



Product Specification

Title	0-10V Dimmable LED Driver
Model	BQ-100ANAV (Constant Voltage / Flicker Free)
Specification	Input: 220~240Vac 50/60Hz Output: 12V/8.34A 24V/4.17A
Power Range	100W
Author	R&D
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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)
	220	59	33
	±1	±1	±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

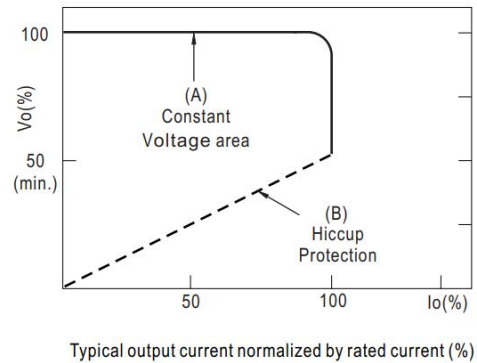
Description

BQ-100ANAV 0-10V 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.

1.4 Working principle

BQ-100ANAV 0-10V Dimmable LED

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



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

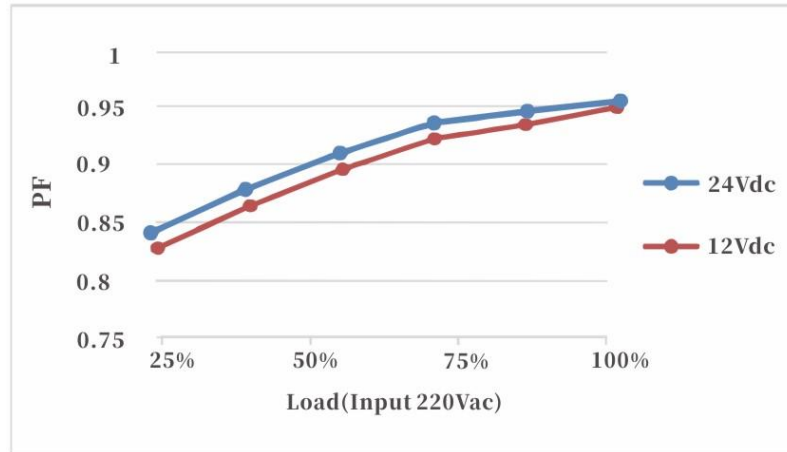
2. Electric Idiosyncrasy

2.1 Specs.

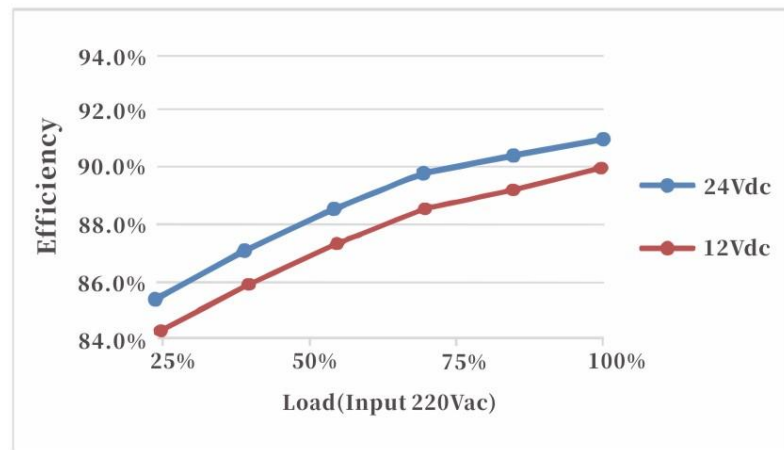
Model		BQ-100ANAV	
Output	DC Voltage	12V	24V
	Output Current	8.34A	4.17A
	Output Power	100W	
	Flicker Index	Modulation depth $\leq 1\%$ Complies with the flicker-free standard (IEEE Std 1789-2015)	
	Voltage Tolerance	$\pm 0.5V$	
	Line Regulation	$\pm 0.5\%$	
	Load Regulation	$\pm 2.0\%$	$\pm 0.5\%$
Input	Voltage Range	220-240VAC	
	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	$\leq 120\%$ constant current limiting, auto-recovery	
	Over temperature	100°C $\pm 10^\circ\text{C}$ 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	$\pm 0.03\%/^\circ\text{C}$ (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: 100M Ω /500VDC/25°C/70%RH	
	EMC EMISSION	EN55015; EN61000-3-2; EN61000-3-3;	
	EMC IMMUNITY	EN61547	
Others	Net. Weight	0.46KG	
	Dimension	220*59*33mm (L*W*H)	
	Warranty	5 Years	

