

**Part No. 438**  
**Long Range 120° Sector EN54-23 Ceiling Optic Red**

Designed for long range coverage meeting EN54 Part 23 requirements for a ceiling mounted Visual Alarm Device (VAD) positioned at a height of 3m. Three of these optics mounted around the base of a VAD can be used to efficiently illuminate areas from 12m to 16m in diameter.

Three of these optics would typically be mounted as shown below:



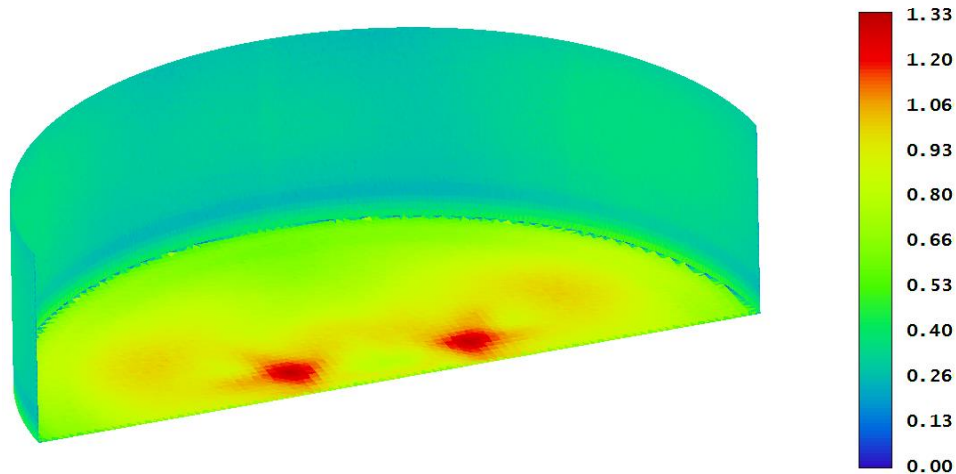
- **Designed for Warm White 2700K Cree XM-L2 and Luxeon TX LEDs.**
- **Rating vs effective LED output required:**

<b>C-3-10</b>	<b>72 lumens</b>
<b>C-3-12</b>	<b>90 lumens</b>
<b>C-3-14</b>	<b>115 lumens</b>
<b>C-3-16</b>	<b>140 lumens</b>
- **Light transmission efficiency of 44%**
- **Precision moulded in optical grade Polycarbonate meeting the V-2 flammability requirement of EN54-23.**

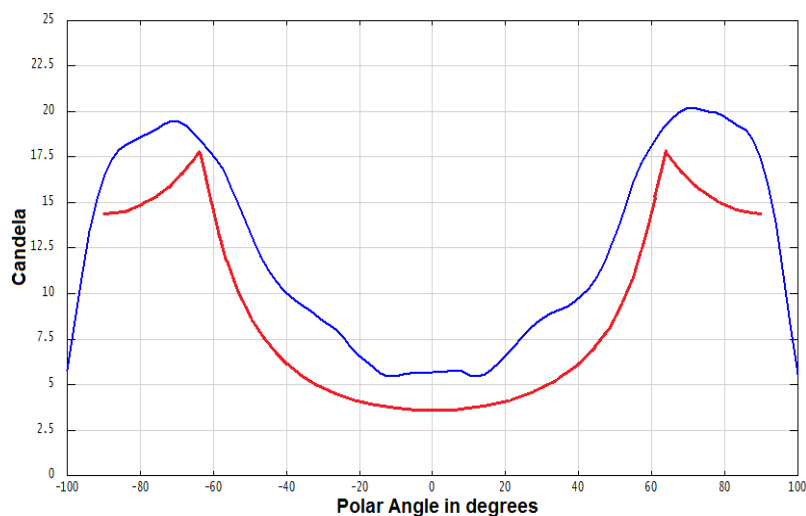
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The plot below shows the variation in flux level at the boundary of a 3m high, 15m diameter cylinder as specified by EN54-23 when illuminated using x3 Warm White 2700K Cree XM-L2 LEDs each emitting 90 effective lumens. (Note: EN54-23 specifies that the flux values are to be measured on a surface facing the source at the boundary.)



The graph below shows the optic output, (shown in blue) compared with the minimum 0.4 Lux level for C-3-15 compliance converted to candela values, (shown in red) from x3 x3 Warm White 2700K Cree XM-L2 LEDs each with an effective output of 90 lumens. (Note: To determine the peak lumens required to generate 90 effective lumens refer to Appendix A of EN54-23.)

