

Model

# BLG-320B Series

**BLG series** is constant voltage led driver, designed for lighting used for landscape illumination. The driver has built-in active PFC, multiple protections, and 10KV surge immunity. It's a excellent design with highreliability and long lifetime.



BLG-320B SERIES  
BSW POWER TECH  
EXCELLENT PERFORMANVE



Class P



SELV



Certificate No.  
SAA-172909-EA



## Product Features

- Constant voltage output
- **SAA Approved : Certificate No. SAA-172909-EA**
- High power factor > 0.96 (230Vac & Full load)
- Universal input voltage 90~305Vac
- Include 3 pin plug
- Ambient temperature: -40°C ~ 60°C
- Overall protection: Short circuit / Over temperature / Over voltage / Over load
- Surge immunity : line-line 5KV, line-earth 10KV
- IP67, glue potted, suitable for dry / wet / damp locations
- 7 Years warranty

## Application

- Suitable for landscape lighting.

## Models

Model Number	Item Code	Max Output Power (W)	Output Voltage Range (Vdc)	Output Current Adjustable Range (A)	Typical Efficiency	Power Factor	
						115Vac	230Vac
<b>BLG-320B-12</b>	<b>BT1911</b>	<b>264</b>	<b>12</b>	<b>0~22.00</b>	<b>91%</b>	<b>0.99</b>	<b>0.97</b>
<b>BLG-320B-24</b>	<b>BT1921</b>	<b>320</b>	<b>24</b>	<b>0~13.33</b>	<b>92%</b>	<b>0.99</b>	<b>0.96</b>

### \*Notes

All performance parameters are measured at 25°C ambient temperature, 230VAC input, full load conditions, except for those specified.

## Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	90Vac	100~277Vac	305Vac	
Input Frequency	47HZ	50/60	63Hz	
Leakage Current	—	—	0.75mA	277Vac /50Hz
Input AC Current	—	—	4.0A	100-277Vac & full load
Inrush Current (A)	—	—	150A	Gold start, 230Vac & full load
Power Factor	0.95	0.97	—	230Vac, 100% load
THD	—	—	20%	277Vac, 75~100% load

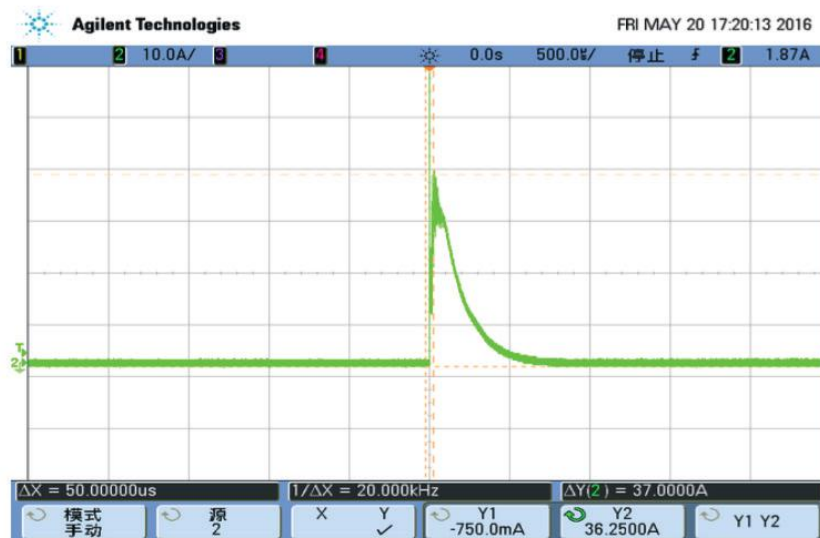
## Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%	—	5%	Full load
Output Voltage Ripple	—	—	6%	Full load, Measured by 20 MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic capacitor and a 10uF electrolytic capacitor.
Output overshoot	—	—	10%	When the power is on
Line Regulation	—	—	3%	25°C±10°C ambient temperature, 100% load, change input from 90Vac to 305Vac
Load Regulation	—	—	3%	25°C±10°C ambient temperature, 230Vac input voltage, change load from 50% to 100%
Turn-on Delay Time	—	—	3S	115Vac, 100% load
	—	—	3S	230Vac, 100% load

