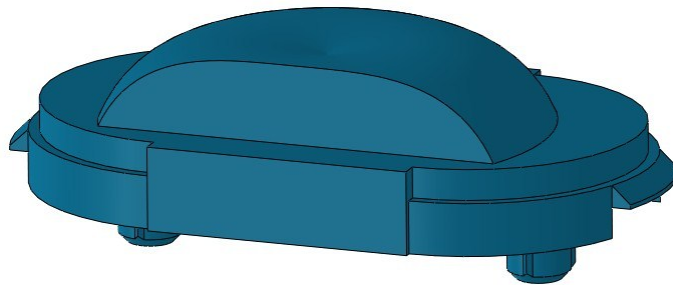


STREET LIGHTING Series Datasheet

Lenses for OSRAM Oslon SSL LEDs

FL-81



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General Characteristics

1. Designed for OSRAM OSLON SSL LEDs

This datasheet provides information about the FL-81 when used on OSRAM Oslon SSL.



Oslon SSL is a trademark of OSRAM. For technical specification on LEDs please refer to Oslon SSL datasheet or visit <http://catalog.osram-os.com>.

Typical beam divergence may change with different color of 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. Outdoor commercial and residential architectural lighting
4. Street lighting

Optical Characteristics

1. Beam Angle:

Lens Part Number	Oslon80 (1/2 power)
FL-81	143×50×38

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	Oslon80 (CENTER)	Oslon80 (X-MAX)	Oslon80 (Y-MAX)
FL-81	22.4	59.6	35.5

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 Oslon SSL** LED datasheet for more details on flux ranking and mechanical tolerances.

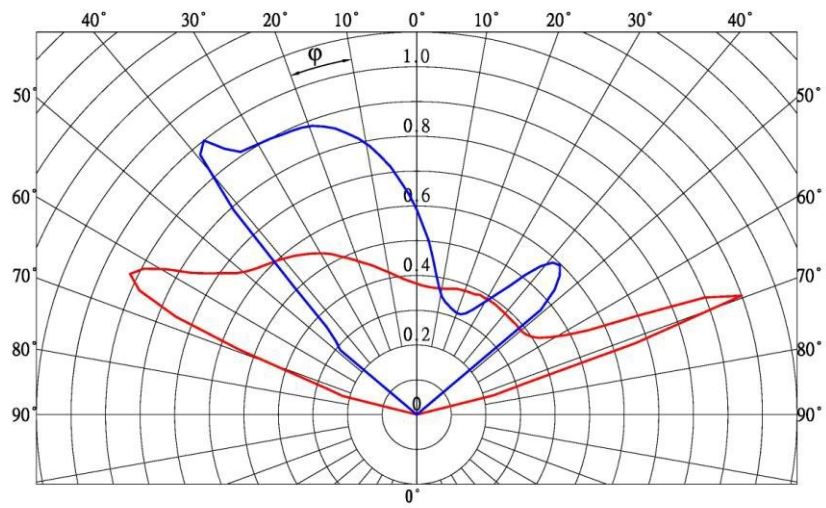
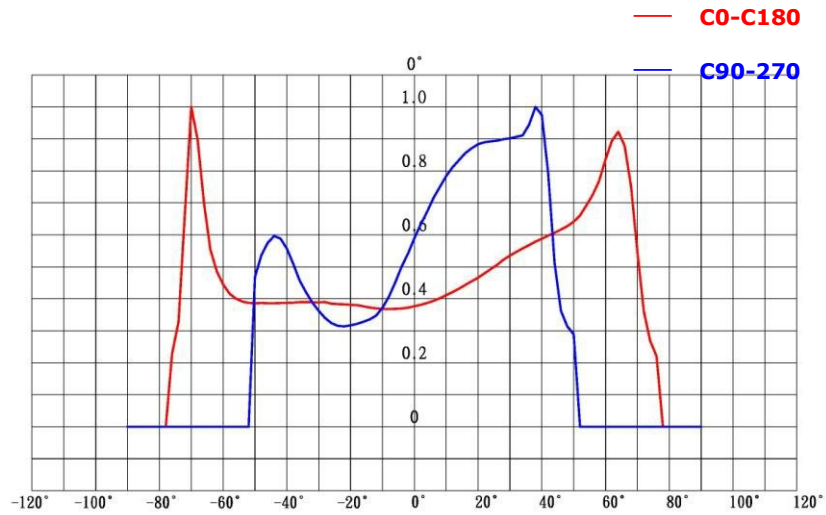
3. Spatial Radiation Pattern