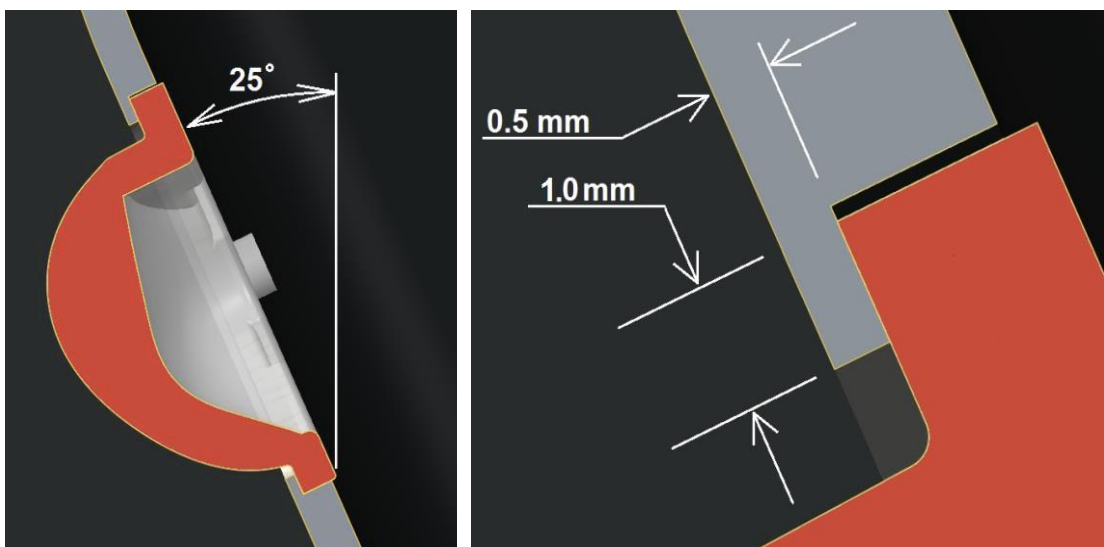


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The picture below is a 3D interactive model of the part. Click to activate.

The optic is located on the PCB using a diamond dowel inserted in to a 2.5mm diameter hole and a peg in to a 3mm diameter hole. The distance between the two hole centres required is 20mm. (See dimensional drawing overleaf).

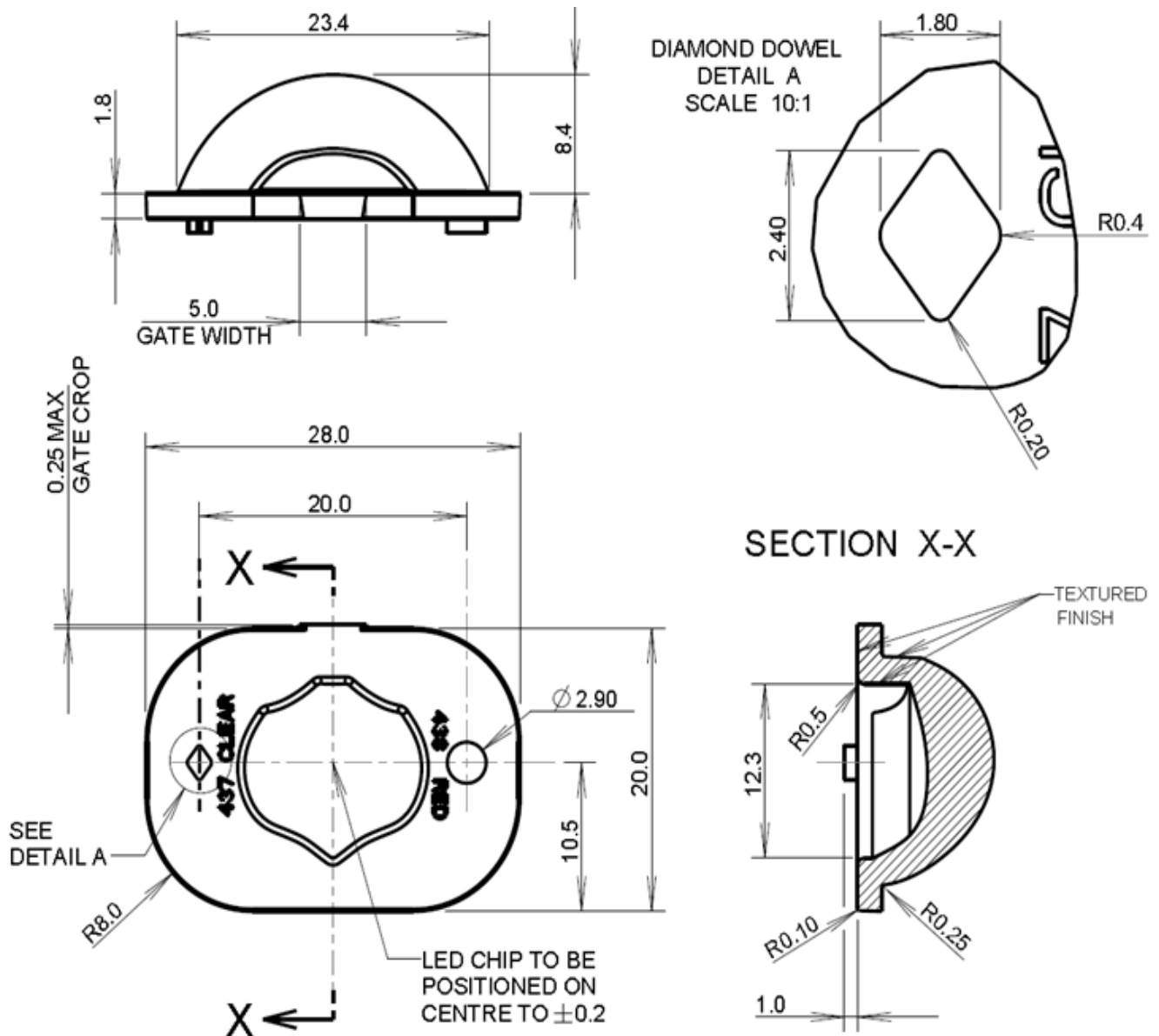
The optic is designed to be mounted at an angle of 25° to the vertical with the gate vestige facing upwards. The maximum size of the lip of a retaining cover placed over the optic is shown below:





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Typical dimensional tolerances to  
+/-0.2mm



In order to determine if the particular beam properties and performance of this optic are suitable for your application POL suggests that you obtain samples from POL or their distributors for your own product testing.

Due to continuous product improvement, POL reserve the right to change specifications without notice.