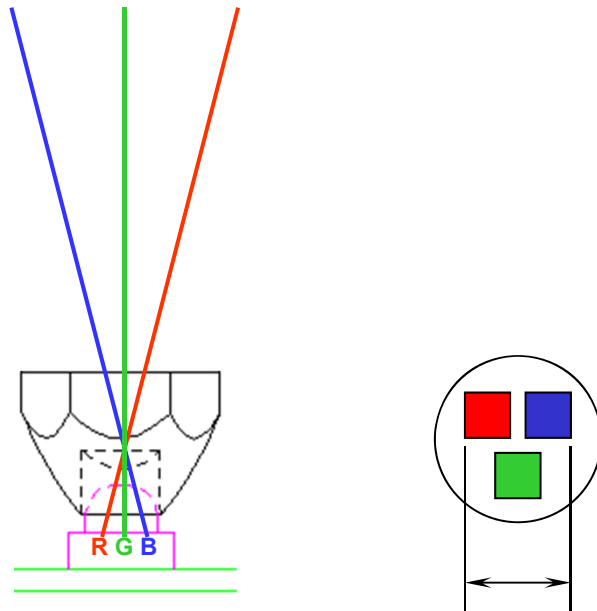


POL LED Colour Mixing Technology



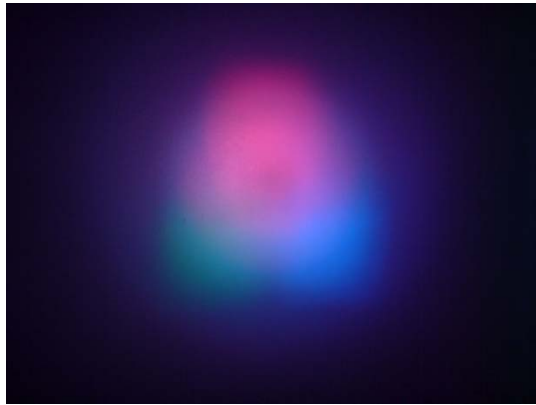
A number of multi-die RGB LEDs have emerged onto the market



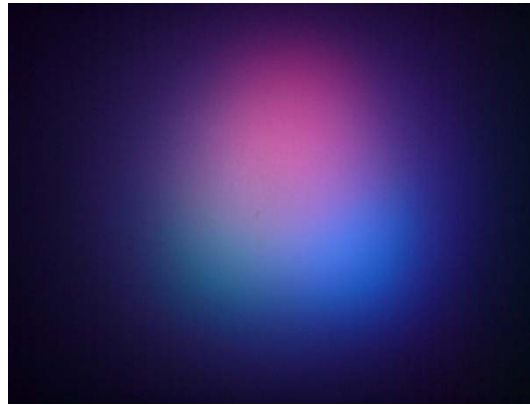
Problem!

The separation of the dies produces angular separation of each colour through an optic

Although the beams will diverge and overlap with distance, considerable colour separation will be seen around the edges of the core beam



Standard TIR Optic



Diffuse TIR Optic

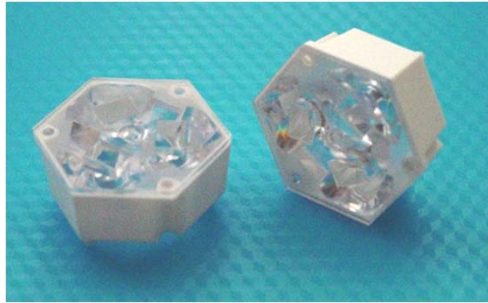


Wide angle TIR Optic

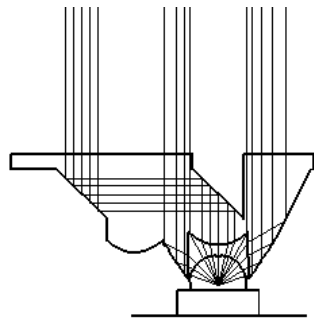
Better colour mixing can be achieved by adding diffuse surfaces to the optic or using a separate diffuser film.
Or, by spreading the beam to a wider angle, so the colours overlap and give better mixing.

But ... the wider more diffuse beam is not so useful if a narrow spot light beam is required.

