

10W 0/1-10v dimmable constant voltage led driver



■ Features

- Constant Current (C.V.) output
- Built-in active PFC function, High efficiency up to 88%
- Input voltage/Full range(up to 305VAC)
- Protections: Short circuit/Over voltage/Over load/Over temperature
- THD≤16%, Dimming range: 0-100%/10-100%
- Built-in 4 in 1 dimming function(1-10V or PWM or Resistor)
- Noise free, flicker free, 5-7 years warranty
- OEM & ODM, no MOQ, Support customization

■ Applications

- LED indoor lighting
- LED panel light
- LED track light
- LED ceiling light
- LED tri-proof light
- LED down light
- LED kitchen light
- LED grille light
- LED strip light

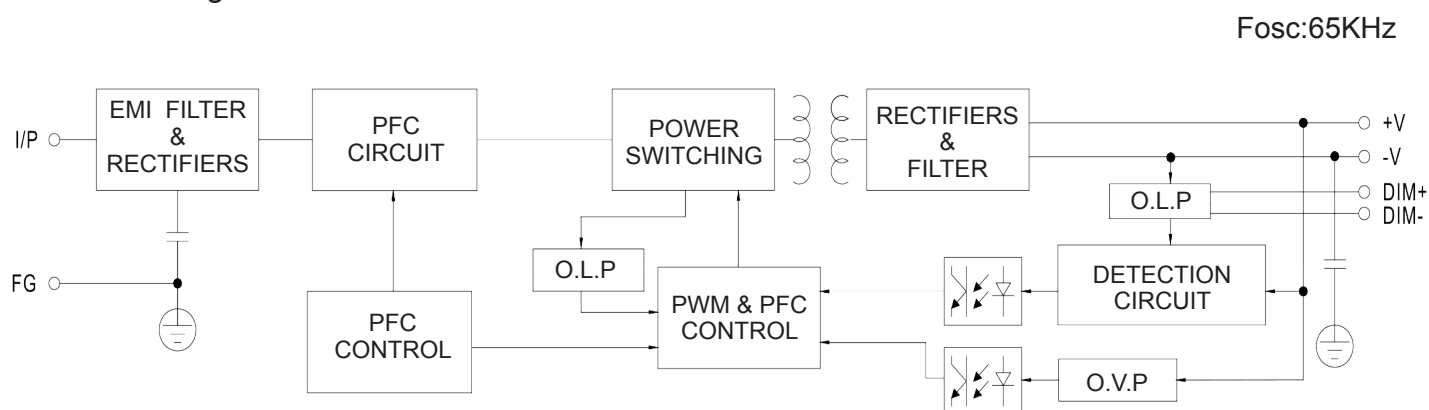
■ Description

The 0-10V constant voltage series produced by Zoran Technology is an AC-to-DC dimming driver. operates from 90~305VAC and offers models with different rated voltage ranging ~between 12V/24V/36V/48V/54V/60V etc. Thanks to the high efficiency up to 88%, with the fanless design, the entire series is able to operate for -40~ +70 °C case temperature under free air convection. It can be widely matched with all European and Austrian mainstream dimmers and lighting control systems, such as: Philips, Qisheng, crestron, Lutron and Leviton series etc. dimmers and systems, flicker free, achieve perfect soft dimming.

