

LL03ED-AFxxL Data Sheet

For EDIXEON Multi-Color and Single-Color LEDs



Features:

- High efficiency
- Available in 5 beam Patterns
- Optimized for uniform effects
- Lens without Housing

Typical applications :

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

Table of Contents

General Information.....	2
General Specifications.....	2
Optical Specifications.....	3
Mechanical Specifications.....	4
Illumination charts.....	5
Package Specifications.....	6
Product Nomenclature.....	7

General Information

- **Compatible Led Type :**

The LL03ED-AFxxL 3 in 1 lenses are optimized for both Multi-Color R.G.B Edison LEDs and Single-Color Edison LEDs (Edixeon 1LA5 White) from Edison Opto. ⁽¹⁾

- **Beam Angle Type :**

An optimized profile integrate different front shape enable the generation of five different lens models : smallest beam(10deg);medium beam (30deg);biggest beam(60deg); oval beam(40*70deg). ⁽²⁾

- **The Way to Assembly :**

The lens should be assembled to the MCPCB or heat sink hole by the built-in three installation legs. The three installation legs ensure ideal relative position between the lens and LEDs resulting in the best optical performance.

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

- **Function :**

LL03ED-AFxxL provides exceptional color mixing result with the highest efficiency through careful engineering and precision manufacturing process.

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/lm) of LL03 lenses]

• Edixeon 1LA5 LED

Typical Cone Angle (degree) ⁽³⁾ with Edixeon 1LA5			
Part Number	Red LEDs	Green LEDs	Blue LEDs
LL03ED-AF10L	28	30	33
LL03ED-AF30L	46	46	43
LL03ED-AF45L	57	59	56
LL03ED-AF60L	62	66	66
LL03ED-AF4070L	--	--	--

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.

Typical on axis intensity (cd/3w) ⁽⁴⁾ with Edixeon 1LA5			
Part Number	Red LEDs	Green LEDs	Blue LEDs
LL03ED-AF10L	2340	5700	480
LL03ED-AF30L	300	930	75
LL03ED-AF45L	180	600	30
LL03ED-AF60L	150	450	30
LL03ED-AF4070L	--	--	--

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

• Edixeon 1LA5 LED

Typical Cone Angle (degree) ⁽³⁾ with Edixeon 1LA5			
Part Number	Red LEDs	Green LEDs	
LL03ED-AF10L	26	24	
LL03ED-AF30L	34	57	
LL03ED-AF45L	41	54	
LL03ED-AF60L	53	72	
LL03ED-AF4070L	--	--	

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.

Typical on axis intensity (cd/3w) ⁽⁴⁾ with Edixeon 1LA5			
Part Number	Red LEDs	Green LEDs	
LL03ED-AF10L	4125	2370	
LL03ED-AF30L	810	360	
LL03ED-AF45L	600	240	
LL03ED-AF60L	360	150	
LL03ED-AF4070L	--	--	

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

Notes:

(3) 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.

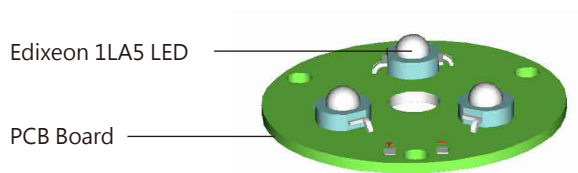
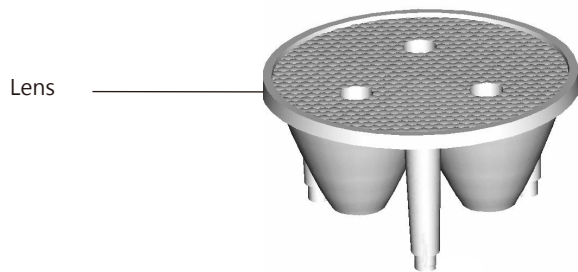
(4) The efficiency value listed above is the total value of the whole lens model, the value depends on the total flux of the LED used. Luminous intensity depends on the LEDs flux and its tolerances, for more details of LED flux, please check Edixeon data sheet at <http://www.edison-opto.com.tw/>

Mechanical Specifications

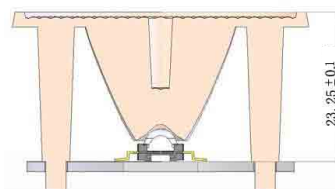
• Usage and Maintenance :

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.

