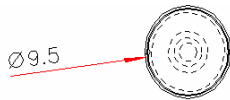
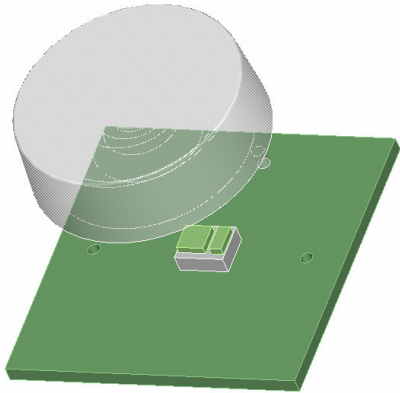


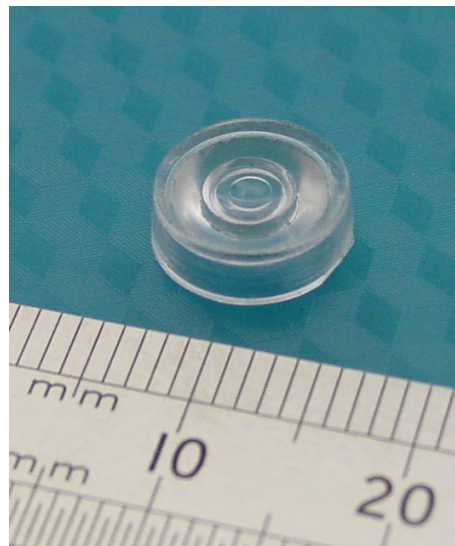
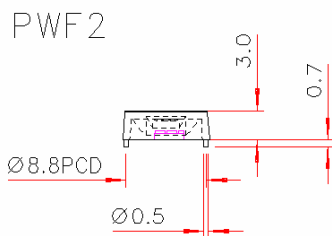
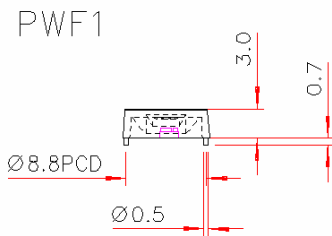
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LED Camera Flash Optic - Part No. 137

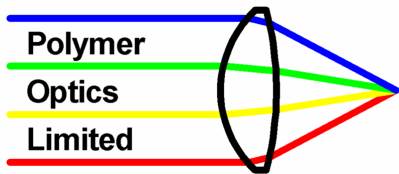


- Designed for LUXEON® PWF LED's
- High light collection efficiency and angular control
- Suitable for both Flash and Camcorder type applications
- Precision moulded in optical grade Polycarbonate for thermal stability and system durability
- Alternatively can be supplied in PMMA for improved scratch resistance of the window
- Can be used as the external window of the flash device and can be hard-coated to customer requirements.
- Can be In-Mould Decorated (IMD) to customer requirements.
- Part of the Polymer Optics "Modular LED Optics"® range



Typical dimensional tolerances to +/-0.1mm

Ultra-compact optical design provides slim-line system solutions with LUXEON® PWF Flash LED types

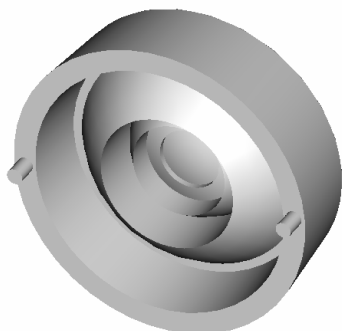


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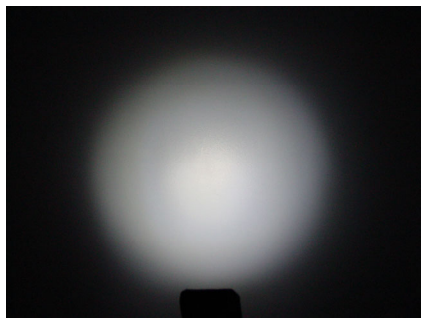
Polymer Optics Ltd.

Camera Flash Optic - Part No. 137 When Used With LUXEON® PWF1 LED

Flash Mode Operation (lux)

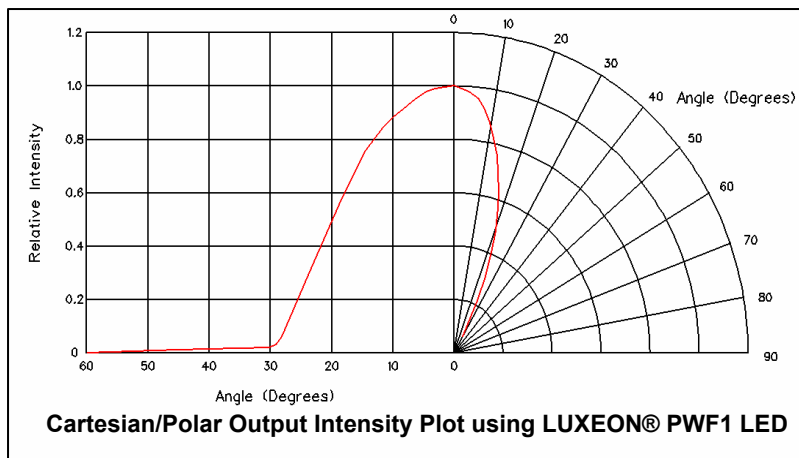


Current	0.5m	1.0m	2.0m
200mA	77	19	4
400mA	143	35	8
600mA	169	42	10
800mA	205	51	12
1000mA	253	63	15
1500mA	304	76	19
2000mA	358	89	22