## General Specifications

Parameter	Min.	Typ.	Max.	Notes
Efficiency @115Vac Vo=12V Vo=24V	87% 88%	89% 90%	—	Measured at full load and 25°C ambient temperature
Efficiency @230Vac Vo=12V Vo=24V	89% 90%	91% 92%	—	Measured at full load and 25°C ambient temperature
Efficiency @277Vac Vo=12V Vo=24V	89% 90%	91% 92%	—	Measured at full load and 25°C ambient temperature
MTBF	—	200,000 HOURS	—	230Vac,80% load (MIL-HDBK-217F)
Lifetime	—	50,000 HOURS	—	230Vac &100% load, 50°C case temperature, refer to lifetime VS Tc curve for details.
Operating Case Temperature for Safety Tc_s	-40°C	—	+85°C	
Operating Case Temperature for Warranty Tc_w	-40°C	—	+50°C	
Storage Temperature	-40°C	—	+85°C	Humidity : 20% to 95% RH
Dimensions (LxWxH)mm	235 x 98 x 40			
Dimensions_Box(LxWxH)mm	285 x 170 x 50			
Gross Weight	1.84kg / PCS			

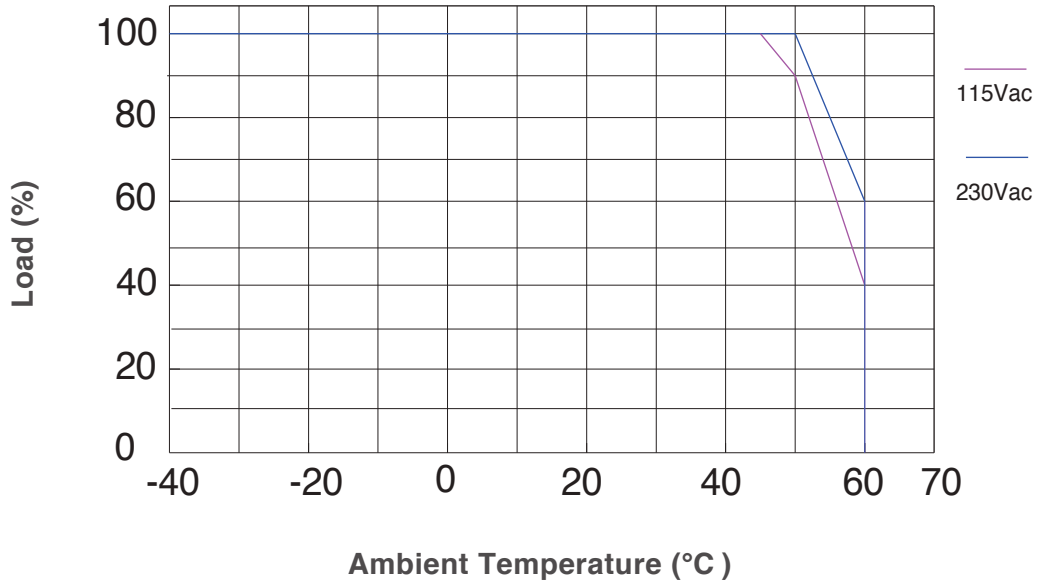
## Inrush current waveform





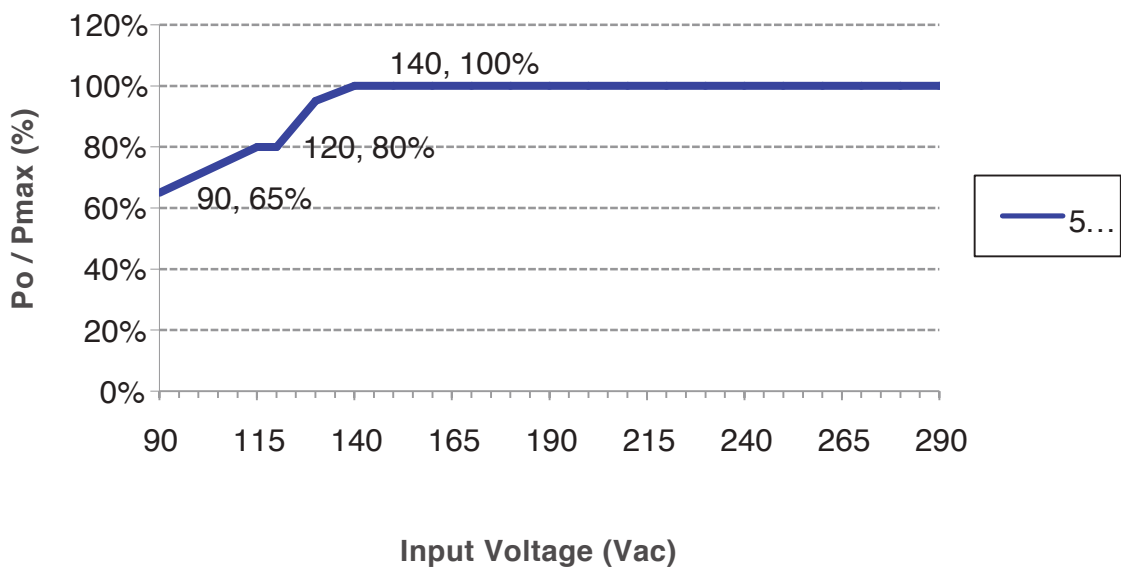
Derating curve

Temperature vs. Load Curve



Output power VS Input voltage

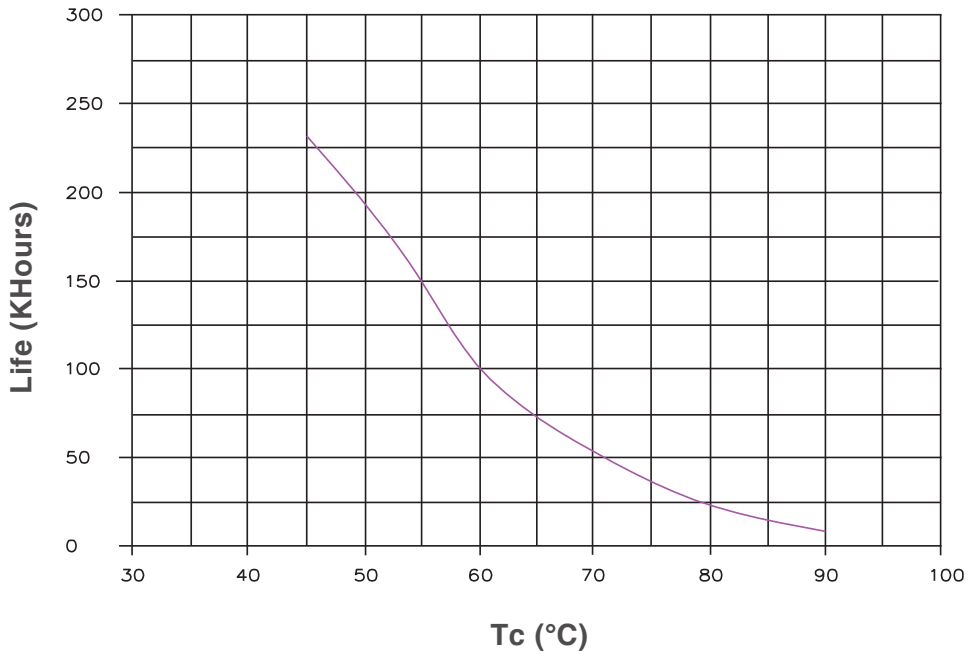
Po / Pmax VS Input voltage





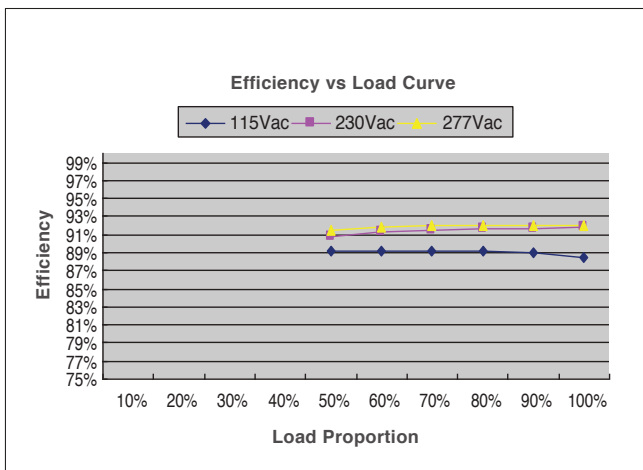
**Lifetime VS Case Temperature**

**Life vs. Tc**

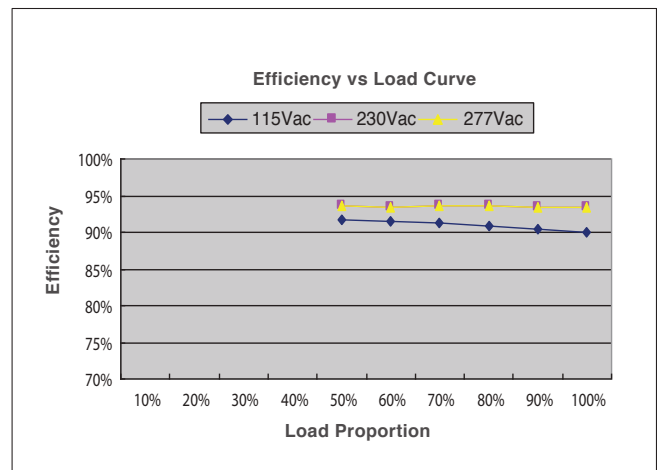


