

LED Lighting
Products . . .





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Introduction



Plus Opto was established in 1994 and continues to build its business, focused on optoelectronic product solutions across an increasing range of applications. Adopting the latest LED chip materials, technologies and production methods has resulted in significant growth in usage particularly from high performance and power emitters. Whilst applications are diverse, the recent developments in white LEDs have accelerated the growth in key markets particularly in LED Lighting to reduce energy costs.

The benefits of LED technology is well documented and includes:

- Energy Efficient
- Safe Low Voltage
- Long Life, zero maintenance
- Highly Durable

Plus Opto offers LED Lighting products with intelligent drive solutions to maximise performance and increase reliability along with a wide range of LED controller products, sensors and interconnection solutions.

Commitment to customer service is demonstrated in our comprehensive UK stockholding and efficient order processing. Full technical support is available on all products.



Polux 150W & 75W Precision Floodlights
The Polux range of precision floodlights project the high intensity light output precisely where it is required maximising illumination and avoiding light spill. The flexible design offers a choice of optics producing the beam angle to meet the application.

- Symmetric 15°, 25°, 55° and 20x40° optics
- Asymmetric 50°x70° optics
- Choice of colour temperatures
- Surge protection up to 10KV (ANSI C62.41.2)
- Photometric testing to IESNA LM79-08
- CCT to ANSI C78.337 Standard
- Waterproof rated IP67

LM 34W Precision Floodlights
For billboard, architectural and general purpose floodlighting the LM 34W precision floodlight is rated to IP68. The robust design allows modules to be connected together to meet the intensity/ area illumination.

- Universal input voltage 90~264vac
- Choice of Optics
- Choice of colour temperatures
- Waterproof to IP68



Standard COB Floodlights
For general purpose indoor and exterior applications our range of standard floodlights offer light output from 1000lm to 20,000 lumens allowing for a wide range of installations

Bulkhead Luminaires

Suitable for indoor or exterior installations and designed to replace traditional 2D lamps, our range of surface mount LED bulkhead luminaires are rated IP65 and available in a number of sizes in circular or square format.

A choice of colour temperatures are available along with a selection of base colour finishes & trims.

Options include:

- Integral microwave sensor
- Emergency lighting pack
- Sensor dimming

Applications include stairwell and corridor illumination.



Linear Bulkhead Fittings

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Our linear non-corrosive LED light fittings are suitable for indoor or exterior installations, and rated IP65. Available in a number of sizes, we offer a choice of luminous intensities, colour temperatures. Applications include car park illumination, workshop & stairwell lighting. These fittings may be supplied with optional motion sensors and dimming to maximise energy saving.



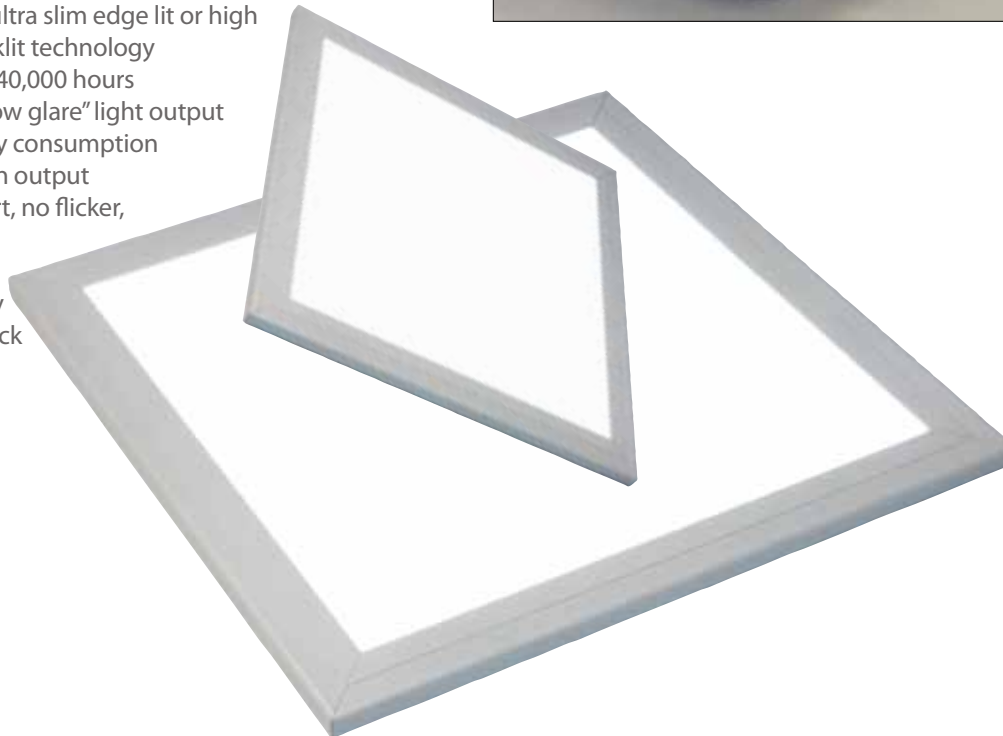


LED Light Panels

Designed to replace modular fluorescent trays, in suspended ceiling grid lighting, we offer a range of LED light panels as a low energy solution. These attractive panels transform living & workspaces and may be easily installed in existing or new lighting schemes.

