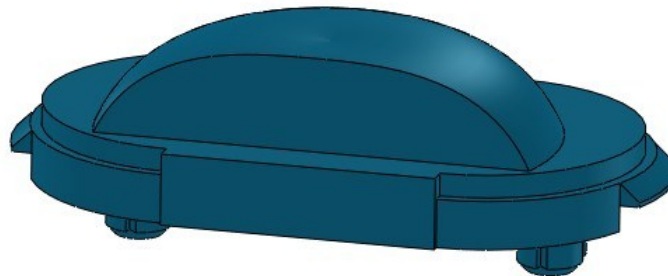


# ***STREET LIGHTING Series Datasheet***

## **Lenses for Lumileds Rebel and Rebel ES LEDs**

### **FL-80**



#### **CONTENT:**

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# General Characteristics

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## 1. Designed for LUMILEDS Rebel LEDs

This datasheet provides information about the FL-80 when used on Lumileds LUXEON® Rebel and Rebel ES LEDs.



LUXEON® Rebel is trademarks of Lumileds Lighting, LLC. For technical specification on LEDs please refer to the LUXEON® Rebel datasheet or visit

<http://www.philipslumileds.com/products/luxeon-rebel>.

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

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## 1. Beam Angles:

Lens Part Number	Rebel (1/2 power)	Rebel ES (1/2 power)
FL-80	134×58×34	145×65×35

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.

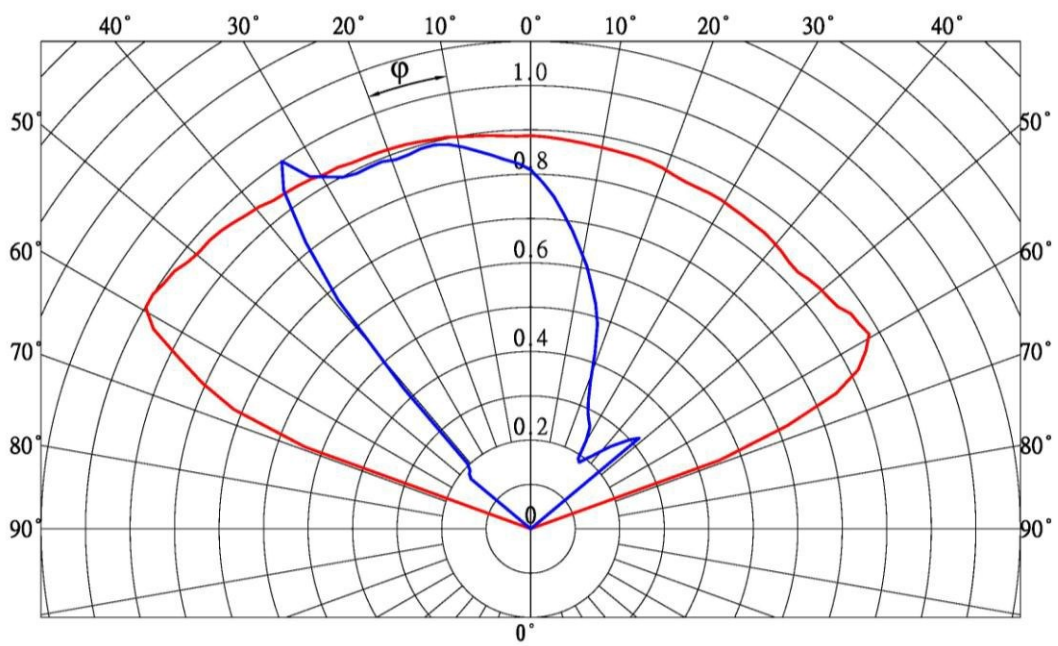
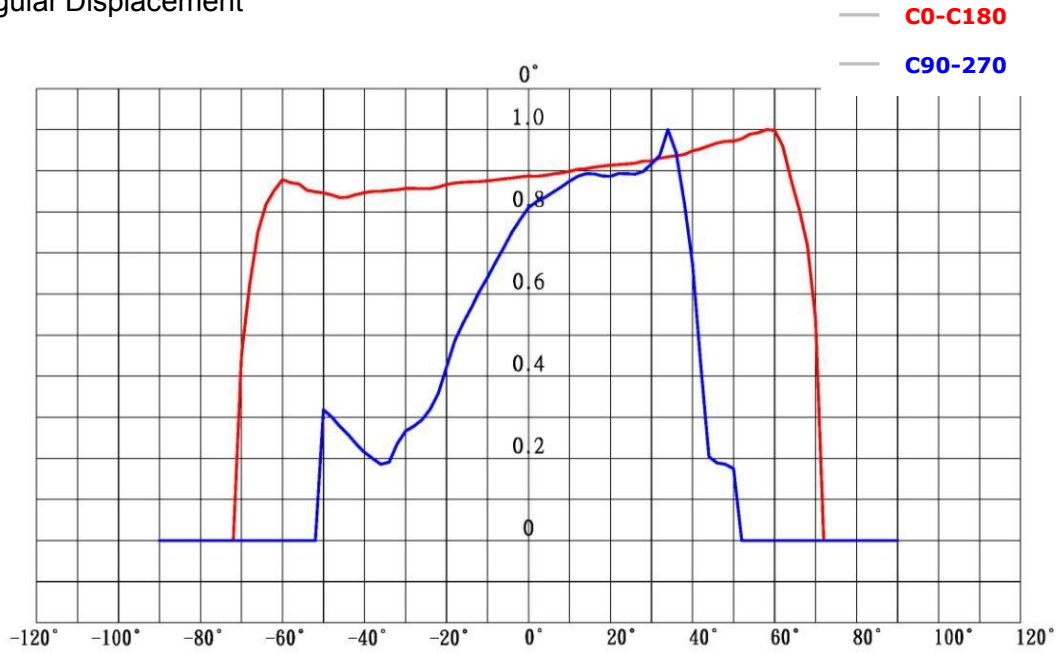
## 2. Spatial Radiation Pattern