POL Standard RGB Colour Mixer



Compact POL Colour Mixer Optic



POL's Colour Mixer Optic uses a patented prismatic technique to mix the LED colours inside the optic, while maintaining a narrow beam



RGB White



Red



Green



Blue



Red/Blue

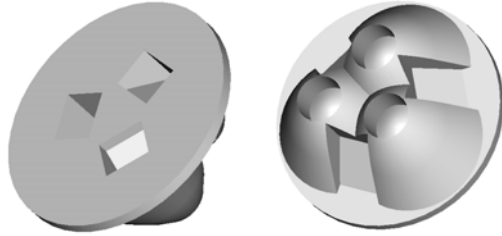


Green/Blue

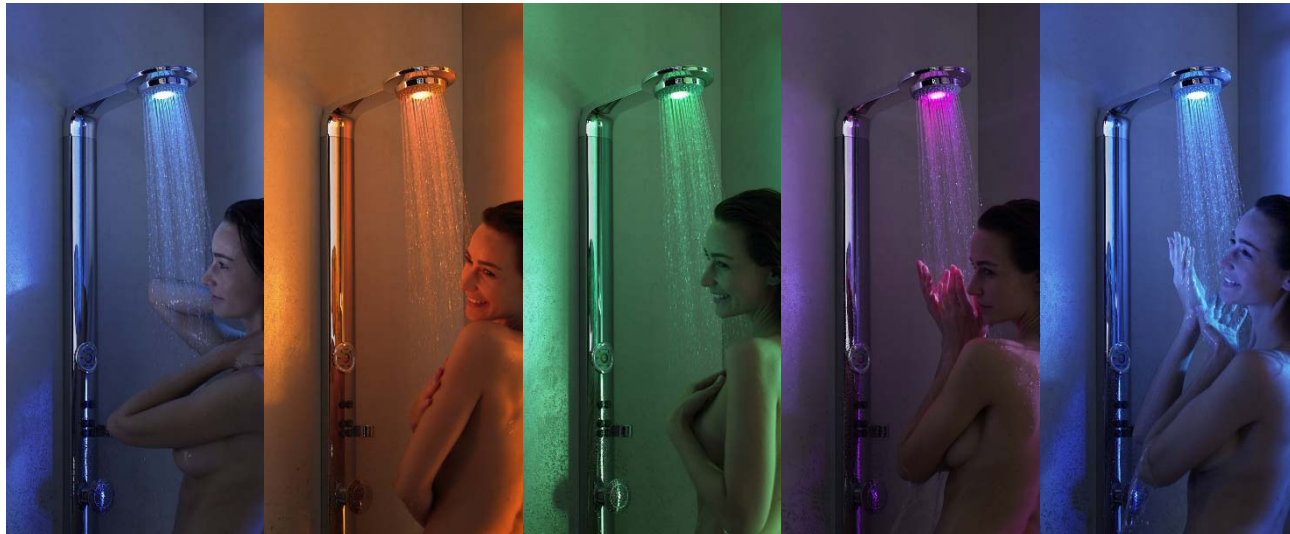


Red/Green

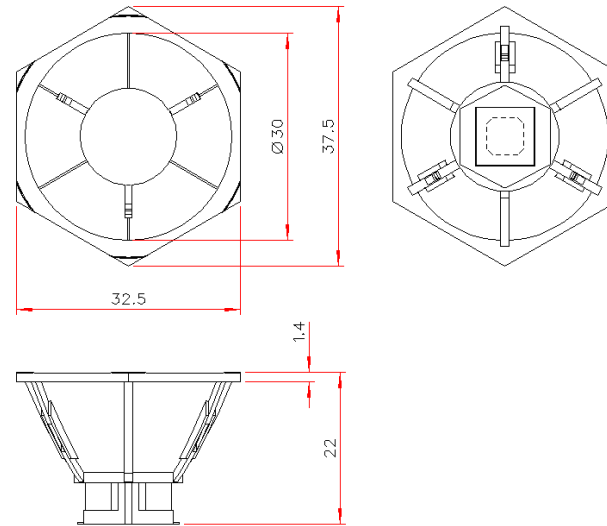
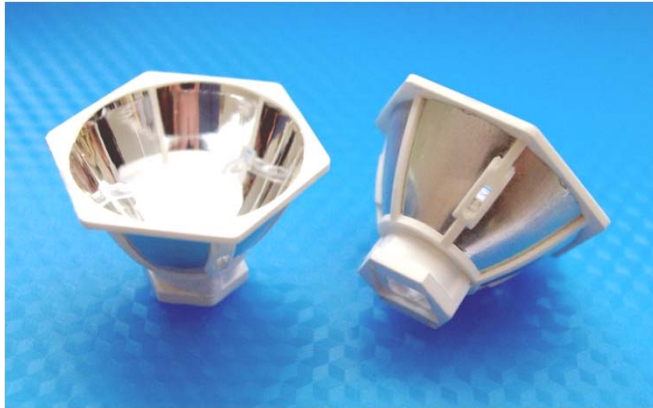
POL Standard RGB Colour Mixer



