LL03 3-in-1 Tri-Lens for Color Mixing

Datasheet

For Edixeon® Multi-Color 3-in-1 and Single-Color LEDs

Features:

- High efficiency
- Available in 3 beam Patterns
- Optimized for color mixing effects
- Lens alone

Typical applications :

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

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General Information

• Compatible Led Type :

The LL03ED-BAxxL Tri-lens are optimized for both Multi-Color RGB 3in1 Edixeon® LEDs (EDERTB-1LC6 and EDERTB-1EC1) and Single-Color Edixeon® LEDs from Edison Opto.(1)

• Beam Angle Type :

An optimized profile integrate different front shape enable the generation of three different lens models: Medium beam (25deg), wide beam (45deg)and ultra wide beam (60deg).(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.

***Hot Pressure and Ultrasonic Assembly process are recommended.**

• Function :

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

Notes:
(1) Edixeon® is a trademark of Edison Opto, for technical information on LEDs, please refer to Edison Opto website at www.edison-opto.com.tw.
(2) Typical beam divergence will be affected by different color of LEDs.

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]

• EDERTB-1LC6

Part Number	Typical Cone Angle (degree)(3) with EDERTB-1LC6			
	Red LEDs	Green LEDs	Blue LEDs	RGB 3 in 1
LL03ED-BA25L	43	37	37	25
LL03ED-BA45L	49	39	47	41
LL03ED-BA60L	57	51	57	53

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)(4) with EDERTB-1LC6			
	Red LEDs	Green LEDs	Blue LEDs	RGB 3 in 1
LL03ED-BA25L	270	1050	115	1480
LL03ED-BA45L	110	630	60	720
LL03ED-BA60L	105	460	33	560

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.

• EDERTB-1EC1

Part Number	Typical Cone Angle (degree)(3) with EDERTB-1EC1			
	Red LEDs	Green LEDs	Blue LEDs	RGB 3 in 1
LL03ED-BA25L	39	39	34	37
LL03ED-BA45L	43	50	41	45
LL03ED-BA60L	52	57	58	54

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)(4) with EDERTB-1EC1			
	Red LEDs	Green LEDs	Blue LEDs	RGB 3 in 1
LL03ED-BA25L	260	1300	51	1450
LL03ED-BA45L	165	564	25	660
LL03ED-BA60L	100	330	15	480

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:

(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.

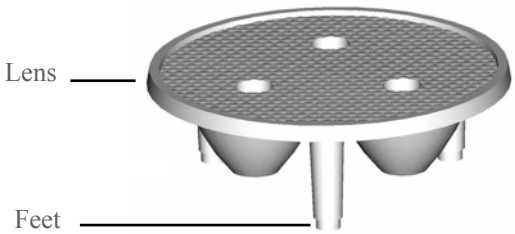
(4) The efficiency value listed above is the total value of the whole Tri-lens model, the value depends on the total flux of the LED used. Luminous intensity depends on the LEDs flux and its tolerances, for more details of LED flux, please check Edixeon® datasheet at www.edison-opto.com.tw.

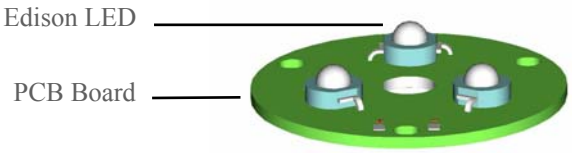
Mechanical Specifications

• Usage and Maintenance :

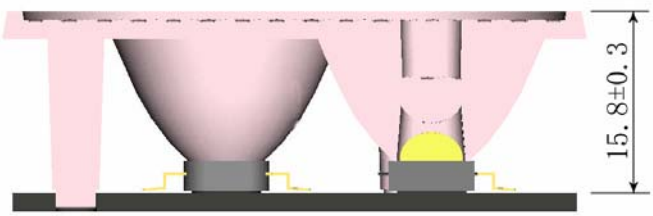
1. If necessary, clean lenses with mild soap, water and soft cloth
2. Never use any commercial cleaning solvents on lenses, like alcohol
3. Please handle or install lenses with wearing gloves, skin oils may damage lens or its optical characteristic.