Simulation using OSRAM of Oslon SSL and compatible LED :

$$I_{rel} = f(\Phi)$$

I_{rel} : Relative Intensity

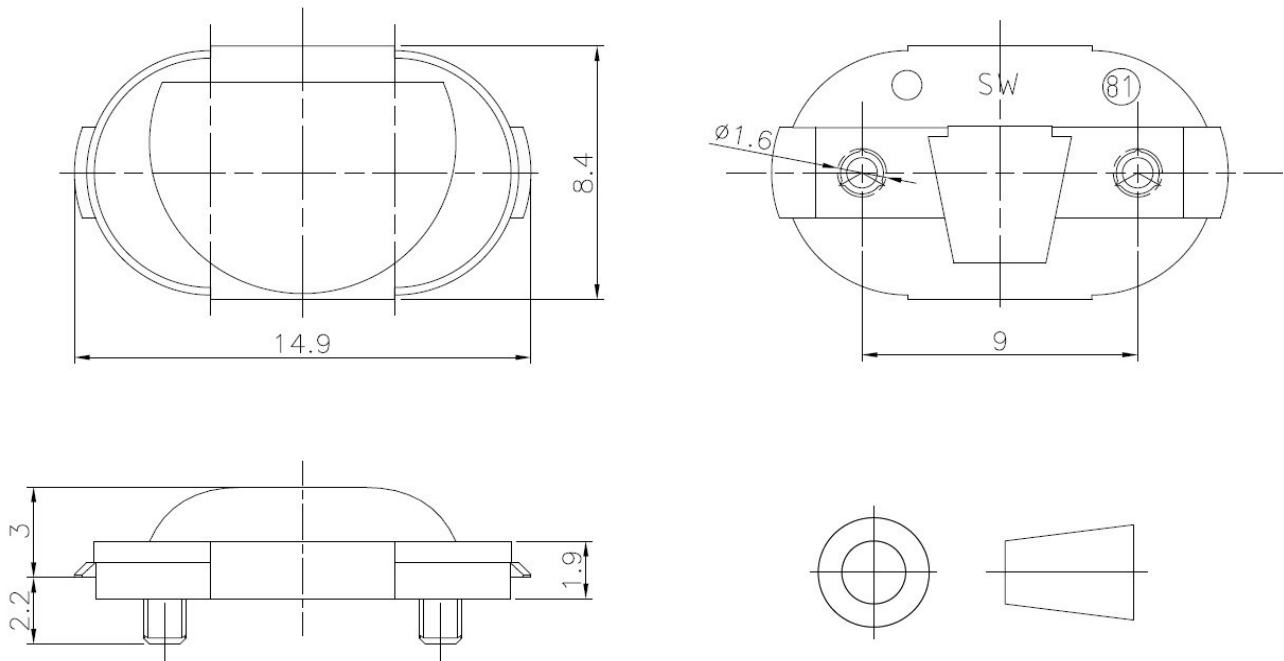
Φ : Angular Displacement



FL-81

Mechanical Specifications

Lens dimensions and Top Views:



