

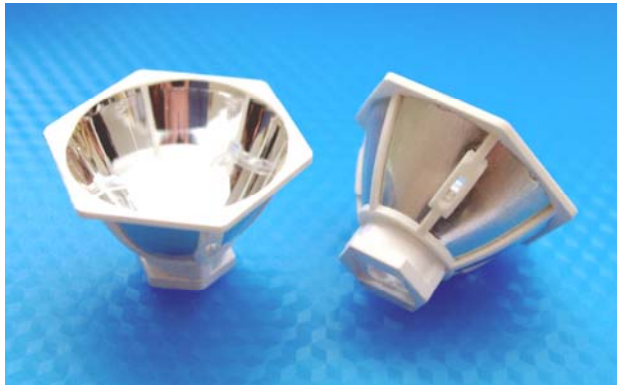


*Our Focus is in Plastics*

**Polymer Optics Ltd.**

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Tel/Fax: +44 (0) 1189 893341  
[www.polymer-optics.co.uk](http://www.polymer-optics.co.uk)

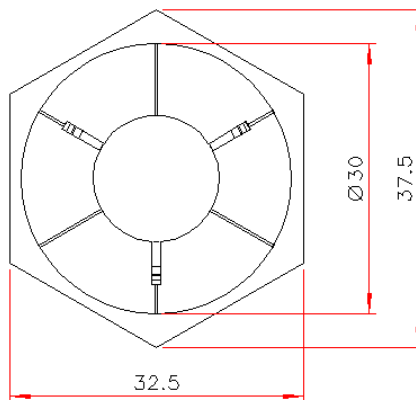
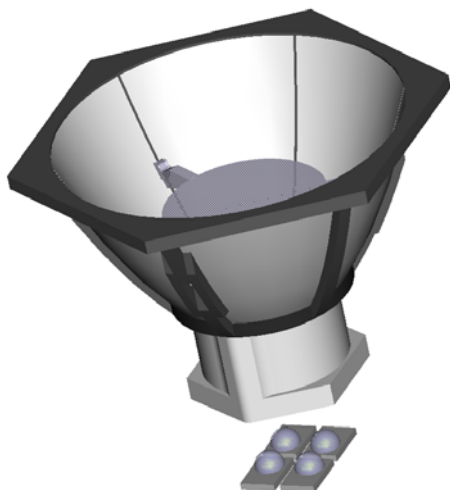
### **30mm Colour Mixer Reflector for Rebel LEDs - Part No. 230**



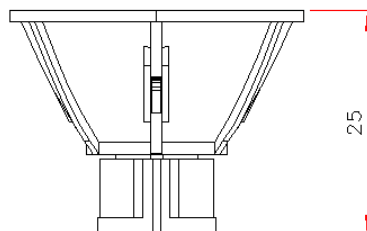
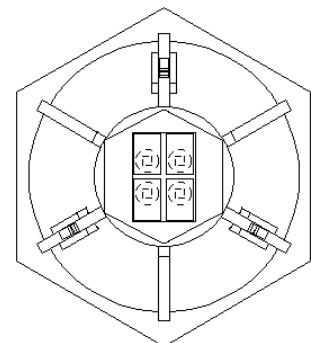
- Designed for colour mixing with up to four LUXEON® Rebel LEDs in any mix of colours and white colour temperatures
- Colour mixing chamber design provides uniform beam colour, which with the output reflector optic, provides a narrow colour mixed beam
- Narrow beam angle of 5 degrees half angle, 10 degrees FWHM (full width half maximum intensity)
- Optical efficiency of >60%

Precision moulded using POL's patent applied for metallised optical insert moulding technique with a polycarbonate frame construction for superior mechanical and thermal stability

Polymer Optics "Modular LED Optics"® design, based on a hexagonal format, allows maximum packing density and assembly flexibility. Arrays of Colour Mixer Reflector optics can be easily constructed to produce high power luminaire designs



SCRAP VIEW SHOWING LED LAYOUT  
ORIENTATION TO REFLECTOR SHAPE



Typical dimensional tolerances to  
+/-0.2mm





**Polymer  
Optics  
Limited**

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### **30mm Colour Mixer Reflector for Rebel LEDs - Part No. 230**

