

## 60W CV LED DRIVER TECHNICAL DATASHEET

**Product** : 60W CV LED Driver  
**Product Output rating** : 12V @ 5A  
**Model No** : BI-WMB-3229-012 050



### Scope

The BI-WMB-3229 series is a 60W, Constant-Voltage LED driver that operates from 120-290 Vac input with excellent Efficiency, Power Factor and THD. It is created for LED Signage and Strip Lights. The high efficiency of these drivers and compact metal case enables them to run cooler, significantly improving reliability and extending product life. To ensure trouble-free operation, protection is provided against input surge, output over voltage, short circuit, and over temperature.

### Features

- Wide Input operating Voltage
- High Power Factor - >0.9
- High Efficiency - >82%
- Low THD (<10%) - Compliance to IEC 61000-3-2
- Precision Constant Voltage Limit
- Better Line & Load Regulation performance (CC Limit)
- AC input High Voltage Cut-Off and Support up to 440V AC
- AC input Low Voltage Cut-Off
- Short circuit & Over Load Protection - Auto Recovery
- Surge Protection - as per IEC 61000-4-5 : 6 kV (L-N, L-E & N-E)
- EFT - as per IEC 61000-4-4 : 6kV (L-N, L-E & N-E)
- IP67

## Technical Specifications

<b>Input Requirements</b>	<b>Nominal Input Voltage</b>	240V AC
	<b>Operating Voltage Range</b>	120V to 290V AC
	<b>Phase</b>	Single Phase
	<b>Frequency Range</b>	47-53 Hz
	<b>Input Current</b>	< 0.35A @ 240V AC
	<b>In-rush Current</b>	< 30A @ 270V AC
	<b>Input Protection</b>	Fuse of appropriate rating to be used for prevention of fire hazard.
	<b>Efficiency</b>	> 82% at 240V AC & Full Load
	<b>Power Factor</b>	> 0.9
	<b>Input Current Harmonic Distortion</b>	< 10%
	<b>Input High Voltage Cut-off</b>	Between 310-325V AC Unit will shutdown and auto recovery with 5-10V hysteresis
	<b>Input Low Voltage Cut-off</b>	Between 105-115V AC Unit will shutdown and auto recovery with 5-10V hysteresis
<b>Output Requirements</b>	<b>Output Voltage</b>	$V_o = 12V$
	<b>Output Current</b>	$I_o = 5A$
	<b>Voltage Regulation – (Line &amp; Load)</b>	$\pm 0.5V$
	<b>Short Circuit Protection</b>	Auto Recovery
	<b>Over Load Protection</b>	Hiccup type
<b>Safety Requirements</b>	<b>Isolation (Hi-Pot Test)</b>	L, N to DC Output : Should withstand 1.5KV for 1 Minute L,N to Earth : Should withstand 1.5KV for 1 Minute
	<b>Insulation Resistance</b>	>10M $\Omega$ at 500V DC
	<b>Earth Leakage Current</b>	<3mA
<b>Environmental Requirements</b>	<b>Operating Temperature</b>	-10°C to +50°C
	<b>Operating Relative Humidity</b>	0-95% RH
	<b>Storage Temperature</b>	-20°C to 80°C
	<b>Ingress Protection</b>	IP67
<b>EMC Requirements</b>	<b>Electrical Fast Transients</b>	As per IEC-61000-4-4; Level-5 (CM-6kV, DM-6kV)
	<b>Surge Immunity</b>	As per IEC-61000-4-5; Level-5 (CM-6kV, DM-6kV)
<b>Wiring &amp; Connections</b>	<b>AC Input</b>	0.5mm <sup>2</sup> , 3-core cable
	<b>DC Output</b>	2.0mm <sup>2</sup> , 2-core cable
<b>Mechanical</b>	<b>Enclosure</b>	Aluminum Extrusion
	<b>Dimensions</b>	Mounting Holes : 230.0 x 65.3 x 41.0 mm (L x W x H)
	<b>Marking</b>	All Markings/ labels to be given on enclosure in non-erasable form