

Product Specification

Title	0-10V Dimmable LED Driver
Model	BQ-060ANPV (Constant Voltage / Flicker Free)
Specification	Input: 100~240Vac 50/60Hz Output: 12V/5000mA 24V/2500mA
Power Range	60W
Author	R&D
Document NO.	RDPS-2505
Date	2021-01-05
Revision	2.0

1. Product Description

1.1 This engineering report describes the design for a **0-10V dimmable Constant Voltage LED Driver** for LED applications.

1.2 Prototype Photo



1.3 Physical size

	L (mm)	W (mm)	H (mm)
	175	56	31
	±1	±1	±1

Features

- 100~240Vac 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

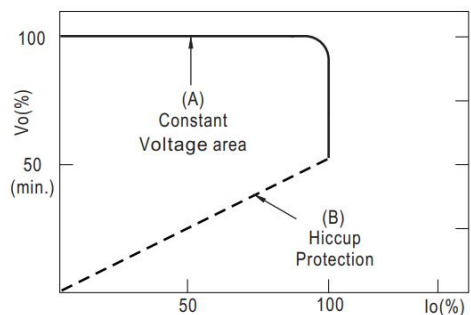
Description

BQ-060ANPV 0-10V dimmable LED Driver is a kind of Constant Voltage 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.

1.4 Working principle

BQ-060ANPV 0-10V Dimmable LED

Driver is with the Constant Voltage feature,
the working condition is as the picture under.



Typical output current normalized by rated current (%)

1.5 Circuit Drawing



- Connect the 0-10V signals to the DIM terminal and the positive electrode connects to +, and the negative electrode connects to -.
- In 0-10V dimming mode, when the input voltage is less than 0.9V, the light will be turned off. When it's more than 0.9V, the light will be turned on. ($\pm 0.2V$ tolerance is acceptable.)
- The minimum dimming depth of 0-10V dimming is 0.5%.
- The pins of the 0-10V DIM terminal without any signal connected: 100% rated output current

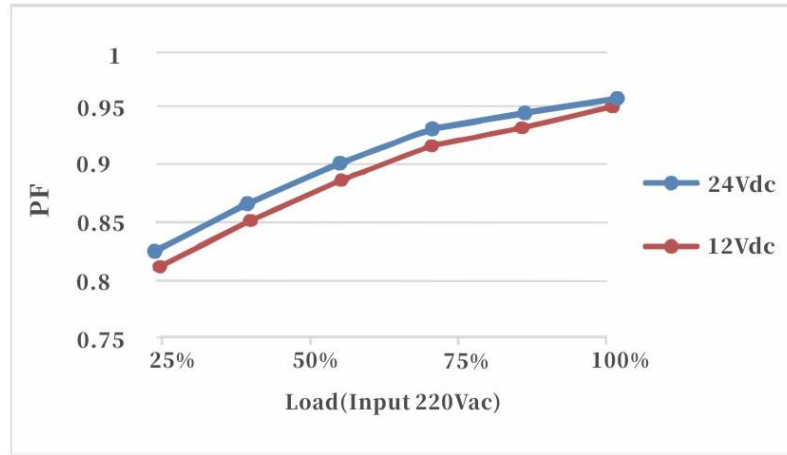
2. Electric Idiosyncrasy

2.1 Specs.

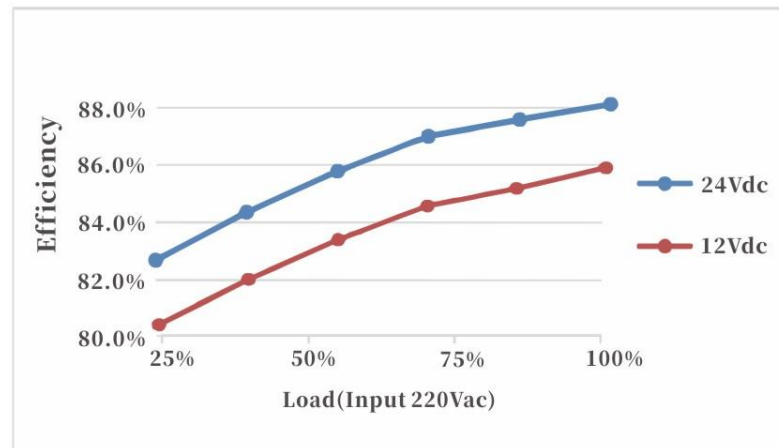
Model		BQ-060ANPV	
Output	DC Voltage	12V	24V
	Output Current	5000mA	2500mA
	Output Power	60W	
	Flicker Index	Modulation depth $\leq 1\%$ Complies with the flicker-free standard (IEEE Std 1789-2015)	
	Ripple Voltage	<10%	
	Voltage Tolerance	$\pm 0.5V$	
	Temperature Drift	$\pm 5\%$	
	Start-up Time	<3S@230Vac	
Input	Input Voltage	100-240VAC	
	Frequency Range	47-63Hz	
	Power Factor(Typ.)@ full load	0.97@115VAC 0.95@230VAC	
	THD(Typ.)@ full load	<20%	
	Efficiency(Typ.)@ full load	86%	88%
	AC Current(Max.)	0.6A@230VAC	
	Inrush Current (Typ.)	20A, 50%, 1.6ms	
	Leakage current	<0.5mA	
Protection	Short Circuit	shut down o/p voltage, re-power on to recover after fault condition is removed	
	Over temperature	100°C \pm 10°C shut down o/p voltage, automatically recover after cooling.	
Environment	Working TEMP.	-40~+60°C	
	Working Humidity	20~90%RH, non-condensing	
	Storage TEMP. Humidity	-40~+80°C, 10~95%RH	
	Atmospheric Pressure	86kPa~106kPa	
Safety& EMC	Safety standards	EN61347	
	Withstand voltage	I/P-O/P: 3.75KVac	
	Insulation Resistance	I/P-O/P:100M Ω /500VDC/25°C/70%RH	
	EMC EMISSION	EN55015; EN61000-3-2; EN61000-3-3;	
	EMC IMMUNITY	EN61547	
Others	Dimming Function	0-10V	
	Dimension	175*56*31 mm (L*W*H)	
	Warranty	5 Years	