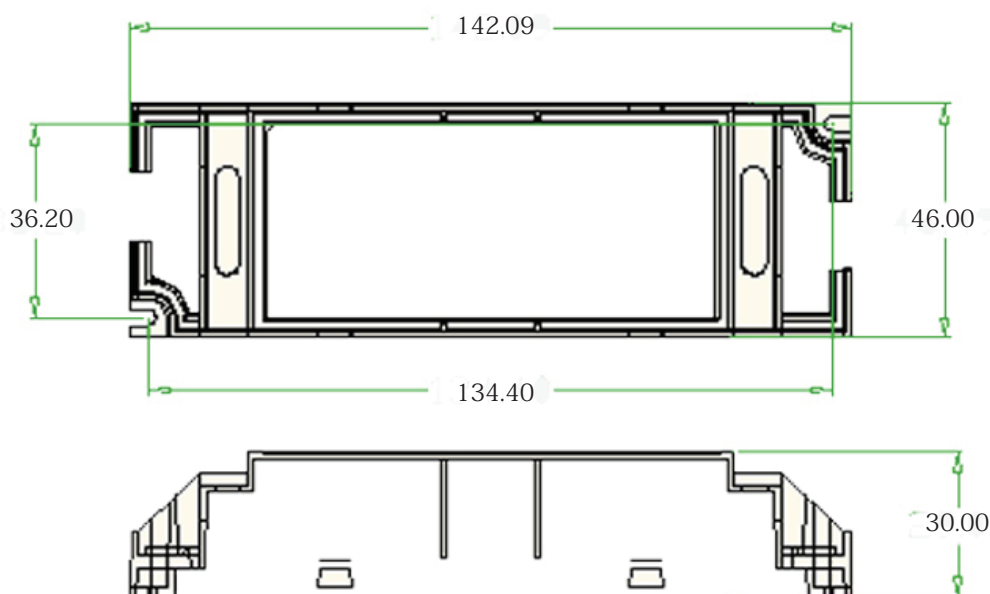
■ Electrical Specification

MODEL		ZR-GVP12NE-10W	ZR-GVP24NE-10W	ZR-GVP36NE-10W	ZR-GVP48NE-10W	ZR-GVP54NE-10W
Output	Output Voltage Note.1	12 VDC	24 VDC	36 VDC	48 VDC	54 VDC
	Opout Current Note.2	830 mA	420 mA	280 mA	210 mA	190 mA
	Rated Power	10 W	10 W	10 W	10 W	10 W
	Voltage Tolerance Note.4	±3%	±3%	±3%	±3%	±3%
	Line Regulation	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	Setup,Rise Time Note.6	1600ms,800ms/115VAC 500ms,1000ms/230VAC				
	Hold Up Time (Typ.)	10ms/115VAC 230VAC				
Input	Rate Voltage Note.5	90~265VAC OR 100-277VAC				
	Frequency Rance	48-62Hz				
	Power Factor	PF≥0.98/115VAC PF≥0.96/230VAC PF≥0.95/265VAC at full load				
	THD	THD≤16%(Bipolar)				
	Full load Efficiency	≥85%	≥86%	≥87%	≥87%	≥88%
	AC Current (Typ.)	0.1A/115VAC 0.05A/230VAC 0.04A/265VAC				
	Input signal (Typ.)	0/1-10V / PWM / Resistor				
No-load power consumption	≤1.0W					
Protection	Over Current	95-108%				
		Protection type:Constant current limiting,recoveres automatically after fault condition is removed				
	Over Load	≤120% Recovers automatically after fault condition is removed				
	Short Circuit	Hiccup Mode,Recoveres automatically after fault condition is removed				
	Over Voltage	Protection type:Shut down O/P voltage,re-power on to recover				
	Over Temperature	Shut down O/P voltage,re-power on to recover				
Environmen	Working Temperature	Tcase=-40~+70 ℃ (Refer to “Derating curve”)				
	Max Case Temperature	Tcase=+75 ℃				
	Working Humidity	20-95%RH non-condensing				
	Storage TEMP. Humidity	-40~+80 ℃ 10-95%RH				
	TEMP. Coefficient	±0.03%/ ℃ (0-50 ℃)				
Safety & EMC	Safe Standards	U8750,CSA C22.2 No.250.13-12;ENEC AS/NZS IEC EN61347-1;AS/NZS IEC EN61347-2-13 independent EN62348				
	Withstand Voltage	I/P-O/P:3.75KVAC I/P-FG:2.0KVAC O/P-FG:1.0KVAC				
	Isolation Resistance	I/P-O/P,I/P-FG,O/P-FG:100M ohms/500VDC/25 ℃ /70%RH				
	EMC Emission	Compliance to EN55015,EN61000-3-2 Class C(≥60% load);EN61000-3-3;GB17743;GB17625.1				
	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11;EN61547 heavy industry level(surge 4KV)				
Others	Dimension (L*W*H)	142*46*30 mm				
	Weight	200g				
	Packing	50pcs/10Kg/ctn				
Note	1.All parameters Not specially mentioned are measured at 230VAC input, rated load and 25 ℃ of ambient temperature. 2.Ripple&Noise are measured at 20MHz of bandwidth by using a 12”twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3.Tolerance: includes set up tolerance, line regulation and load regulation. 4.The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufactures must re-qualify EMC Directive on the complete installation again. 5.Please refer to the product warranty on Zoran Technology website http://www.zorantech.com . 6.If you need other special parameters, please contact our customer service for consultation!					