Simulation using LUXEON Rebel and Rebel ES of PHILIPS LUMILEDS and compatible LEDs :

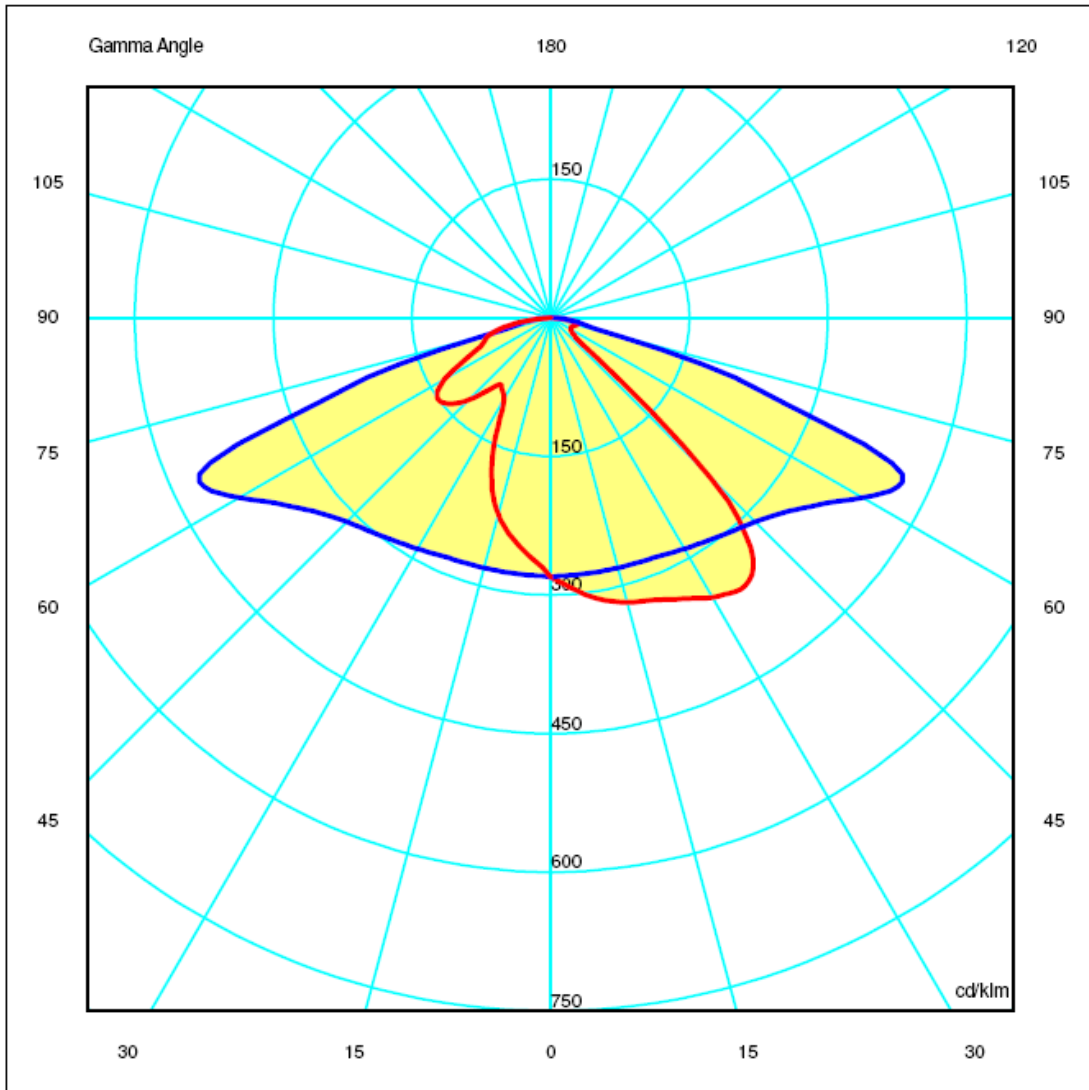
$$I_{rel} = f(\Phi)$$

$I_{rel}$  : Relative Intensity

$\Phi$  : Angular Displacement



