



## Product Specification


<b>Title</b>	<b>TRIAC &amp; Phase Cut Dimmable LED Driver</b>
<b>Model</b>	<b>BQ-100TNAV (Constant Voltage / Flicker Free)</b>
<b>Specification</b>	<b>Input: 200~240Vac 50/60Hz Output: 12V/8.34A 24V/4.17A</b>
<b>Power Range</b>	<b>100W</b>
<b>Author</b>	<b>R&amp;D</b>
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<b>Revision</b>	<b>2.0</b>

## 1. Product Description

1.1 This engineering report describes the design for a **TRIAC dimmable Constant Voltage LED Driver** for LED applications.

### 1.2 Prototype Photo

### 1.3 Physical size

	L	W	H
	(mm)	(mm)	(mm)
	221 ±1	59 ±1	33 ±1

## Features

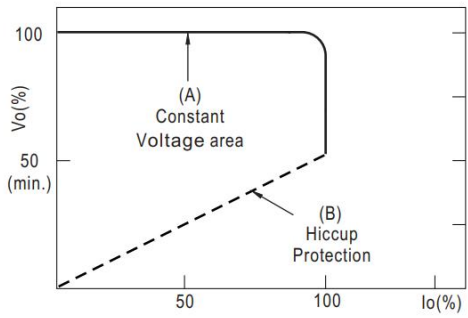
- 220~240Vac 50/60Hz
- Built-in active PFC function
- Flicker Free
- Short circuit, Over current, Over voltage Protection
- Air Cooling
- Applied to LED lighting etc
- No load and Safety Protection Device
- Installed economically and quickly
- Complied with the world safety standard of lighting
- protection class II
- 5 years Warranty

## Description

BQ-100TNAV TRIAC dimmable LED Driver is a kind of Constant Voltage dimmable LED power supply that our company R&D, with high power factor, high efficiency, high precision, adopting the high efficiency, stable, low loss of switch control chip. It was made with high-quality components, so it had the characteristics like low noise, energy-saving, environmental protection, and long life, etc.

### 1.3 Working principle

BQ-100TNAV TRIAC Dimmable LED Driver is with the CV feature, the working condition is as the picture under.



Typical output current normalized by rated current (%)