Features include:

- Choice of ultra slim edge lit or high bright backlit technology
- Long life >40,000 hours
- Uniform "low glare" light output
- Low energy consumption
- High lumen output
- Instant start, no flicker, no noise
- Optional emergency lighting pack





LED Downlights

Our comprehensive range of LED down lights are designed as suitable replacements for traditional incandescent lighting and incorporate the latest LED technology to maximise performance, light output and lifetimes.

The range encompasses miniature types from 3W to 6W along with larger high flux fittings up to 25W designed for general lighting applications in both domestic and commercial environments.

Features include:

- High intensity even light output
- Low voltage operation
- Low energy consumption
- Zero maintenance
- Choice of colour temperatures
- Integral clips facilitates easy installation





Lamp Replacement

We offer a range of LED lamps as suitable replacement for traditional incandescent GLS types and halogen spotlights.

Features include:

- Compatible with existing lamp cap styles
- Low energy
- Efficient light output
- Choice of colour temperatures
- Choice of beam angles



Retail Lighting

The display of products in the retail sector may be enhanced by the use of LED lighting with the benefit of lower energy costs particularly where all-day illumination is required. High intensity light focused into the display area can be provided by a range of products including spotlights, recessed fittings and linear luminaires along with bespoke product solutions. Direct lighting, accent and decorative illumination further enhances retail schemes. LED fittings operate from low voltage power supplies and do not emit heat.

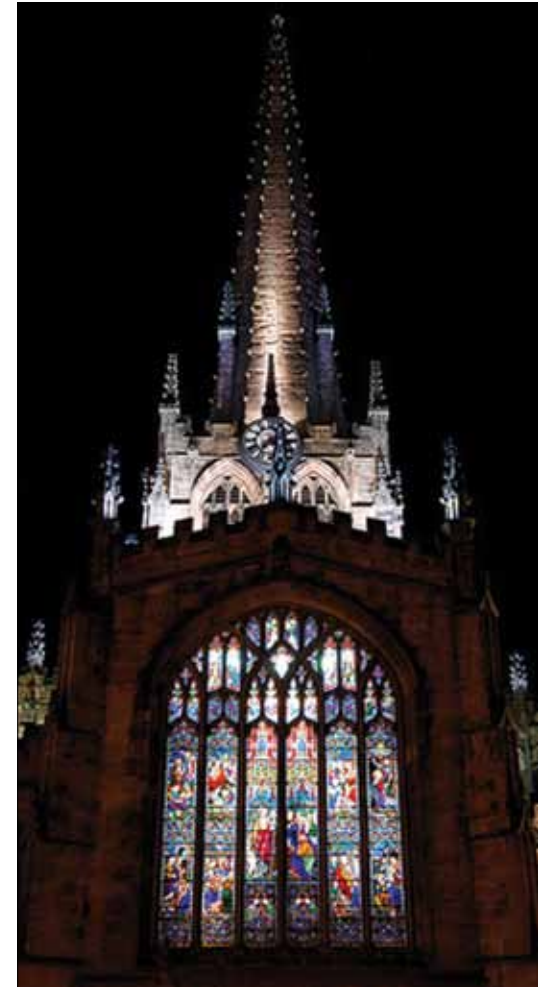


Spotlights

We offer a range of LED spotlights rated from 6W to 36W for general and accent lighting.

Features include:

- High intensity light output
- Low energy consumption, low maintenance
- Choice of optics
- Choice of colours including RGB
- IP rated for outdoor environments
- Adjustable bracket for light positioning



Flexible LED Strip

We offer an extensive range of Flexible LED Strips for a wide range of decorative and area lighting applications.