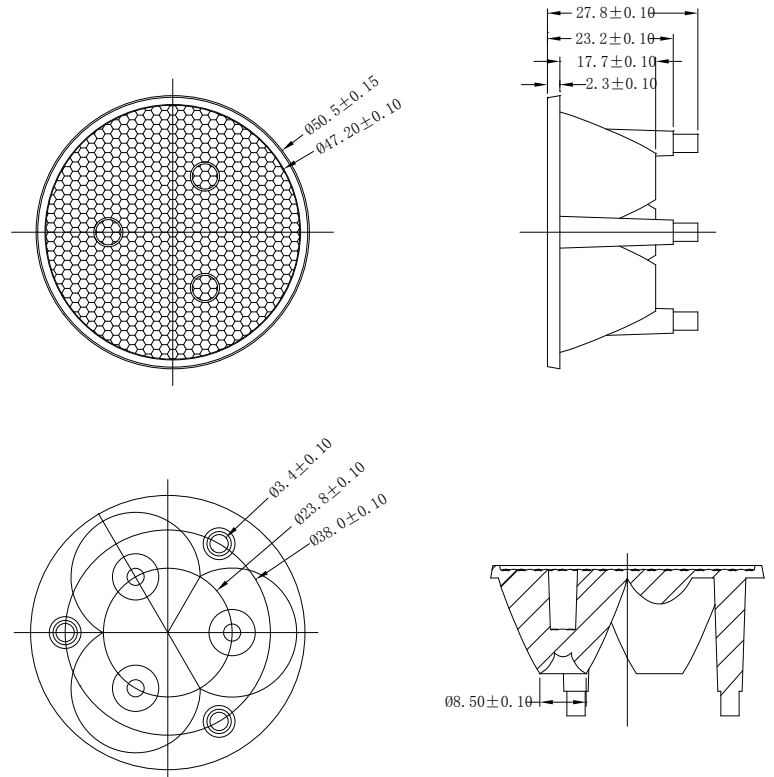
1. Lens + Leds+MCPCB assembly instruction



2. View assembly lens with MCPCB:



3. Lens dimensions and Top Views:



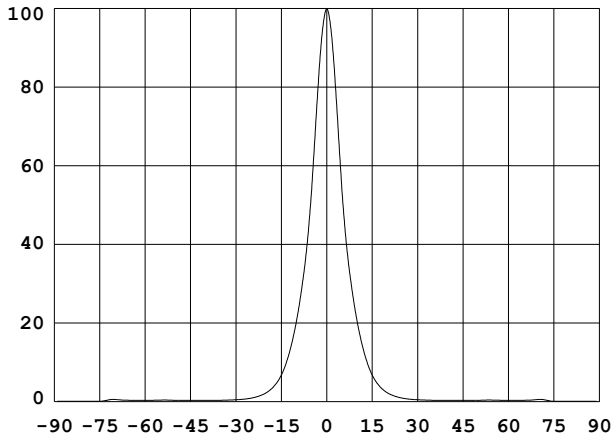
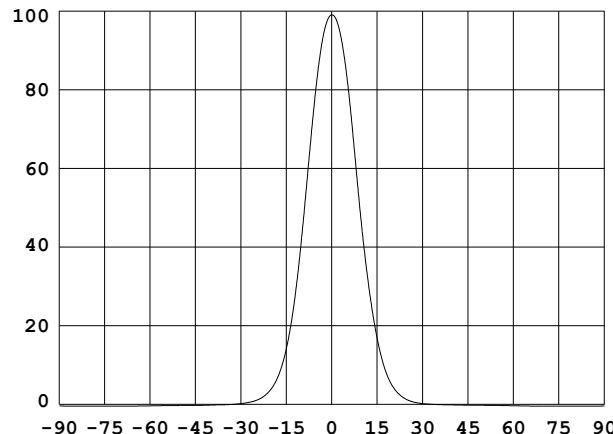
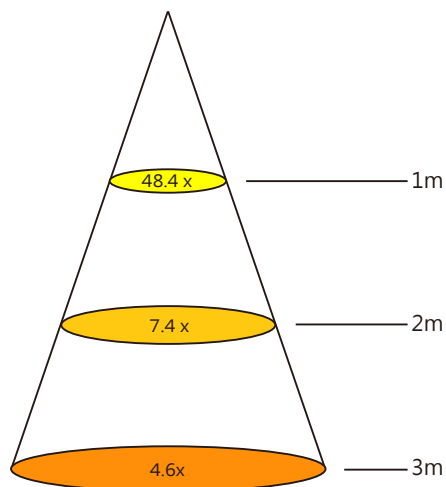
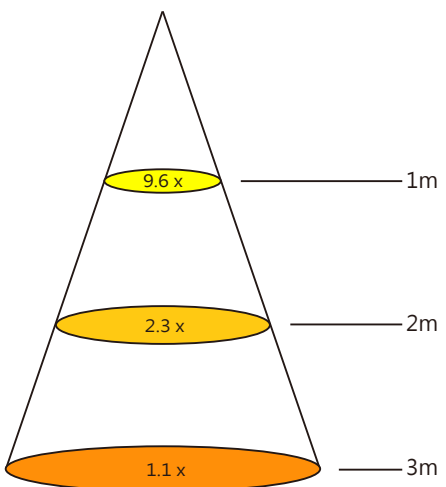


