

## binay PowerLED Indoor Light

**The BINAY PowerLED Indoor Light provides a long-life, energy efficient and 'eco-friendly' light for indoor lighting applications**

This universal PowerLED Indoor Light is designed to drastically reduce power consumption in office and home lighting, thereby resulting in immense reduction in greenhouse gases, which is one of the primary causes of global warming.

This light will provide a lumens output of 700-800 lumens (which is equivalent to that of a 75-watt incandescent lamp), with negligible luminaire losses, thus resulting in unprecedented high lux levels of illuminance at such low power consumption. As such, the light output of this 10W LED light allow it to replace a 100 watt incandescent bulb luminaire due to the high luminaire efficiency of 95%, which is achieved by proper design of the LED luminaire (in contrast to a conventional bulb luminaire, which has an efficiency of only 60-75%). Consequently, the resultant effective brightness will be more than that of a filament lamp. This is possible as LEDs have 180-degree light emission, instead of the 360-degree characteristic of other light sources (which results in losses inside the luminaire due to reflection).

This BINAY PowerLED Indoor Light has a life of over 50,000 hours to 100,000 hours due to its superior thermal management (in contrast to a filament incandescent bulb life of only 1,000 hours). Savings are generated not just in zero replacement costs, but also in elimination of maintenance/relamping labour, apart from greater performance reliability.

**The specifications of the BINAY PowerLED Indoor light are as follows:**

Power consumption: 10 Watts  
Input Voltage: 12V-13.5VDC (can also be supplied for 230VAC input, or any other voltage input)  
Current: 700mA  
Total Lumens: 700-800 lumens  
Lamp efficiency: 95%  
Colour Rendering Index (CRI): >75  
Working temperature: 30°C to 45°C  
Working Humidity: 10% to 90% RH  
Chip specification: Each LED chip is a 1mm x 1mm InGaN P/N junction chip mounted on metal or silicon substrate with phosphor coating  
Encapsulant: Non-degrading silicone gel with allowance for expansion and contraction  
Colour: Cool White 5500°K – 7000°K  
Body: Powder coated mild steel; Mirror finish reflector  
Circuit Design: Circuit of the LEDs is designed such that failure of any one LED will not affect the performance of the other LEDs in circuit  
LED Driver Circuit: Ensures constant current operation. Transient surge protection is provided, as well as forward high current dump surge protection and reverse polarity protection.

The LEDs are mounted on a metal board. The heatsink design allows free flow of air so that heat build up is avoided. This is crucial as the LED life reduces by 50% with every 10 degree centigrade rise in Chip Junction temperature.



**The BINAY PowerLED Indoor Light**



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