Block Diagram

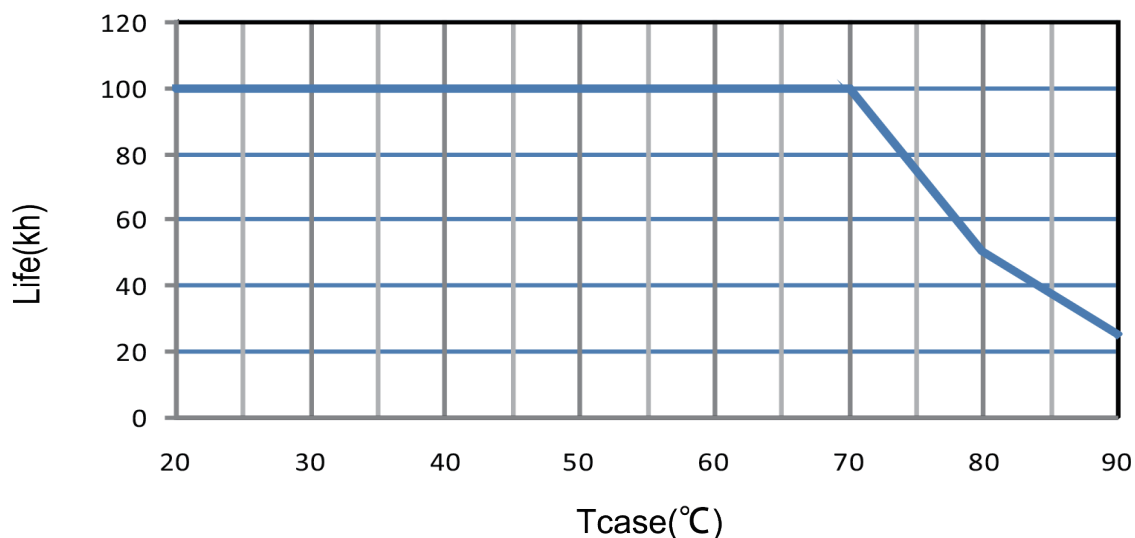


Mechanical Specification



- ※ Please connect the corresponding neutral wire (N) and fire wire (L) according to the label;
- ※ Please connect the corresponding dimming signal positive electrode (DIM+), dimming signal negative electrode (DIM-), LED lamp positive (+) and LED lamp negative (-) according to the label.
- ※ In addition, the input and output lines can be customized according to customer requirements. For more information, please contact Zoran Customer Service;

Life



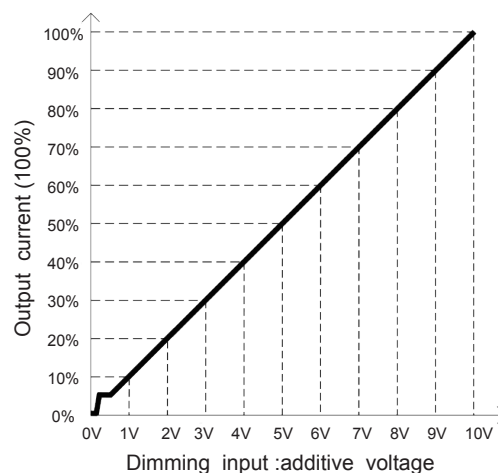
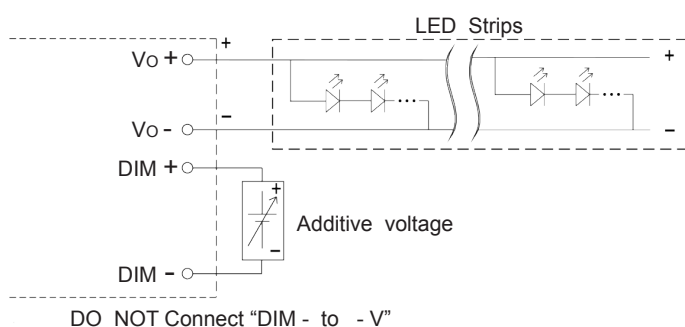
■ Dimming Operation