FL-80 Rebel

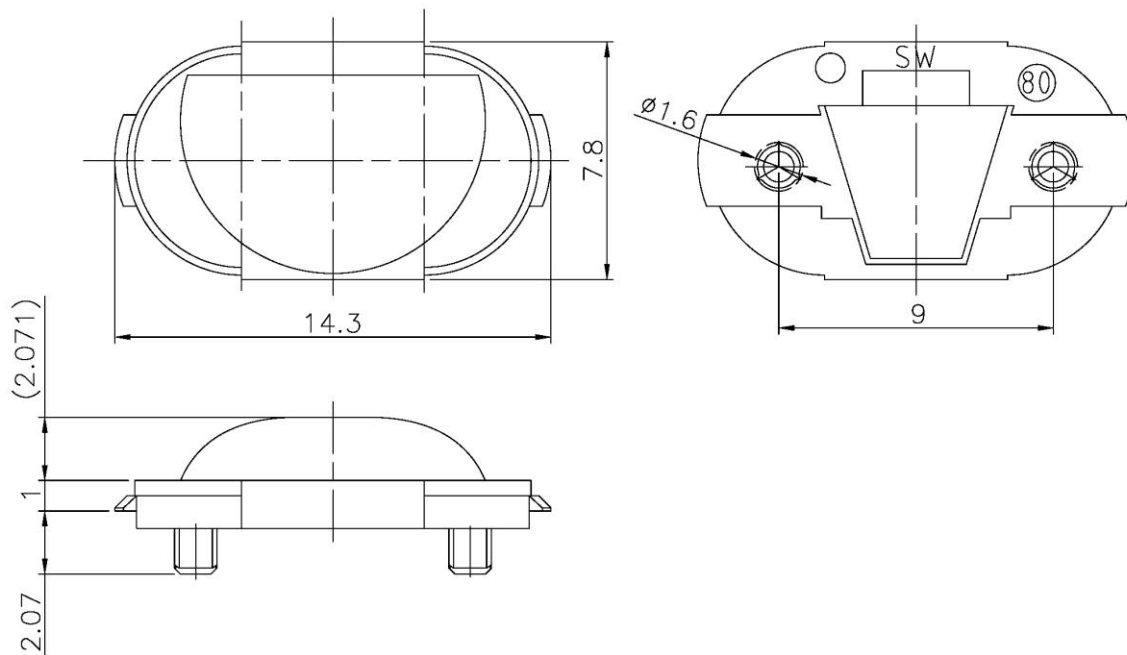


FL-80 Rebel ES

# Mechanical Specifications

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## Lens dimensions and Top Views:



FL-80

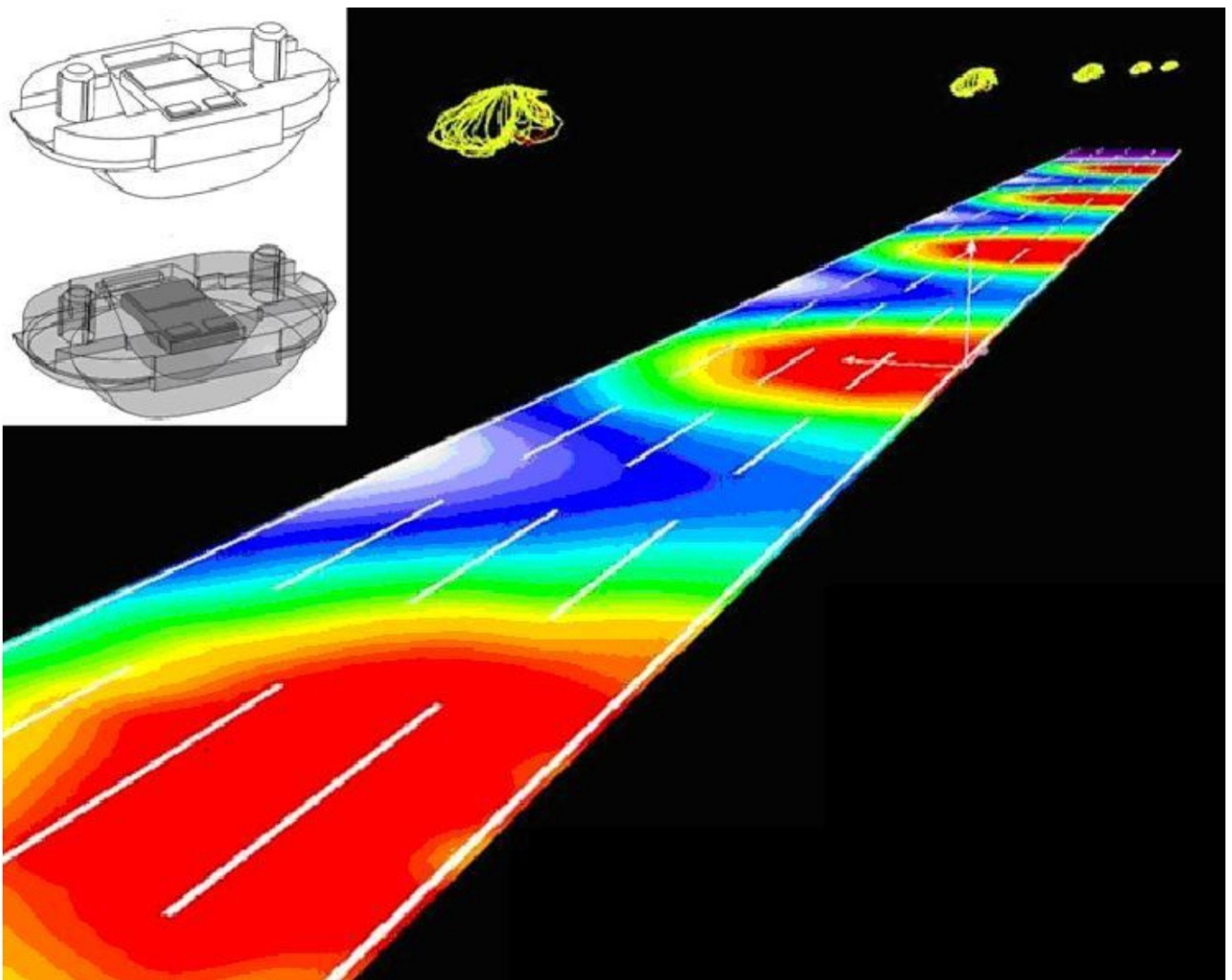
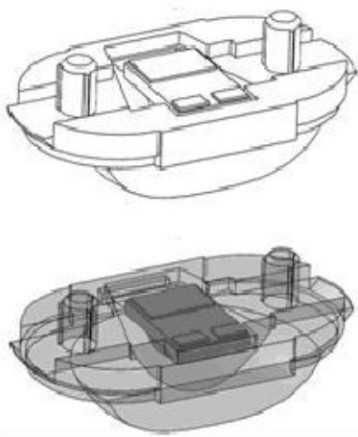
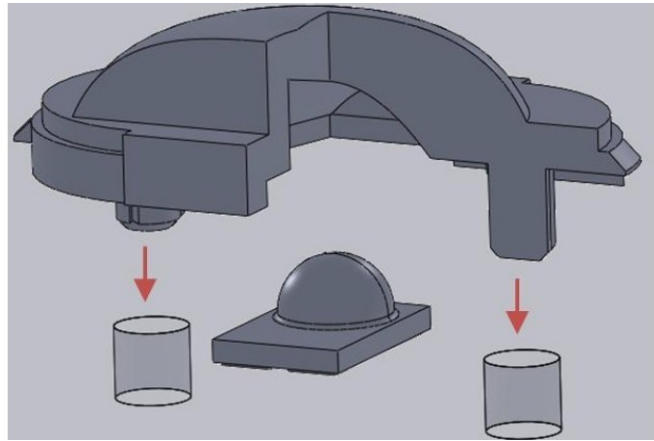
### Note:

1. Unit measurement: mm
2. General tolerance:  $\pm 0.2$ 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

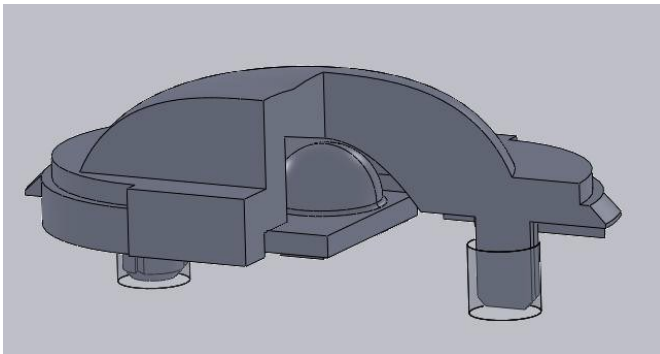
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## Lens + Leds + MCPCB



## View assembly lens with MCPCB:

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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)