RGB Shower Optic for Hansa, GmbH



POL Colour Mixer Reflector Optics

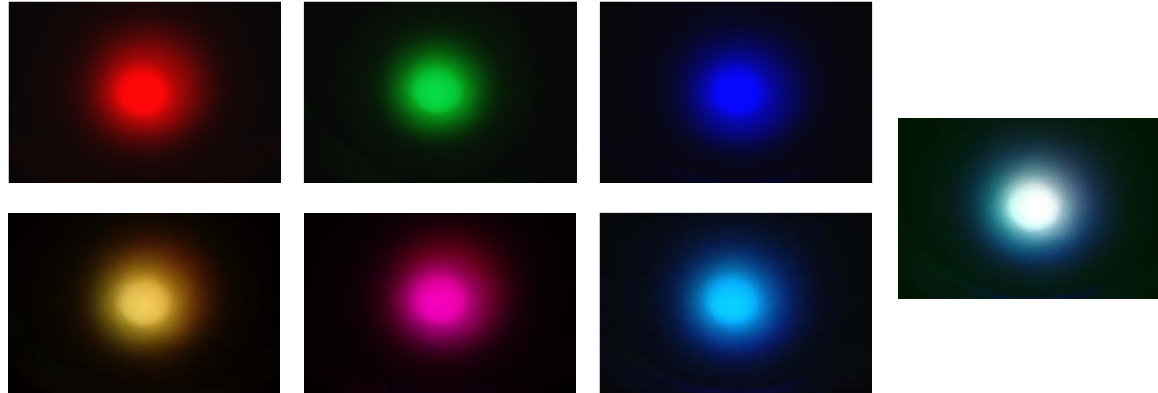


Based on POL's Hybrid Reflector Optic technology, POL has developed a novel colour mixing technique to provide a perfect colour mixing with a narrow angle beam.

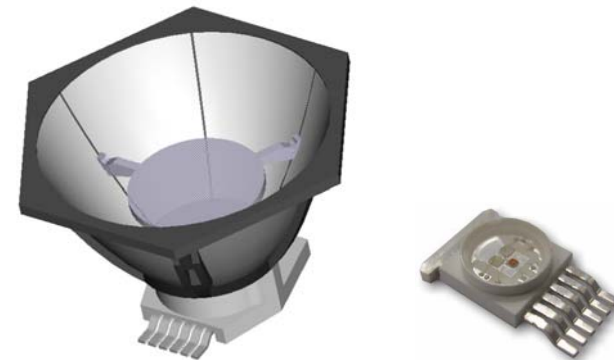
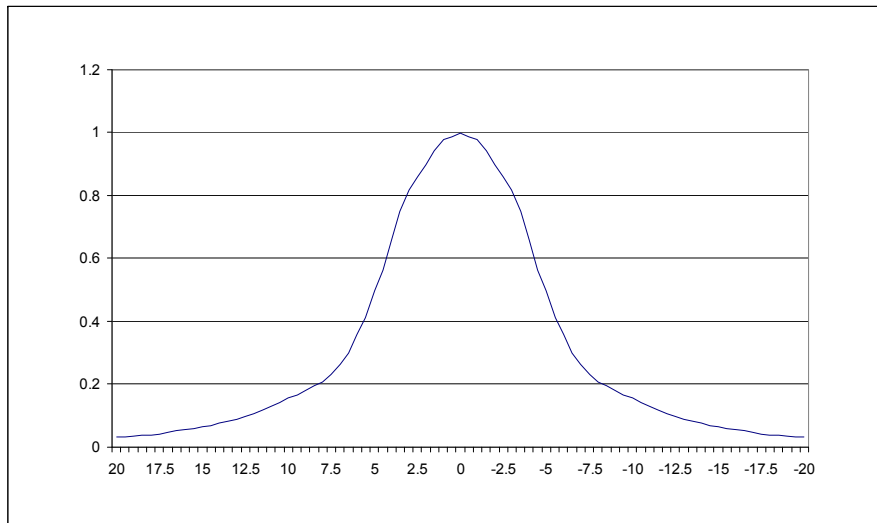
The perfect colour mixing achieved with the POL Colour Mixer Reflector optics allow an infinite range of illumination colours to be produced with a constant and stable beam geometry.

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

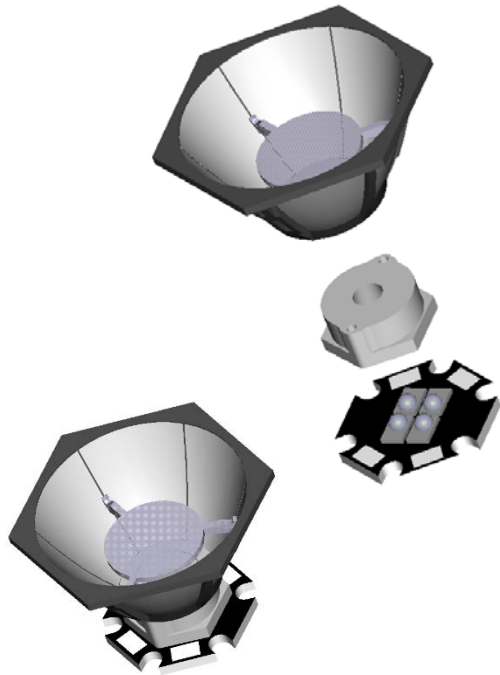
POL Colour Mixer Reflector Optics



POL manufacture Colour Mixing Hybrid Reflectors for most multi-die LEDs from Avago, Edison, Osram, SSC, etc.