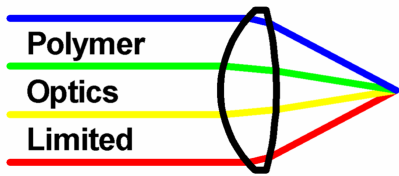


Camcorder/Torch Mode Operation (lux)

Current	0.5m	1.0m	2.0m
50mA	20	5	1
100mA	40	10	2
200mA	77	19	4
300mA	112	28	7
350mA	128	32	8



Performance values given are typical values and will vary dependant on LED binning and drive profile



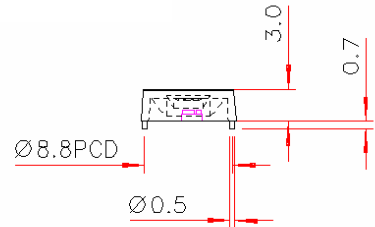
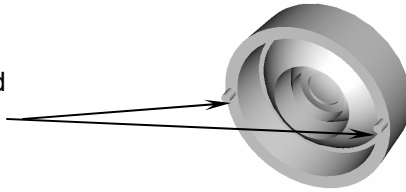
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Camera Flash Optic - Part No. 137 - Application Notes

Adhesive Assembly

Adhesive to be applied to pin areas to ensure good bond to PCB



**Component tolerances to +/-0.05mm.
LED emission area to be placed to +/-0.2mm
of 137 lens centre.**

To assemble the 137 lens to the PCB, POL recommend the use of Loctite 460 adhesive. It is intended that the adhesive is used to secure the 137 lens to the PCB, to form a sub-assembly, but the 137 lens should be fully secured in the final product assembly in relation to the PCB via the A and B case features.

Loctite 460 adhesive is a low bloom, low odour cyano-acrylate adhesive which has been specially developed for bonding clear plastics without leaving cloudy deposits on the optical finishes and has low vapour emission. Please refer to Loctite specification and H&S data sheets for the correct usage of this adhesive product (www.loctite.com)

Mechanical Assembly

The 137 lens can be mechanically assembled by press fitting the lens into a suitable aperture in the first case component. The PCB/FlexCB can then be assembled over the two location pins on the 137 lens to ensure correct location of the LED and the assembly supported by the positioning of the second case part or other internal components/features.

Schematic Assembly



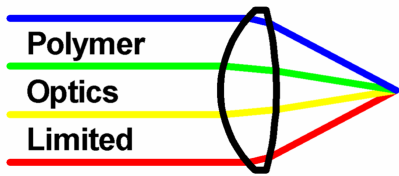
137 Lens is push fit assembled into front case using interference of 5 degree draft angles



Flex-PCB is assembled and located over pins



Second case is assembled with features to retain flex and 137 Lens



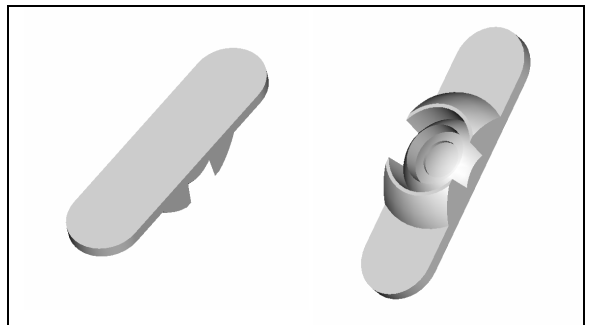
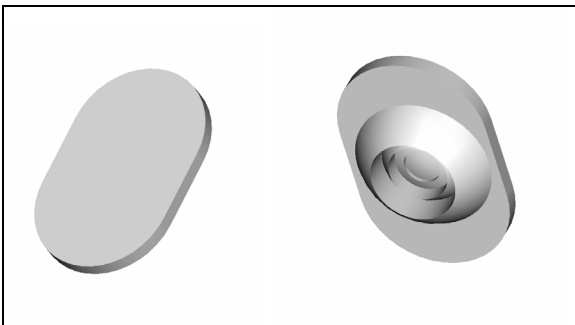
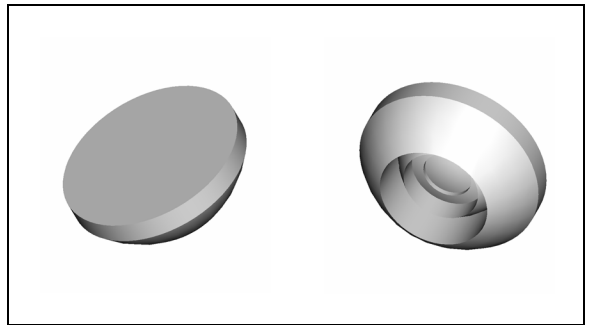
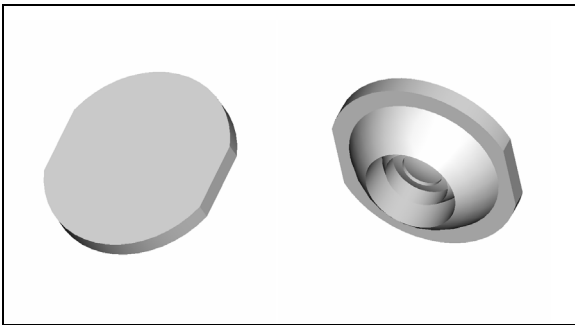
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Camera Flash Optic - Part No. 137

Alternative Flange Designs



Using POL's in depth knowledge and expertise in optical design and tooling construction, a wide range of alternative optical configurations and flange designs can be produced to suit particular mounting and assembly requirements.

The designs shown here are NOT available as stock items, but illustrate some examples of possible custom designs that can be made, based on POL's generic Flash Optic design.