1. Lens + Leds+MCPCB assembly instruction:

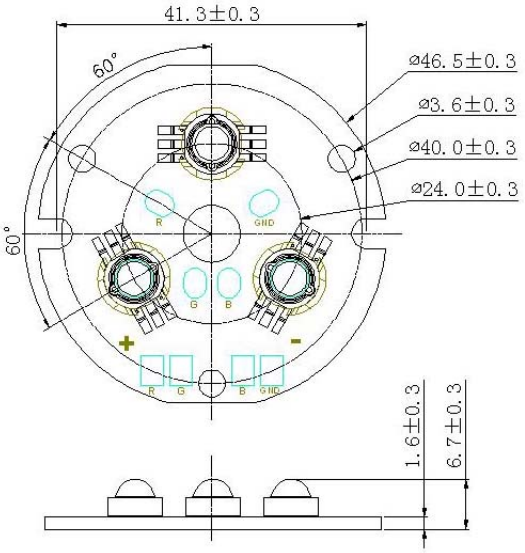




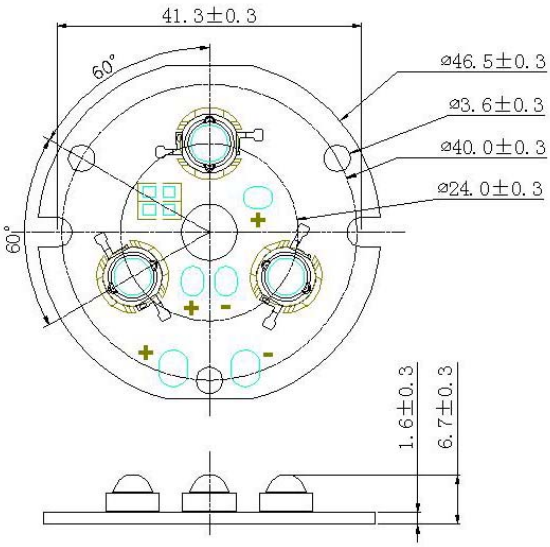
2. View assembly lens with MCPCB:



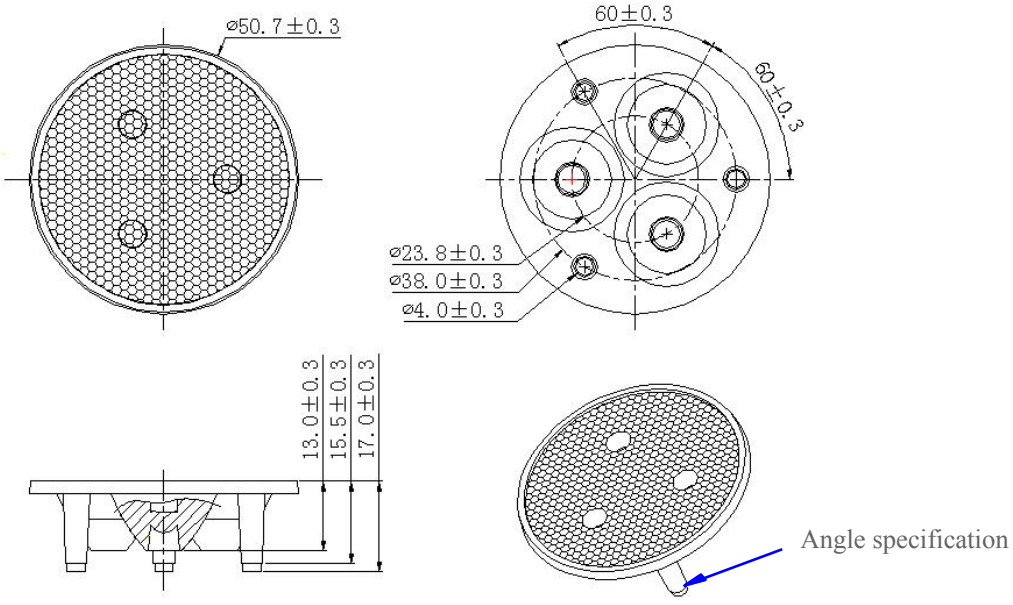
3. Multi-Color RGB Compatible MCPCB Dimensions:



4. Single-Color Compatible MCPCB Dimensions:



5. Lens assembly dimensions and Top Views :



Notes:

(1) All dimensions are in mm.

(2) Drawing not to scale.

(3) Collimator material is PMMA.

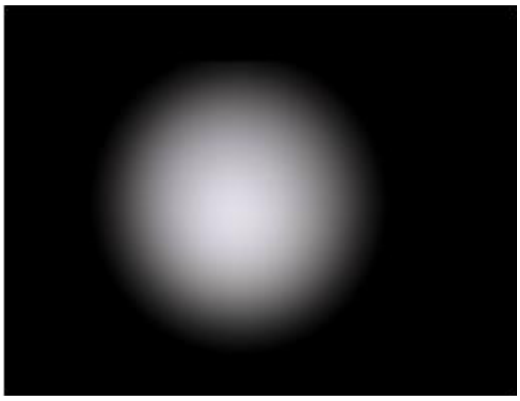
(4) View angle is showed on one of the installation legs.

Illumination charts

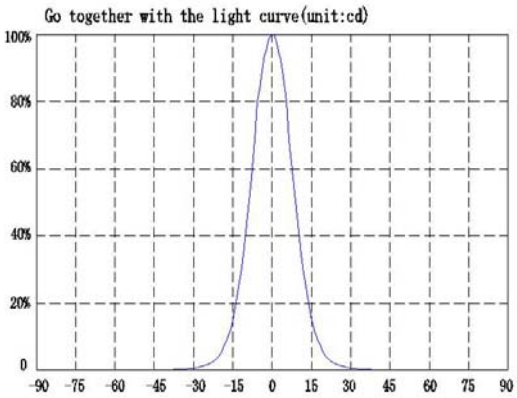
*Edixeon® single white LED:EDEW-KLC8

LL03ED-BA30L

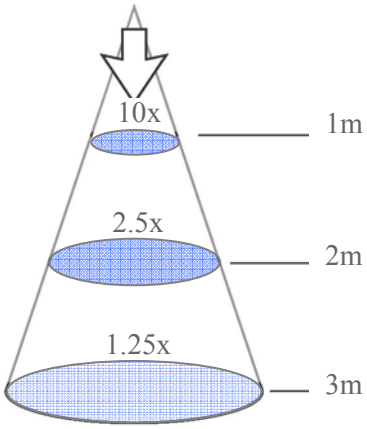