POL Colour Mixer Reflector Optics



Green



Red



Amber



Cool White



Green/White



Green/Red



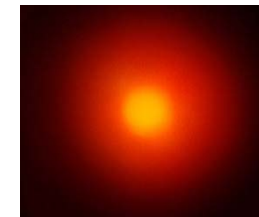
White/Green



Amber/White



Red/White



Red/Amber



Cool White



Neutral White



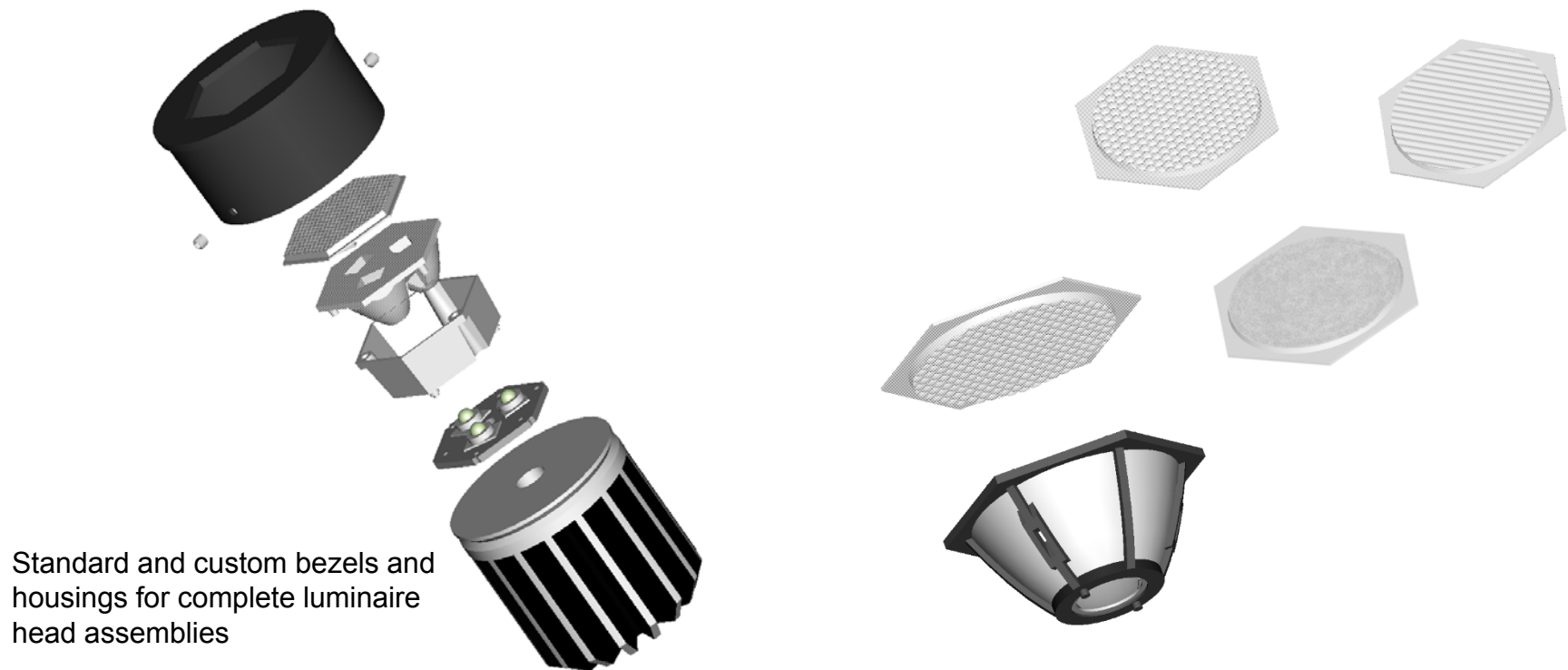
Warm White

POL also makes Colour Mixing Hybrid Reflectors for clusters of single-colour LEDs in RGB, RGBA, RGBW and other configurations.

These are available in a wide range of standard products or custom applications can be developed

POL Colour Mixer Optics Accessories

An additional modular design approach is to use beam converter optics fitted over the standard Colour Mixer Optic and Colour Mixer Hybrid Reflectors to give different beam angles. This approach gives a flexible product design with the minimum number of component parts. The beam converter optics are either supplier pre-assembled to the base optic or can be supplied separately, so that the luminaire can be customised at point of manufacture or point of installation.



Standard and custom bezels and housings for complete luminaire head assemblies