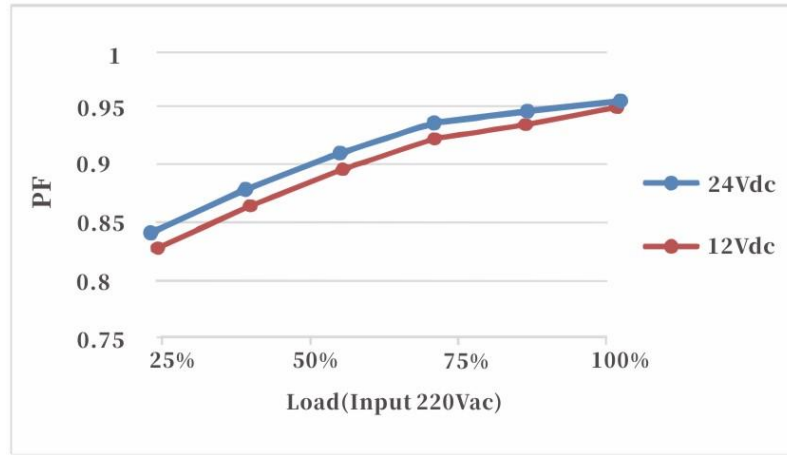
## 2. Electric Idiosyncrasy

### 2.1 Specs.

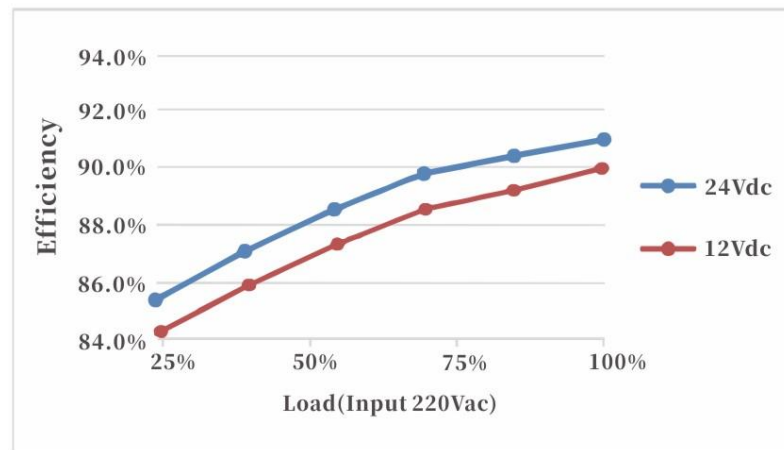
Model		BQ-100TNAV	
Output	DC Voltage	12V	24V
	Output Current	8.34A	4.17A
	Output Power	100W	
	Flicker Index	Modulation depth ≤1% Complies with the flicker-free standard (IEEE Std 1789-2015)	
	Voltage Tolerance	±0.5V	
	Line Regulation	±0.5%	
	Load Regulation	±2.0%	±0.5%
Input	Voltage Range	200-240VAC	
	Frequency Range	47-63Hz	
	*Power Factor(Typ.)@ full load	0.95@230VAC	
	THD(Typ.)@ full load	<20%	
	Efficiency(Typ.)@ full load	90%	91%
	AC Current(Max.)	0.55A@230VAC	
	Inrush Current (Typ.)	20A, 50%, 1.6ms	
	Leakage current	<0.50mA	
Protection	Short Circuit	shut down o/p voltage, re-power on to recover after fault condition is removed	
	Over Loading	≤120% constant current limiting, auto-recovery	
	Over temperature	100°C±10°C shut down o/p voltage, automatically recover after cooling.	
Environment	Working TEMP.	-40~+60°C (see below derating curve)	
	Working Humidity	20~90%RH, non-condensing	
	Storage TEMP. Humidity	-40~+80°C, 10~95%RH	
	TEMP .coefficient	±0.03%/°C(0~60°C)	
	Vibration	10~500Hz, 2G 10min./1 cycle,period for 60min. each along X,Y,Z axes	
Safety& EMC	Safety standards	EN61347	
	Withstand voltage	I/P-O/P: 3.75KVac	
	Isolation resistance	I/P-O/P:100MΩ/500VDC/25°C/70%RH	
	EMC EMISSION	EN55015; EN61000-3-2; EN61000-3-3;	
	EMC IMMUNITY	EN61547	
Others	Net. Weight	0.46KG	
	Dimension	221*59*33mm (L*W*H)	
	Warranty	5 Years	

## 2.2 Characteristic Curve

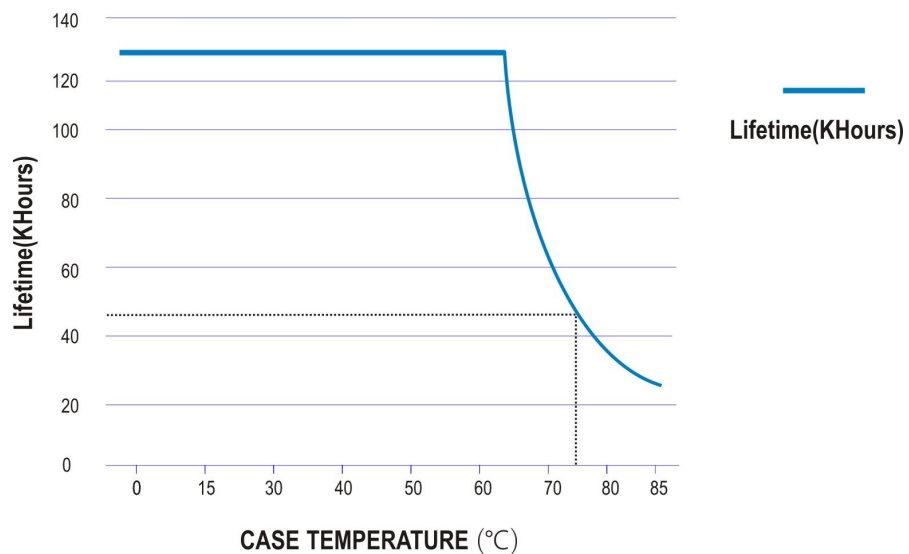
### 2.2.1 Power Factor Characteristic Curve