**Efficiency VS Load**

**BLG-320B-12**

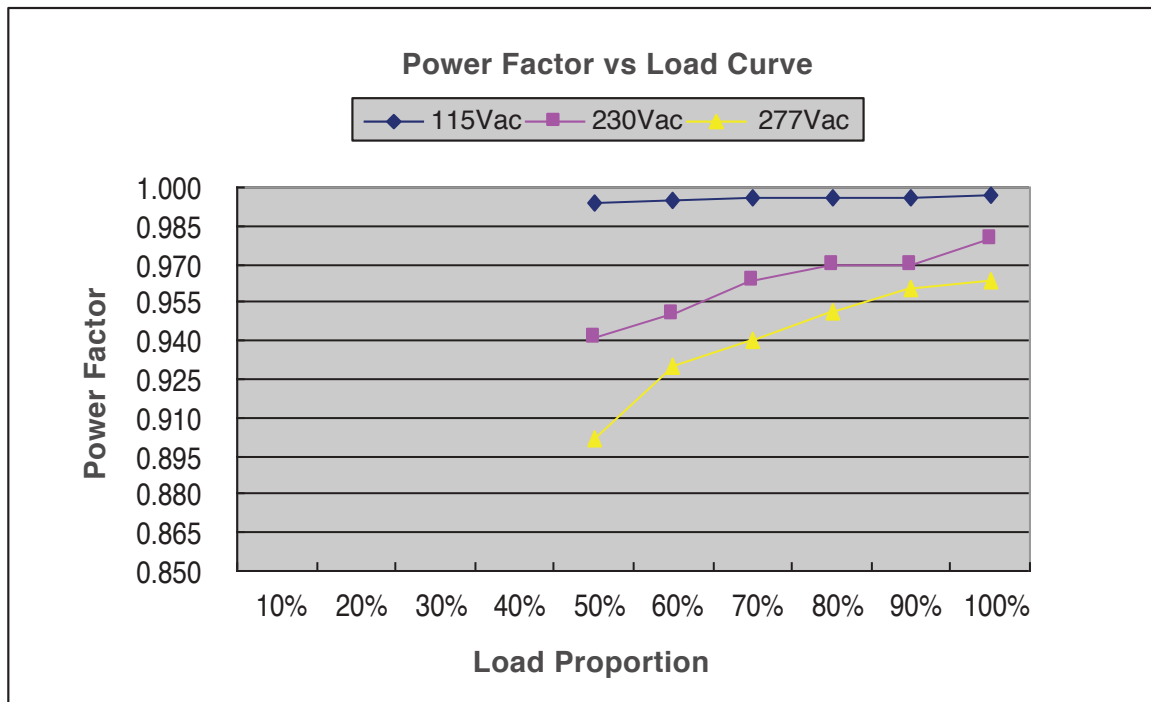


**BLG-320B-24**

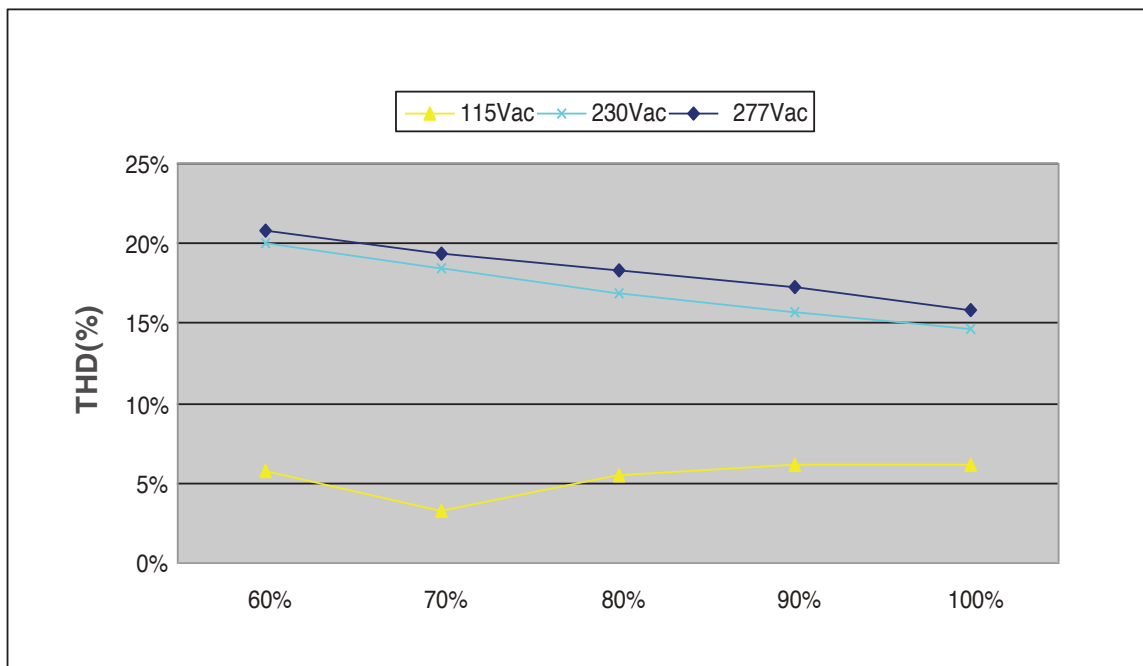




**Power Factor VS LOAD**



**Total Harmonic Distortion**

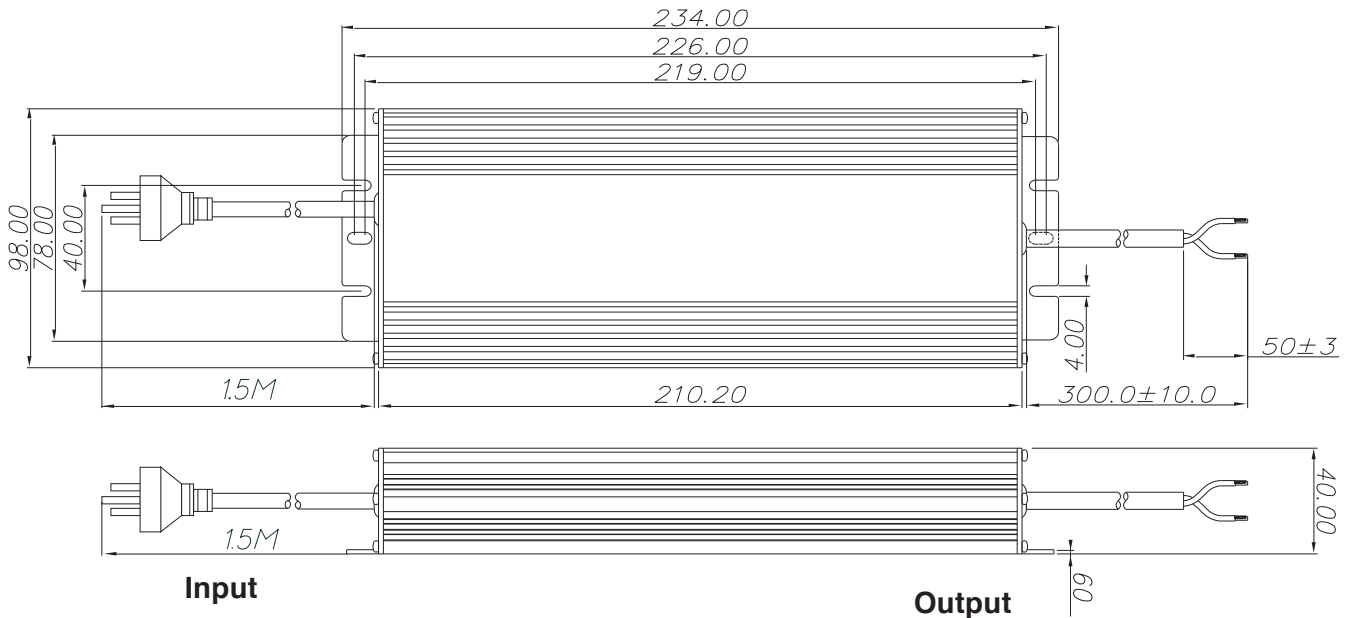




**Protections**

Parameter	Notes
Over Temperature Protection	When the Tc is over 90°C, the driver shuts off automatically and enters protection status.
Short Circuit Protection	The input power shall decrease when the output rail short, the power supply shall not be damaged.
Over Current Protection	The product will enter hiccup status when 1.1-1.5 maximum load current applied to the output, and the product shall be self-recovery recovery when the fault condition is removed.
Over Voltage Protection	When the output voltage is over 1.1-1.3 Rated Load Voltage, the driver shuts off automatically and enters protection status, the driver will work normally after fault condition removed and AC input reapply.

**Mechanical Outline**



Wire	Specification
AC Input	SAA 3 x 1.0mm <sup>2</sup> L=1.5M
DC Output	14AWG 2C L=300mm

**Revision History**

Version	Description of Change		Date	Note
	Before	Now		
A.1	—	Datasheets Release	2018-10-09	A.1