

MANUFACTURERS OF OPTOLITE CONTRAST ENHANCEMENT FILTERS
SHIELDED WINDOWS – INSTRUMENT GLASSES
POLARISING FILTERS

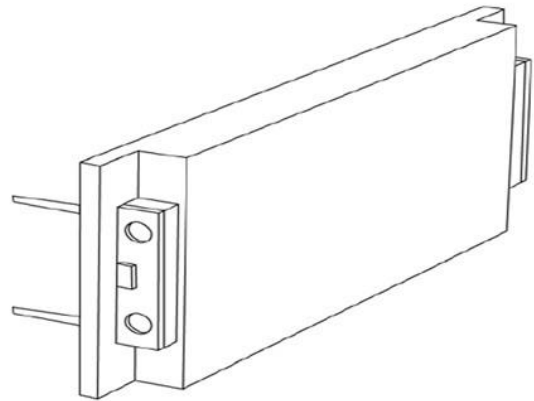
Optolite™ Backlights

Optolite™ Backlights are available as custom design displays.

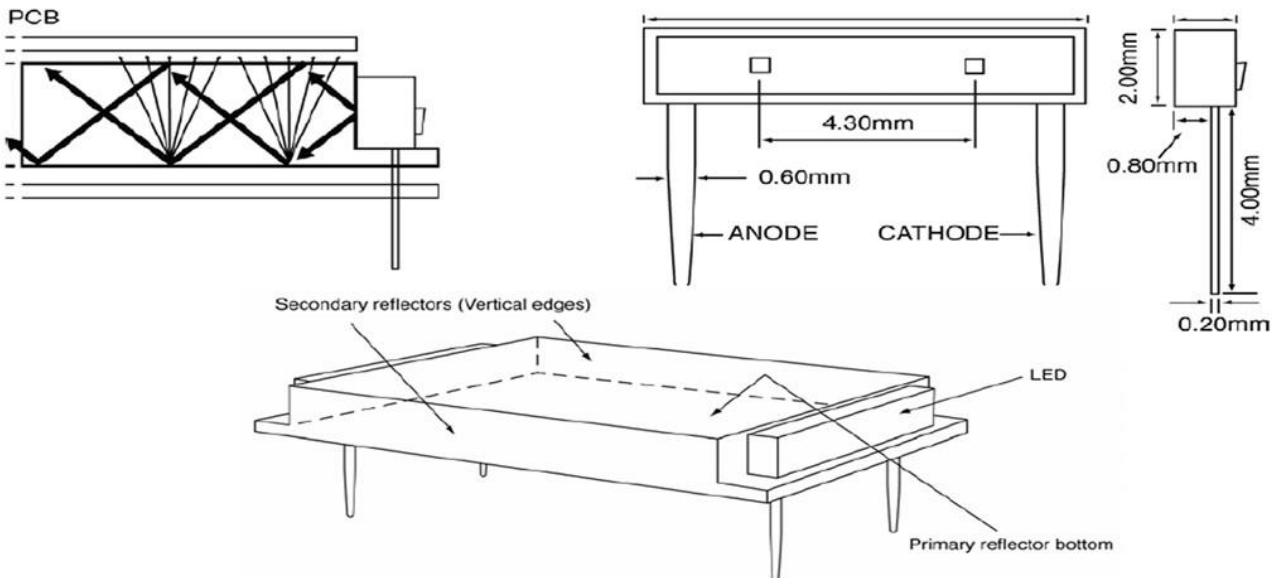
With high brightness + low current they give even illumination.

Instrument Plastics Ltd offers a custom service in LED backlight design with the following benefits:

- Low cost
- High brightness
- Low current
- Even illumination
- Design flexibility
- Easy application



Operation



The light from the LED is spread around the light guide and directed forwards by the side reflectors and the primary base reflector. The primary reflector can be either white or can have an active layer combined with a coloured filter. The active layer absorbs and re-emits internal light and ambient light, if available.



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LED Electro Optic Characteristics Absolute Maximum Ratings

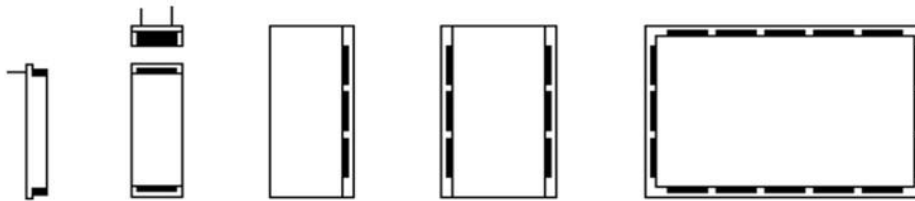
Ambient Temperature 25°C

P/N	Colour	Peak Wavelength		Forward Voltage VF(V)			Luminous Intensity (mcd)	
		P (Nm)	Typ.	Typ.	Max	IF (mA)	Typ.	IF (mA)
221LC	Red	660	3.6	4.0	20	17	10	
231HC	Red	635	4.5	5.5	20	8	10	
231AC	Amber	610	3.6	4.0	20	8	10	
241AC	Yellow	585	4.5	5.5	20	8	10	
251PC	Green	570	4.5	5.5	20	12	10	
251GC	Green	570	4.5	5.5	20	20	10	

Application Notes

- Low melting point solder to be used. Soldering should be carried out at no more than 260°C. Length of time for soldering 3 seconds @ 2mm from the reflector edge.
- For ease of installation: 1mm diameter PCB holes are recommended.
- Any pre forming of the leads should be carried out before soldering.
- Current limiting should be incorporated in the circuit design as overdriven backlights will reduce life and reliability.
- Cleaning of backlights should be with Isopropyl alcohol (or equivalent).
- Storage temperature –70°C to +85°C
- Operating temperature –20°C to +80°C
- Thickness (typical): 3mm
- Tolerances (typical): +/- 0.3mm overall

Possible Options



The standard design is based on a 3mm thick backlight with an active primary reflector plus secondary side reflectors. LEDs can be positioned on one, two, or four sides and with spacing to suit design requirements. The most cost effective solution involves the minimum number of LEDs per backlight required to give a specified even illumination.

The size and colour of the LED backlights, together with the number, colour and location of the LEDs are customer specified.



Instrument Plastics Limited has a policy of continual improvement of products and so reserves the right to change the product specification without notice.



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