1. Beam Pattern



2. Angular Intensity Distribution

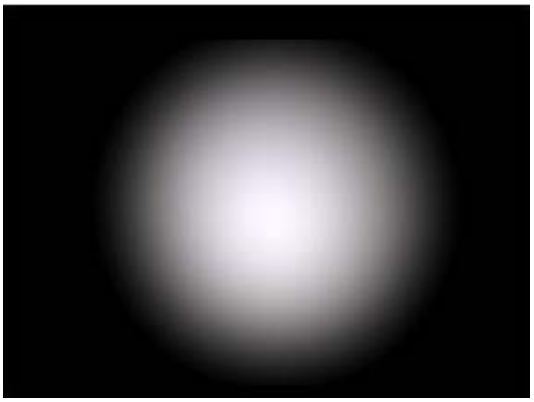


3. Shine on one degree diagram

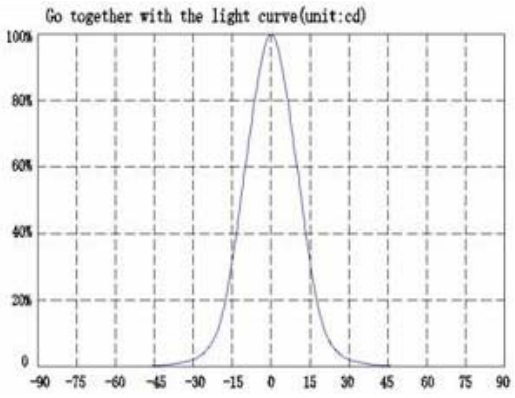


LL03ED-BA45L

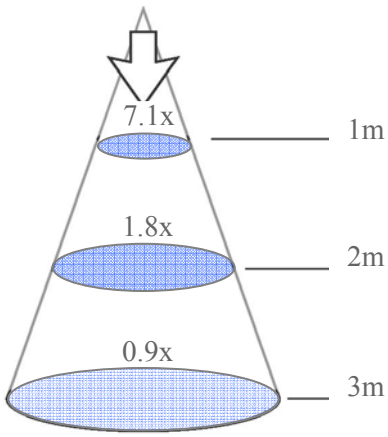
1. Beam Pattern



2. Angular Intensity Distribution



3. Shine on one degree diagram

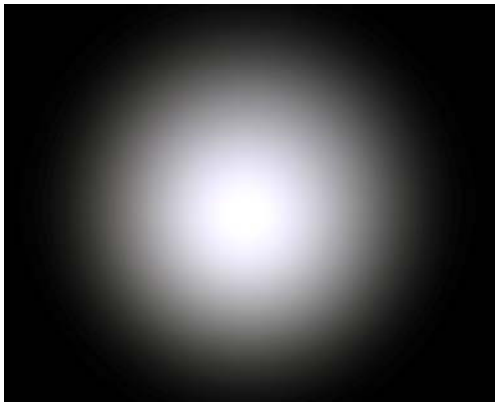


Illumination charts

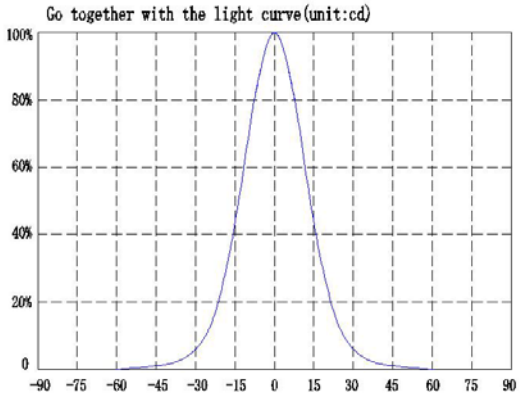
*Edixeon® single white LED:EDEW-KLC8