Notes:

- (1) All dimensions are in mm.
- (2) Drawing not to scale.
- (3) Collimator material is PMMA.

Illumination charts

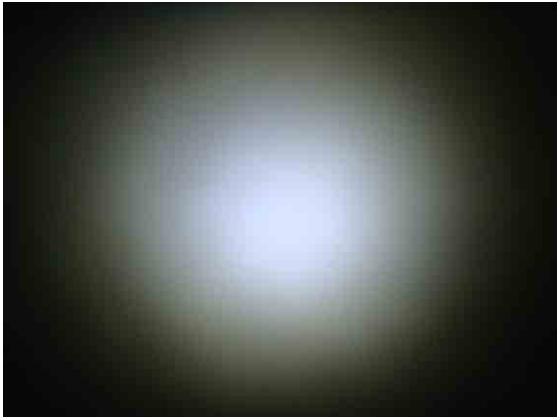

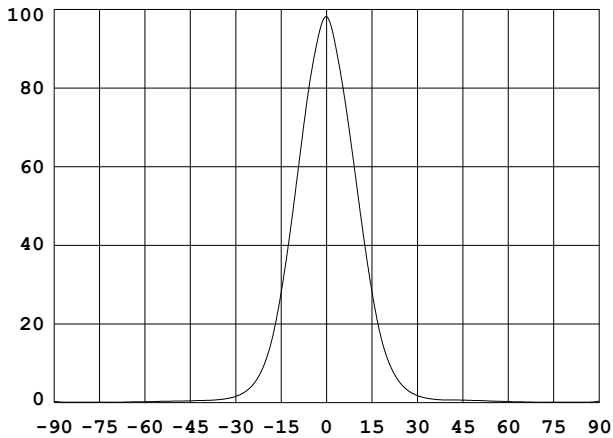
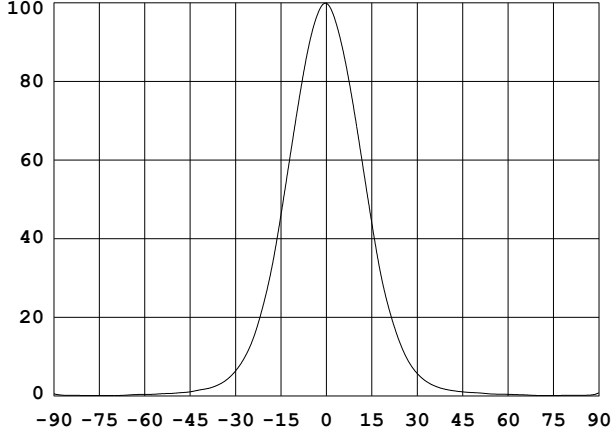
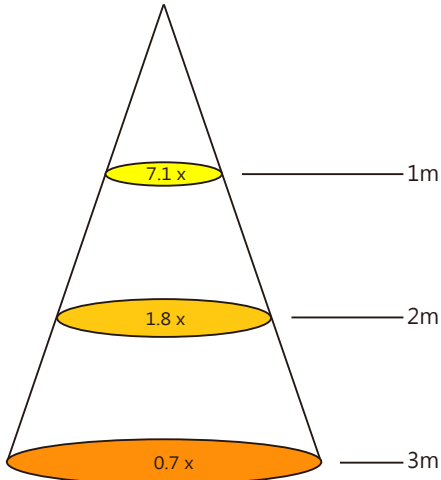
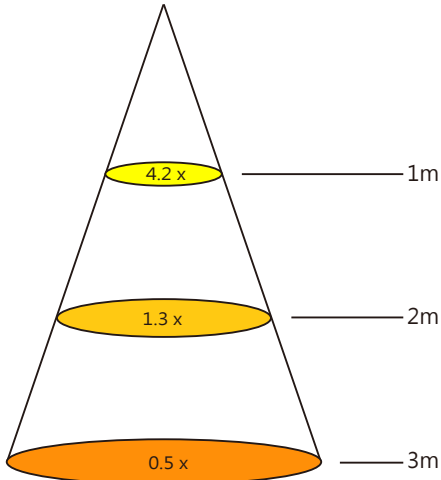
*Edixeon 3 in 1 white LED: Edixeon 1LA5

