

Backlighting Lens Series Datasheet

Lenses for OSRAM Golden Dragon Plus LEDs

FL-54



CONTENT:

1. General Characteristics	2
2. Optical Characteristics	3
3. Mechanical Specifications	5
4. Assembly Instruction	6

Rev.	Date	Description	Author
V01	2010/10/26	New SPEC release	Maha

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General Characteristics

1. Designed for OSRAM Golden Dragon Plus LEDs

This datasheet provides information about the FL-54 when used on OSRAM Golden Dragon Plus LEDs.



Golden Dragon Plus is trademarks of OSRAM. For technical specification on LEDs please refer to Golden Dragon Plus datasheet or visit

<http://catalog.osram-os.com/catalogue/catalogue.do;jsessionid=82451EDA4D2272CBFD8E6CDCA6946522?act=showBookmark&favOid=000000030000ad4f037c0023>.

Typical beam divergence may change with different color LEDs.

2. Lens Material

Optical Grade PC

Operating Temperature range: -30 C° / +70 C°

Storage Temperature range: -30 C° / +70 C°

3. Typical Applications

1. Decorative and entertainment lighting
2. Signal and symbol luminaries for orientation
3. Indoor lighting
4. Special backlighting

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Optical Characteristics

1. Beam Angle :

Lens Part Number	GD+
FL-54	137.5

The typical divergence varies with LED color due to different 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.

2. On-Axis Intensity :(Lux)

Lens Part Number	GD+
FL-54	25.88

1. The high collection efficiency reaches **88%** of the total flux emitted by the LEDs.
2. Luminous intensity depends on the flux binning and tolerances of the LEDs. Please refer to the **OSRAM Golden Dragon Plus** LED datasheet for more details on flux ranking and mechanical tolerances.

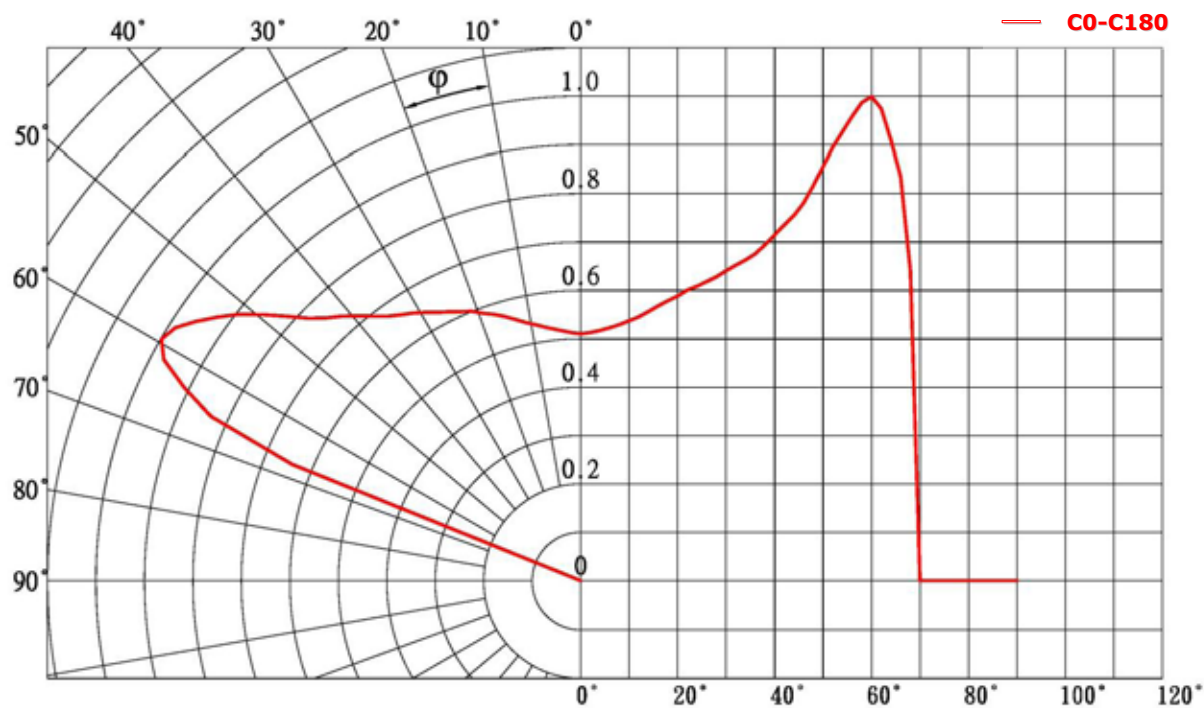
3. Spatial Radiation Pattern

Simulation using Golden Dragon Plus of OSRAM and compatible LED:

$$I_{\text{rel}} = f(\varphi)$$

I_{rel} : Relative Intensity

Φ : Angular Displacement



FL-54

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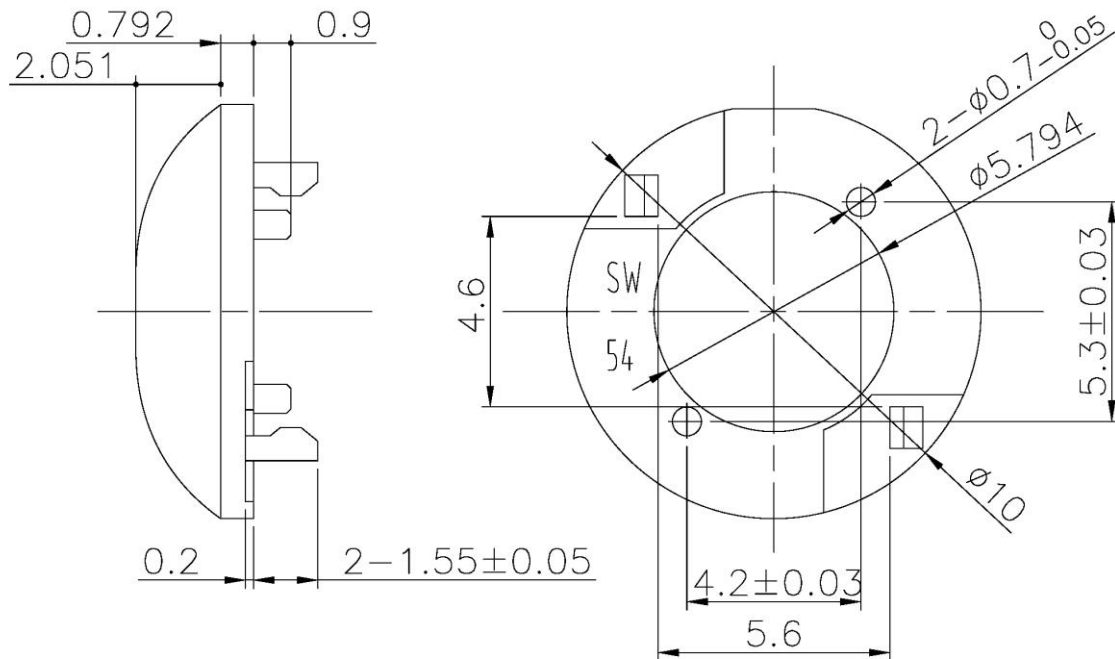
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Mechanical Specifications

Lens dimensions and Top Views:



FL-54

Note:

1. Unit measurement: mm
2. General tolerance: $\pm 0.2\text{mm}$
3. Protruding of the gate from the side surface: less than 0.3mm.
4. Please handle or install lenses with gloves, skin oils may damage lens or its optical characteristic.

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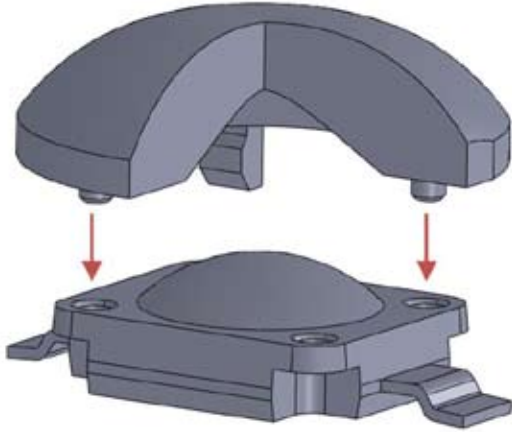
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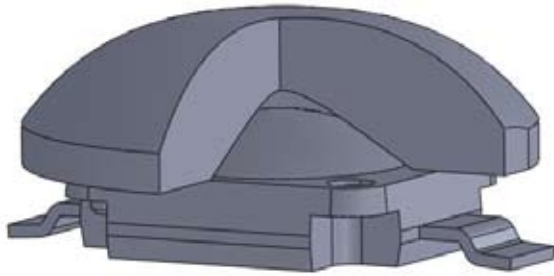
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Assembly Instruction

Lens + Leds + MCPCB



View assembly lens with MCPCB:



Notes:

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

- The lens with pins can be glued to the PCB to provide a secure assembly.
- Glue type recommended : EPOXY ADHESIVES (Ex : Loctite E30-CL or ThreeBond 1530C)

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