2.2 Characteristic Curve

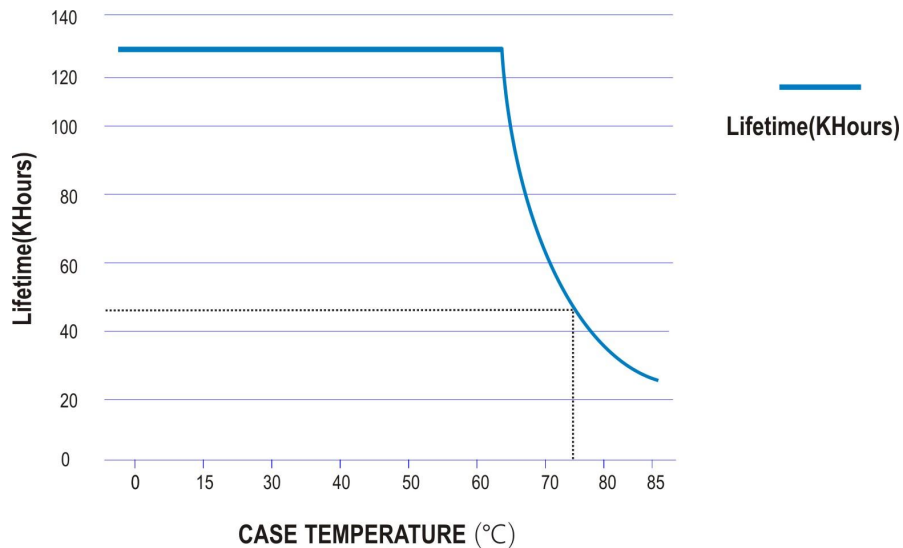
2.2.1 Power Factor Characteristic Curve



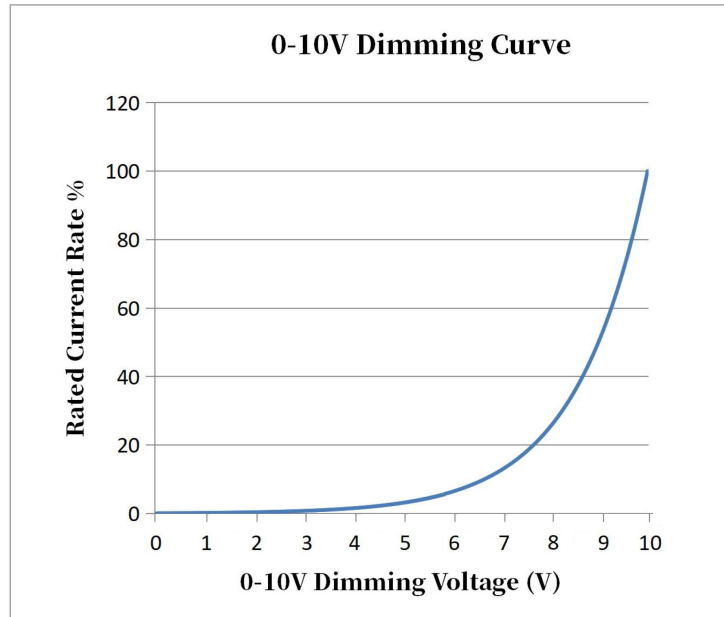
2.2.2 Power Efficiency Characteristic Curve



2.2.3 Lifetime Characteristic Curve



2.2.4 Dimming Curve



3. Real Photo