LL03ED-BA60L

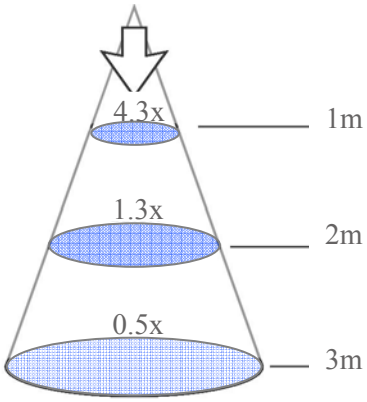
1. Beam Pattern



2. Angular Intensity Distribution



3. Shine on one degree diagram

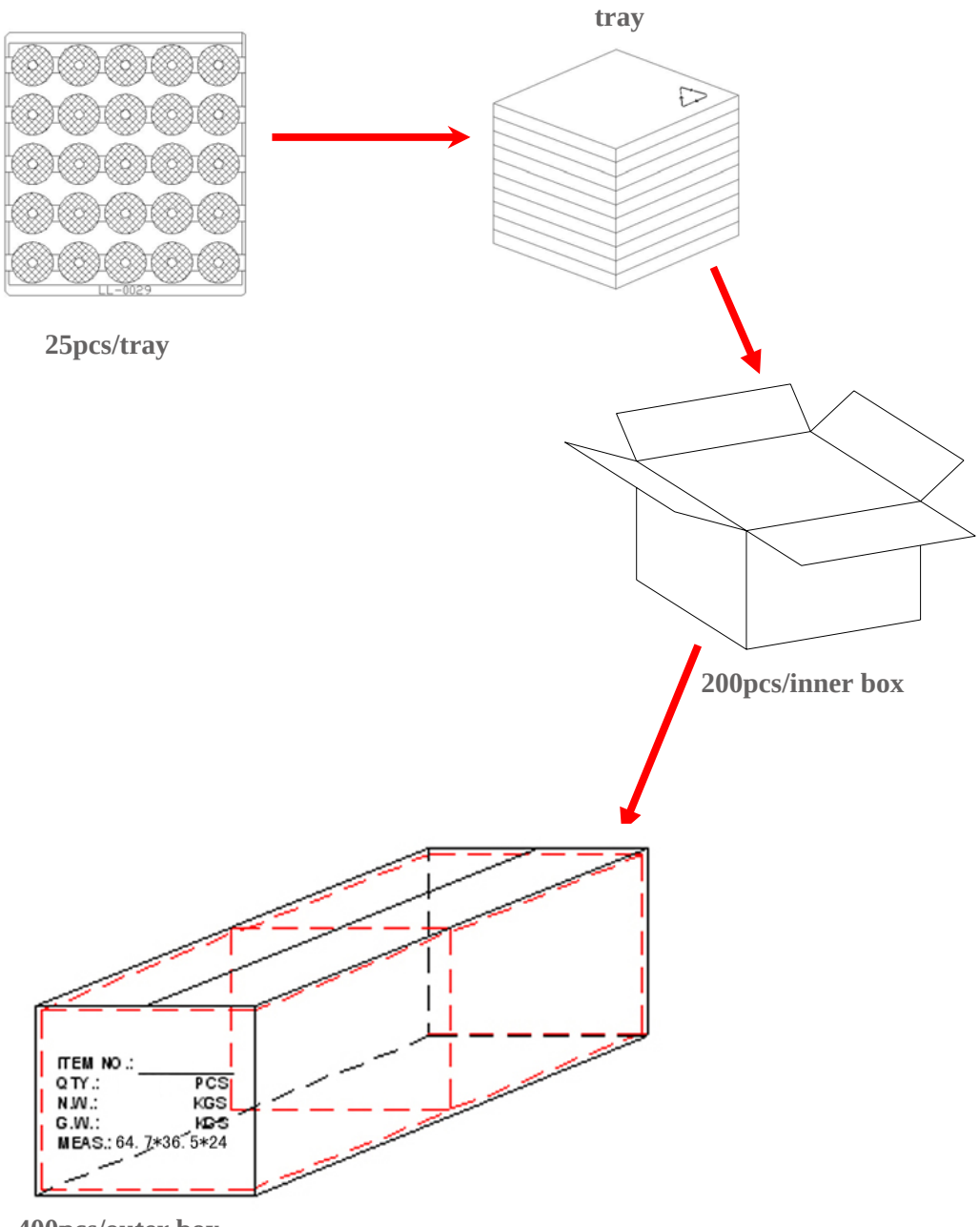


1. Beam Pattern

2. Angular Intensity Distribution

Package

Item	Quantity	Total	Size (long * width * high)
Tray	25	25 pcs	34*30*3.5 cm
Inner box	8tray/box	200pcs	35*31*21 cm
Outer box	2 inner box/outer box	400pcs	64.7*36.5*24 cm



400pcs/outer box

Product Nomenclature