LL03ED-AF10L	LL03ED-AF30L
1. Beam Pattern	1. Beam Pattern
	
2. Light Distribution Curve	2. Light Distribution Curve
	
3. Illuminance	3. Illuminance
	

Notes: The Flux of Edixeon 1LA5 LED is 85 lm

Illumination charts

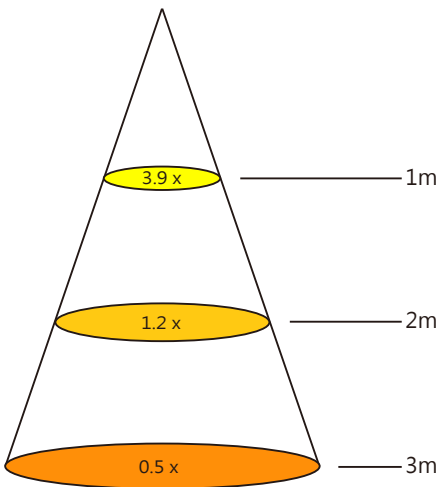
*Edixeon 3 in 1 white LED: Edixeon 1LA5

LL03ED-AF45L	LL03ED-AF60L
1. Beam Pattern	1. Beam Pattern
	
2. Light Distribution Curve	2. Light Distribution Curve
	
3. Illuminance	3. Illuminance
	

Notes: The Flux of Edixeon 1LA5 LED is 85 lm

Illumination charts

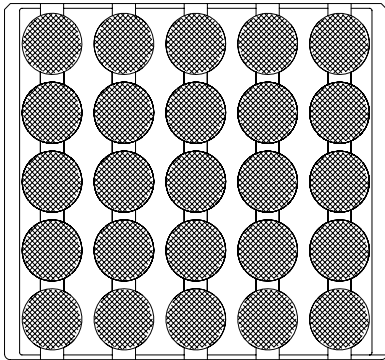
*Edixeon 3 in 1 white LED: Edixeon 1LA5

LL03ED-AF4070L	
1. Beam Pattern	
2. Light Distribution Curve	
3. Illuminance	
 <p>Diagram illustrating the beam pattern and illuminance distribution for the LL03ED-AF4070L LED. The beam is shown as a cone, and the illuminance is measured at three distances: 1m, 2m, and 3m. The illuminance values are 3.9 x at 1m, 1.2 x at 2m, and 0.5 x at 3m.</p>	

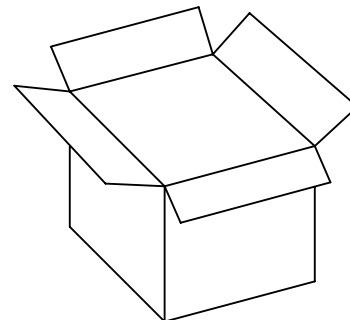
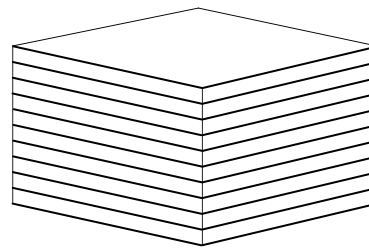
Notes: The Flux of Edixeon 1LA5 LED is 85 lm

Package

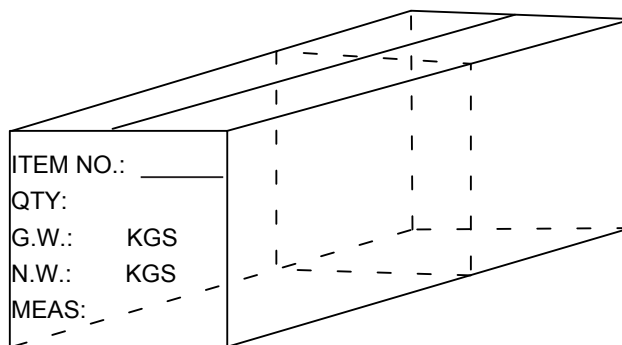
Item	Quantity	Total	Size (long*width* high)
Tray	25	25pcs	34*30*3.5 cm
Inner box	10tray/box	250pcs	35*31*21 cm
Outer box	2 Inner box/outer box	500pcs	64.7*36.5*24 cm



25pcs/tray



250pcs/inner box



500pcs/outer box

Product Nomenclature