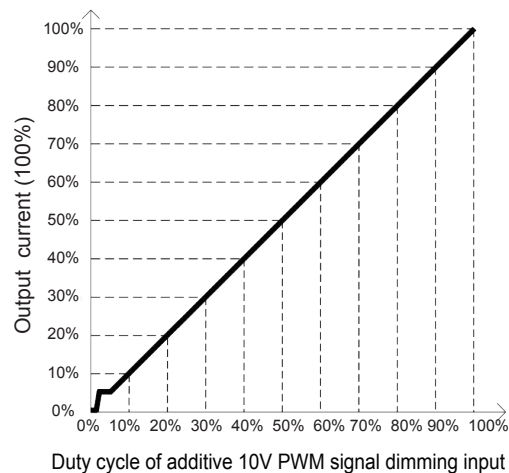
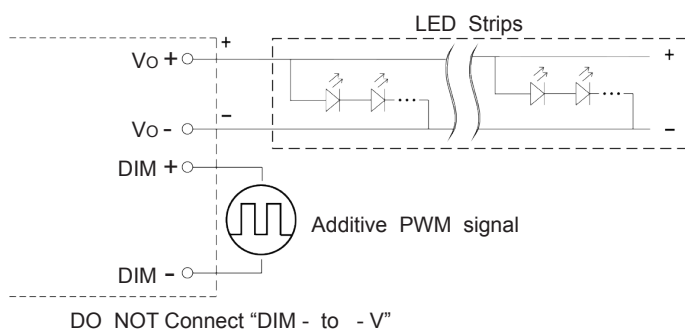
※ 4 in 1 dimming function(for E/A-Type)

- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-: 0-10VDC, or 1-10VDC, or 10V PWM Signal or resistance.
- Direct connecting to LED is suggested. It is not suitable to be used with additional drivers.
- Dimming source current from power supply: 100 μ A(typ.)

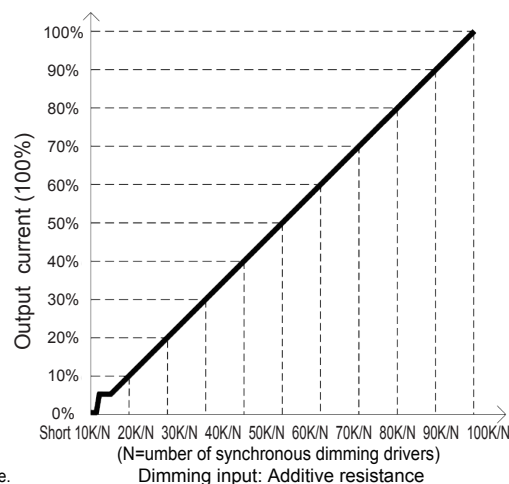
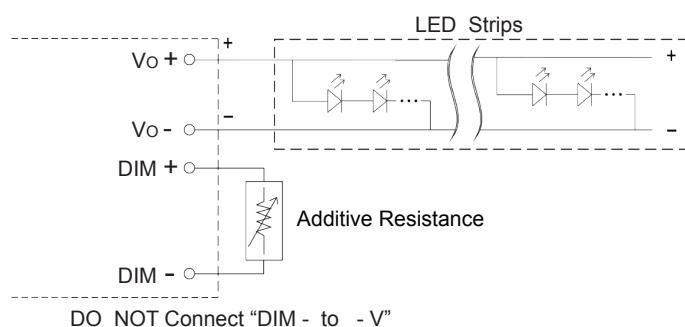
◎ Applying additive 0~10VDC:



◎ Applying additive 10V PWM signal(frequency range 100Hz~3KHz):



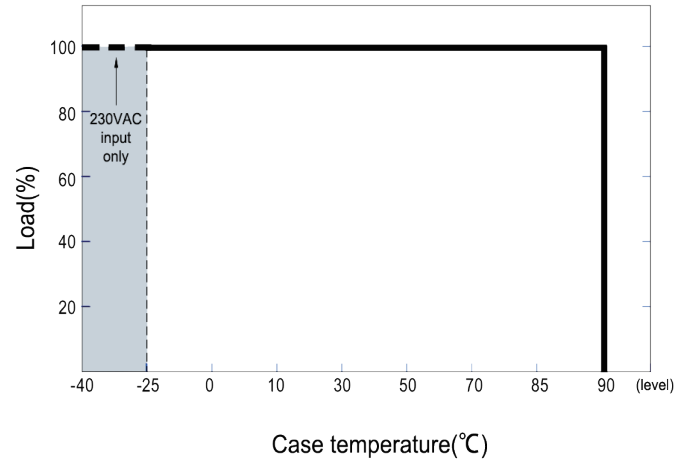
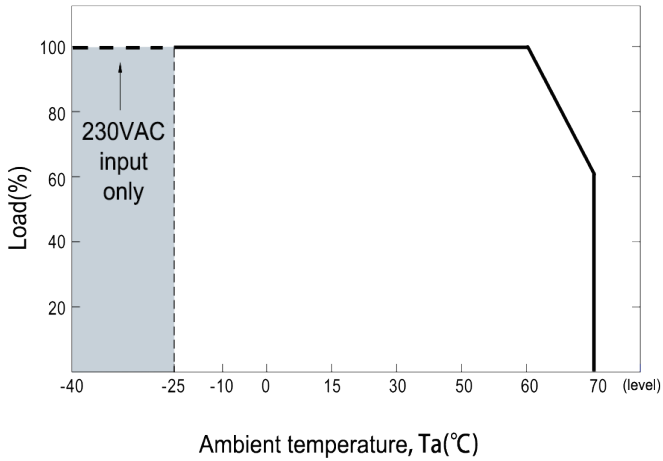
◎ Applying additive resistance:



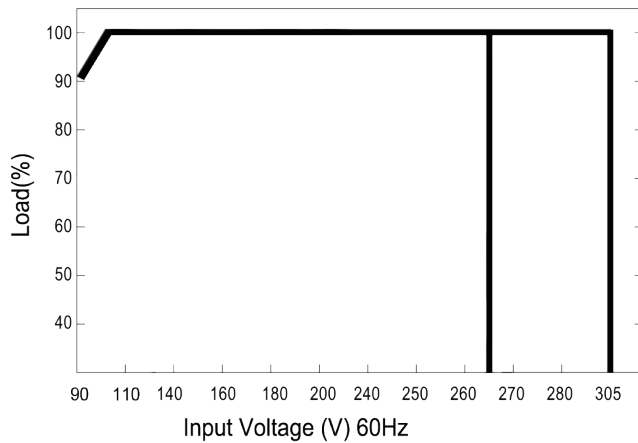
Note:

1. Min. dimming level is about 3% and the output current is not defined when $0\% < I_{out} < 3\%$.
2. The output current could drop down to 0% when dimming input is about 0k Ω or 0Vdc, or 10V PWM signal with 0% duty cycle.

Output load VS Temperature



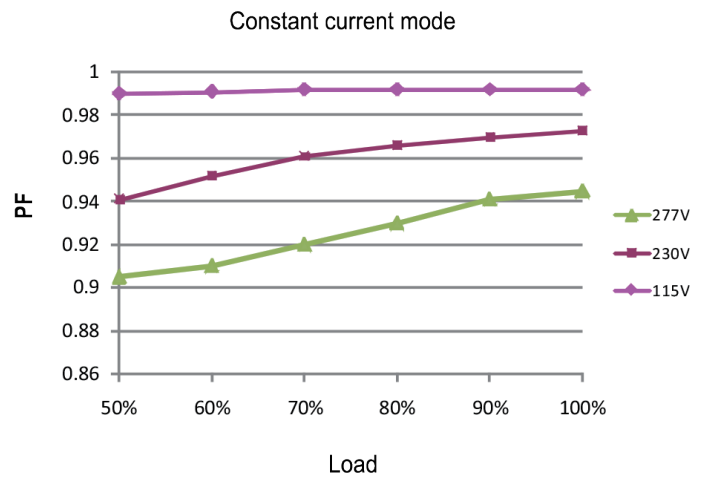
Static characteristic curve



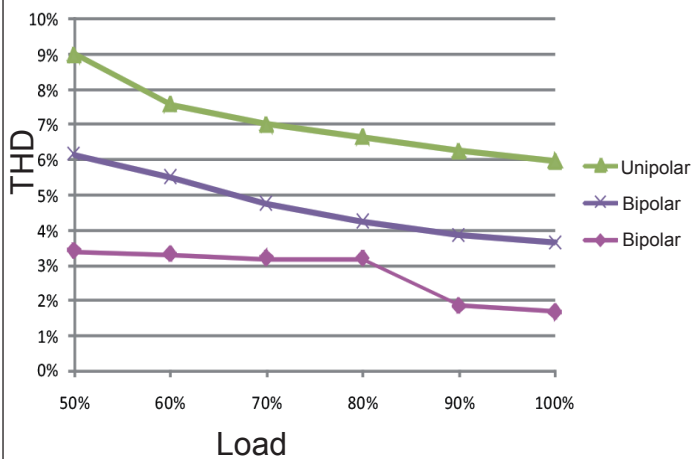
※ Derating output at low input voltage

PF characteristic curve

※ Tcase at 80°C



THD characteristic curve



Efficiency VS Load