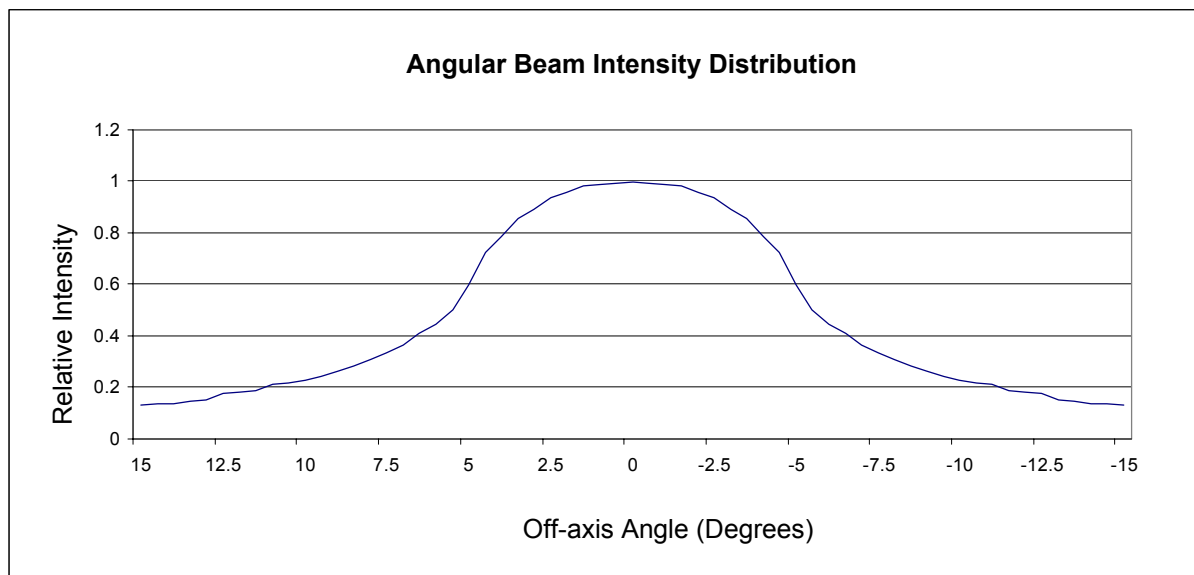
The perfect colour mixing achieved with the POL 230 optic allows an infinite range of illumination colours to be produced with a constant and stable beam geometry.

An additional advantage is that the appearance of the emitted light from the POL 230 optic is a uniform mixed colour too, removing the usual visible spots of RGB seen in other colour mixing products.



The POL 230 optic's narrow, high intensity beam is ideal for demanding applications, such as:

- ✓ Architectural spot lights
- ✓ Theatrical lights and follow-spots
- ✓ Forensic torches
- ✓ Medical lighting applications



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



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### 30mm Colour Mixer Reflector for Rebel LEDs - Part No. 230



Green



Red



Amber



Cool White

The example system shown here was constructed with Red, Green, Amber and Cool White LUXEON® Rebel LEDs. With this simple mix of colours, a vast range of mixed colours and controlled correlated colour temperature (CCT) whites can be mixed. Some examples of the mixed colours are shown below.



Green/White



Green/Red



White/Green



Amber/White



Red/White



Red/Amber



Cool White



Neutral White



Warm White

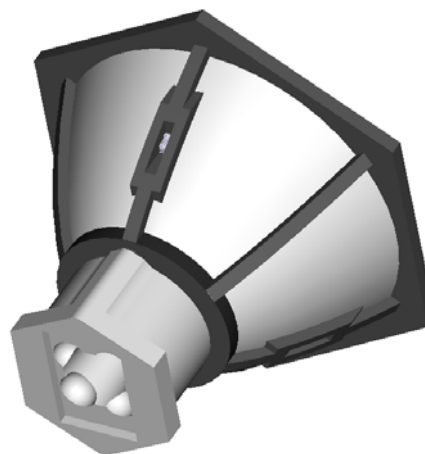
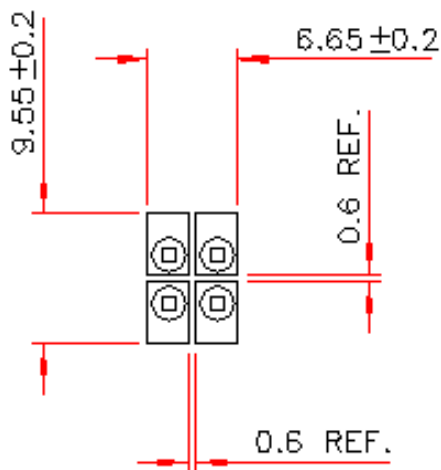


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### **30mm Colour Mixer Reflector for Rebel LEDs - Part No. 230**



The LUXEON® Rebel LEDs should be populated on the PCB, as shown in the above diagram, in order to fit the recess in the bottom of the 230 optic, which locates over the populated LEDs and is simple adhered to the PCB using a small amount of Loctite 460 cyano-acrylate adhesive.

The LEDs can be populated in any number, up to four emitters and in any combination of colours to achieve the desired system range of colours (colour gamut) and tune ability to suit the target application.