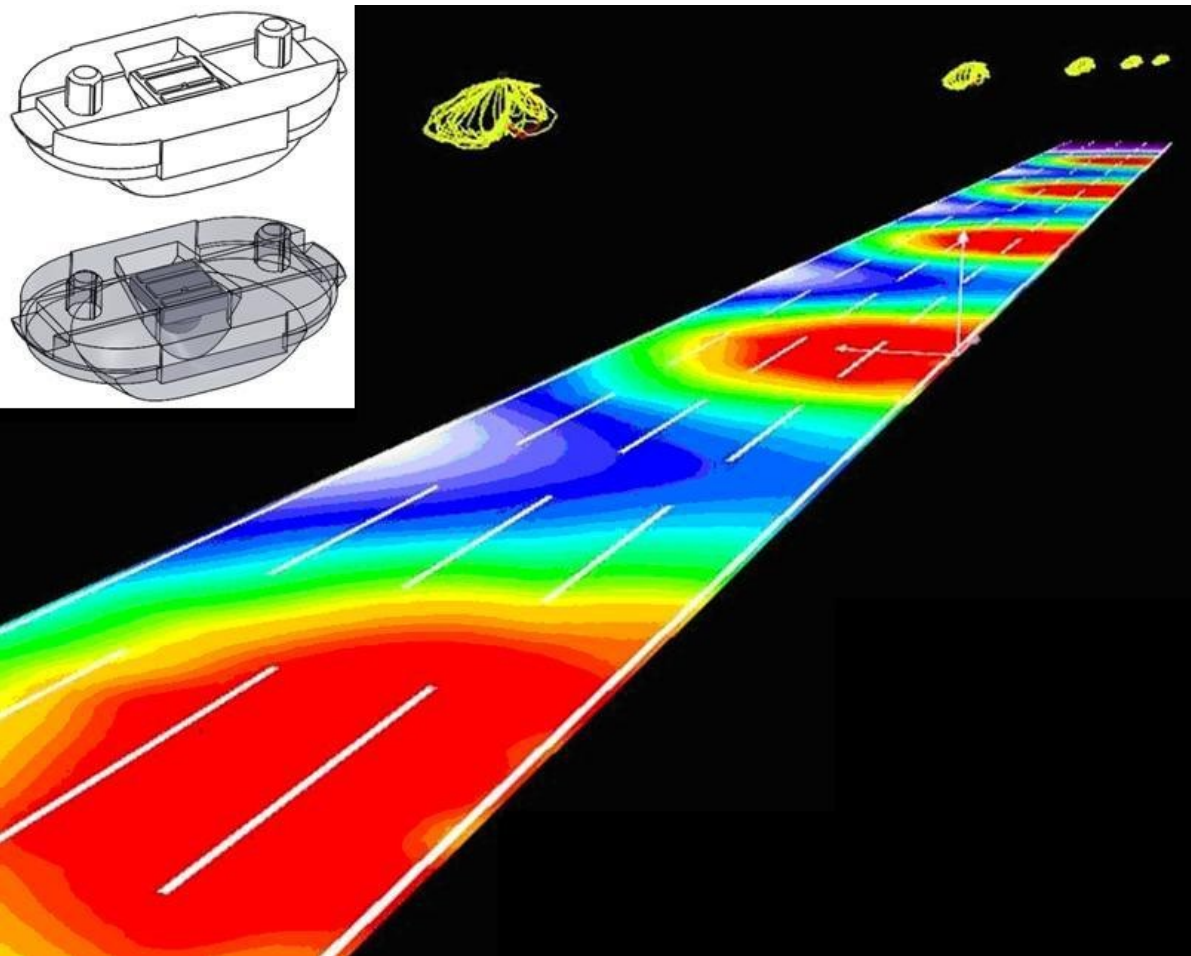
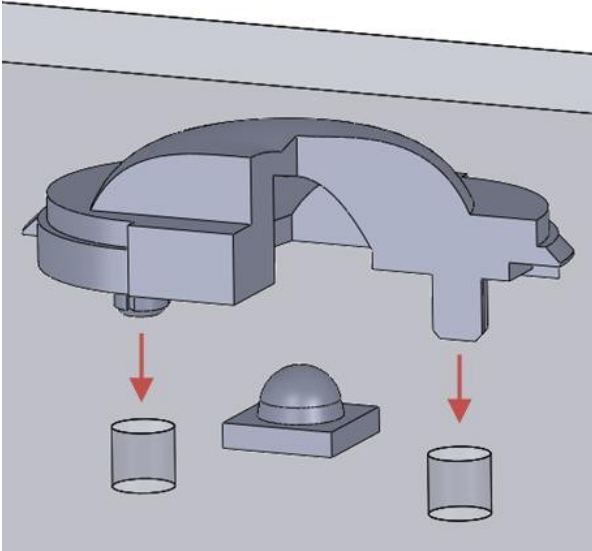
FL-81

Note:

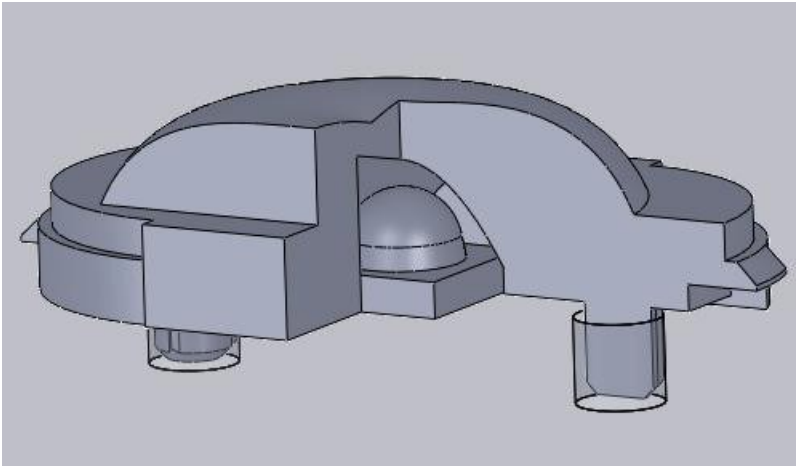
1. Unit measurement: mm
2. General tolerance: ± 0.2 mm
3. Protruding of the gate from the side surface: less than 0.3mm.
4. Please handle or install lenses with gloves, skin oils may damage lens or its optical characteristic.

Assembly Instructions

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 (eg: Loctite E30-CL or ThreeBond 1530C)