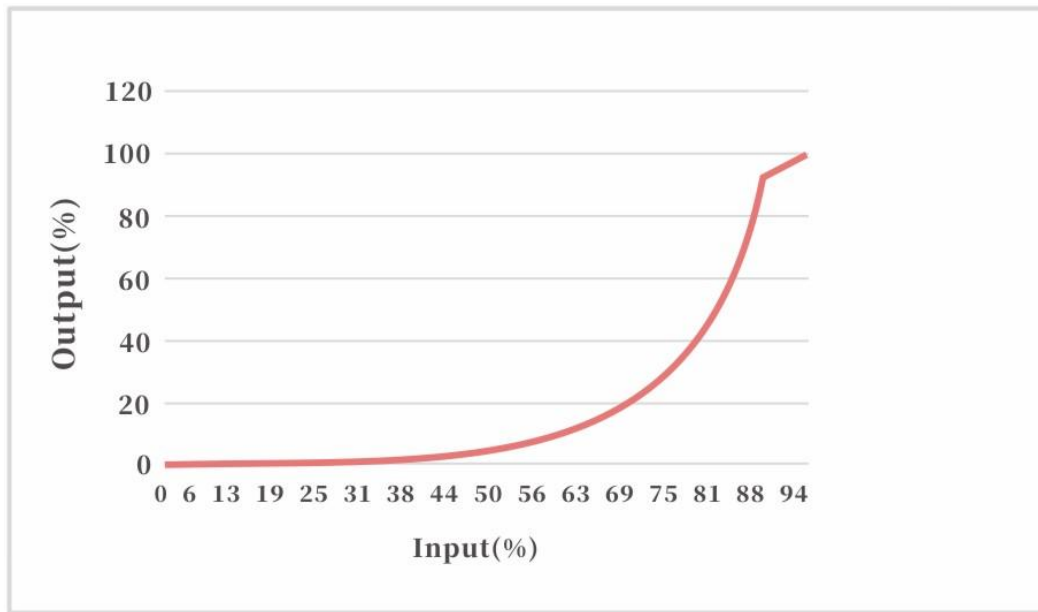
### 2.2.2 Power Efficiency Characteristic Curve



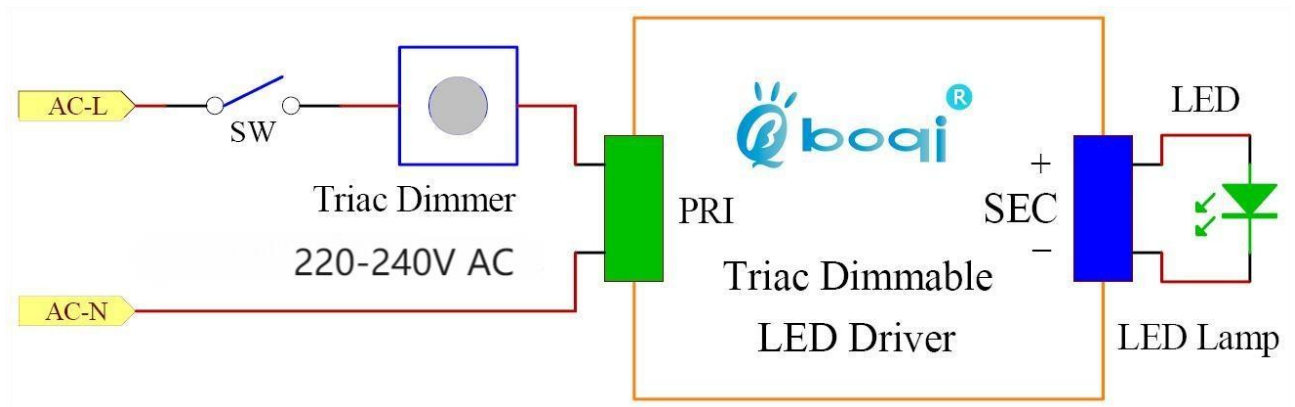
### 2.2.3 Lifetime Characteristic Curve



### 2.2.4 Dimming Curve



### 2.2.5 Circuit Drawing



### 3. Real Photo