2.2 Characteristic Curve

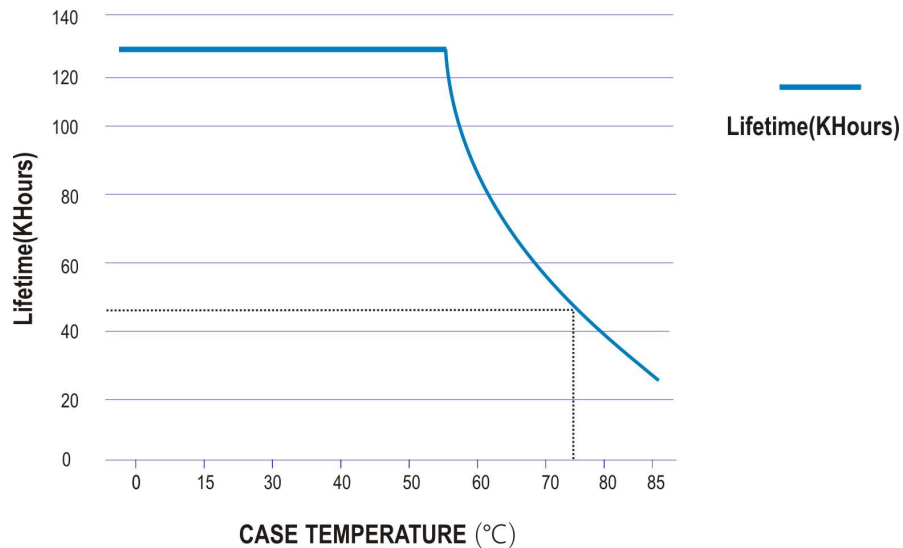
2.2.1 Power Factor Characteristic Curve



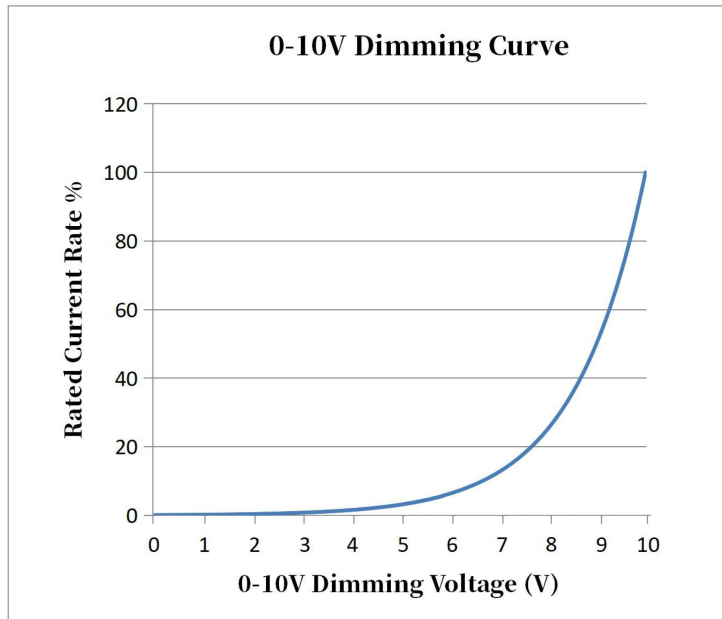
2.2.2 Power Efficiency Characteristic Curve



2.2.3 Lifetime Characteristic Curve



2.2.4 Dimming Curve



3. Real Photo

