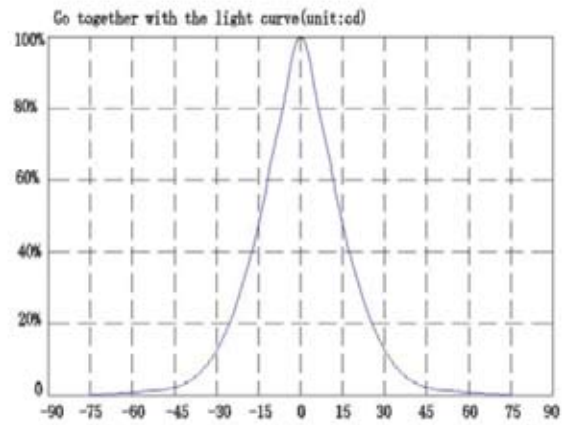


ARL-LL01CR-AO60L-Mx

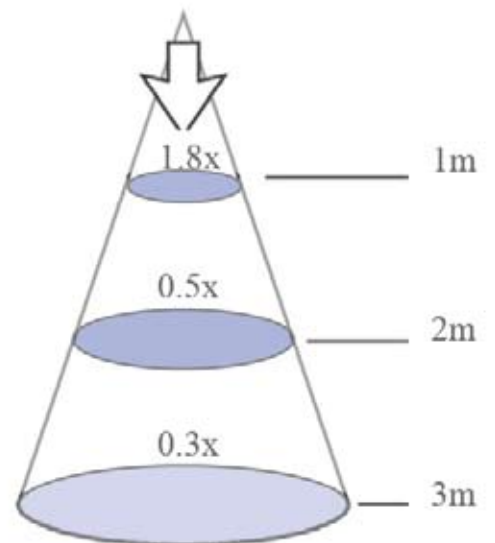
1. Beam Pattern



2. Angular Intensity Distribution



3. Shine on one degree diagram



Illumination charts

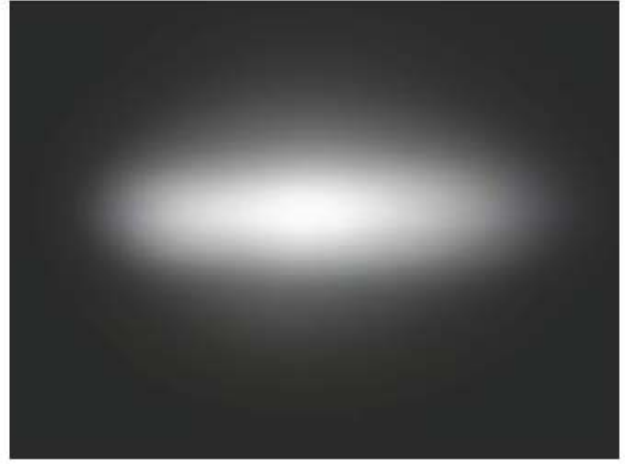
*CREE single white LED: CREE XR-E
ARL-LL01CR-AO80L-Mx

1. Beam Pattern

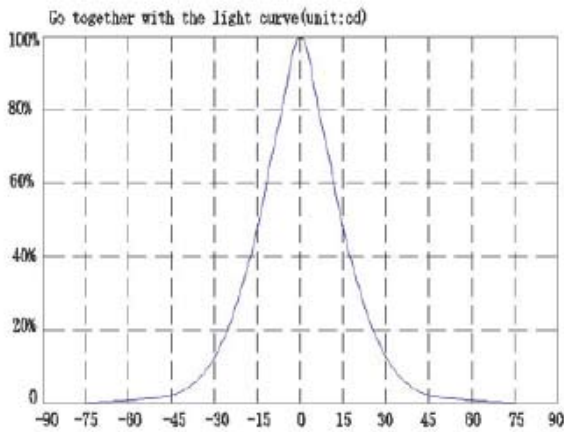


ARL-LL01CR-AO2545L-Mx

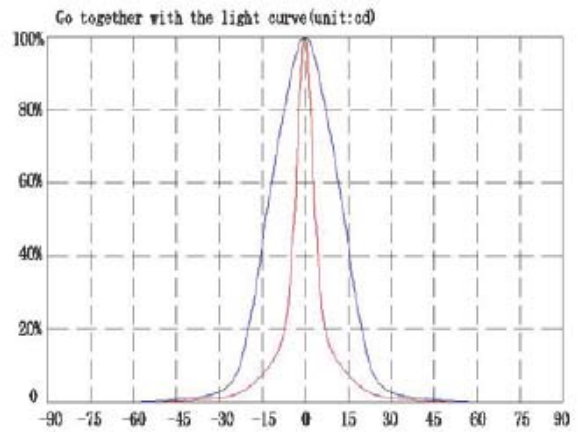
1. Beam Pattern



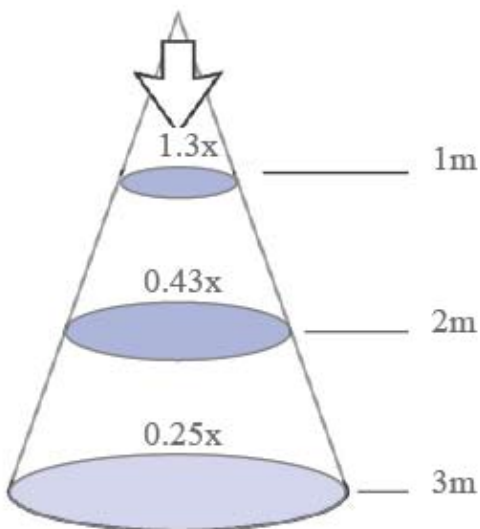
2. Angular Intensity Distribution



2. Angular Intensity Distribution



3. Shine on one degree diagram



3. Shine on one degree diagram