Standard emitter densities are:

- Low density: 30 LEDs/metre
- Medium density: 60 LEDs/metre
- High density: 120 LEDs/metre

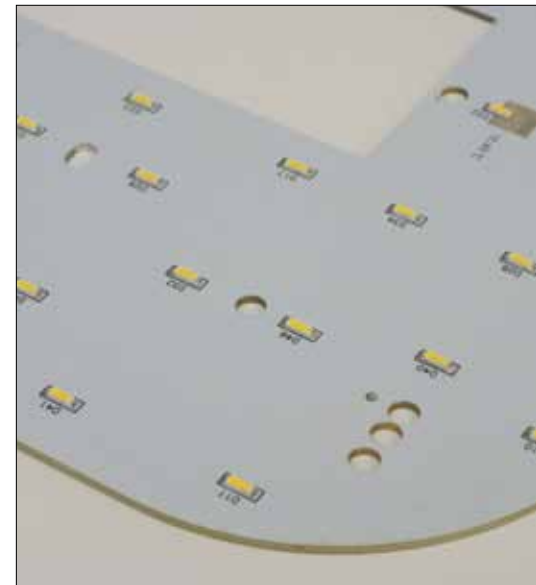
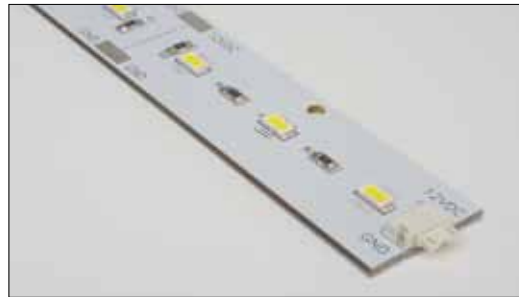
A choice of colours is available with a variety of LED emitter types including full colour RGB and addressable. Waterproof options are available with IP65 crystal epoxy or IP67 PVC sleeve. Operation is from low voltage power supply 12v or 24vdc.



LED Light Engines

From standard linear LED strips to custom LED arrays we offer a range of LED light engines designed for lighting applications selected from our extensive range of LED emitters.

- Low, medium or high power LED emitters
- High Efficiency
- Long lifetimes >30000 hours
- Choice of on-board connectors & drivers
- Range of CCT and intensity options



Emergency Lighting Packs

To support our range of Light Panels and luminaires we offer an optional emergency lighting pack.

In the event of mains supply failure the emergency pack automatically switches in.

The output current is automatically adjusted to the luminaire to provide illumination from the maintained battery pack.



LED Drivers

To support our extensive range of LED lighting products and facilitate reliable efficient power management we offer a range of solutions. With output ratings ranging from 5W to 360W.

Features include:

- EN, TUV and UL approvals for safety & emission standards
- Open & short circuit protection
- Overload & overheat protection
- Rating to IP20 or IP67
- Choice of termination











Sensors & Sensor Dimming

For lighting control we offer integration of microwave motion sensor modules that will switch on the output on detection of people movement and turn off after a pre-selected hold time when no persons present. A daylight sensor is also built-in to switch off the light when there is sufficient natural light.

Features include:

- Direct connection to ac mains 220/240vac
- Selectable detection area
- Selectable hold time
- Selectable daylight sensor
- May be installed in totally enclosed light fittings



	Cherry Red 660nm		Yellow 585nm		Cool White 7000/10000°K
	Bright Red 625-630nm		Yellow/Green 570nm		Pure White 5650/7000°K
	Sunset Orange 623nm		Green 525/530nm		Neutral White 4500/5650°K
	Orange 610nm		Cyan 505nm		Natural White 3500/4500°K
	Amber 590nm		Blue 470nm		Warm White 2750/3500°K

Bin Grading for colour consistency

LED binning is essential in order to maximize effective utilization of emitters in lighting applications.

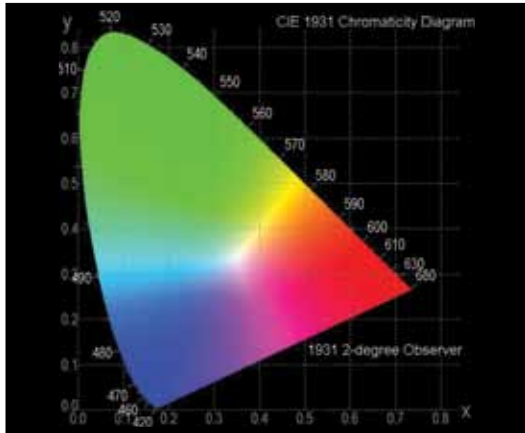
Binning for light output and particularly colour ensures consistency of luminaire performance. Our binning for colour temperature is defined by (x,y) coordinates on the CIE 1931 Chromaticity Diagram. We provide binning to ANSI standard and sub-binning in order to offer extremely tight colour control.

Test & Measurement Suite

**Not sure what colour LEDs you're using?
Send to us for testing . . .**

If you are unsure of the LED type being used, or the specification, then from a sample we would be pleased to evaluate, test and measure, in order to check the parameters and performance.

From the test data we are able to offer the best possible solutions for the application, taking into account performance, efficiency, reliability and life, along with commercial considerations and suggested alternatives.





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