Junction Box Triac Dimmable LED Driver

OTM-TDJ300 series

Features:

·Output constant voltage
·UL cUL listed, Class P, Type HL, FCC, NEMA 4X, T24
·Universal input, 110-277Vac
·Build in active PFC, typical power factor>0.95, THD<10%@120V Max. load
·High efficiency : up to 91%
·Load: 0.01-100%
·Short-circuit, over-temperature, over-load protection
·Full protection metal case, for dry, damp, wet location
·Flicker-free·Suitable for LED lighting and moving sign applications

SELV Intertek LISTED E525847 FC RoHS Class 2 WET Class P TYPE HL

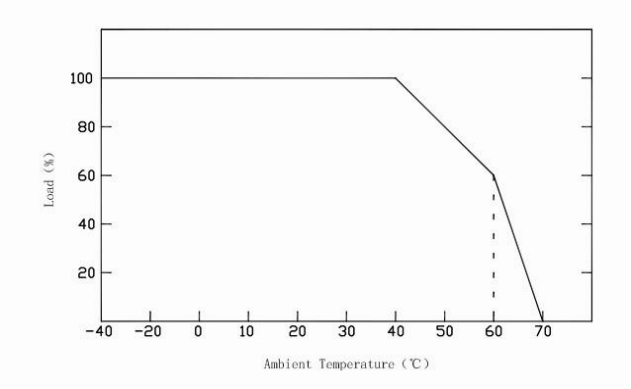
Product advantage：

•Dim-all: Triac/0-10V/1-10V/10V PWM/Potentiometer
•Switch to PWM or Voltage regulation output（**American Invention Patent**）
•Dimming effect: Voltage Reduce mode: 100%-0.01% dim, stepless dimming,flicker-free, PWM dim mode:100-0.1% dim, flicker-free
•Triac dim mode: Forward phase & reverse phase, MLV, ELV dim
•Exclusive patent design of “Clamshell” junction box,low-profile logo
•Flexible wiring compartment to adjust the AC and DC wiring space
•Metal shell NEMA 4X for indoor and outdoor use; Wet, damp, and dry location
•Title 24 JA8 compliant
•Constant voltage type, fine tune of output voltage
•Super low loading request, works perfect at 0.01-100% load.
7 years warranty
Dimming range: 100%-0.01% Ultra Deep Amplitude
No Vpeak-peak during driver on/off and dimming, no harm to the LED for long-term using, and slow down the speed of lumen depreciation.
Works with single channel CCT warm-dim LED strip/tape (2 wires).
Switching different output mode, can be compatible with more different types of LED lamps
compatible with DC-DC design LED fixture, such as MR16, PAR, wall washer, linear lighting, LED strip/type

■ Specification

Model		OTM-TDJ300-12	OTM-TDJ300-24	OTM-TDJ300-36	OTM-TDJ300-48
Certificates		UL, cUL listed, Type HL rated, FCC NEMA 4X,T24,			
Output	DC Voltage	12V	24V	36V	48V
	Rated Current	25A	12.5A	8.3A	6.25A
	Rated Power	300W	300W	300W	300W
	Voltage Tolerance	±0.5V			
	Voltage Regulation	±0.5%			
	Load Regulation	±1%			
Input	Voltage Range	110-277VAC			
	Frequency Range	47-63Hz			
	Power Factor（Typ.）	@ full load 0.99@120VAC 0.98@277VAC			
	THD（Typ.）@ full load	<20% 120VAC &277VAC			
	Efficiency（Typ.）@ full load	12V/89% @120Vac 90% @277Vac 24V/36V/48V 90% @120Vac 91%@277Vac			
	AC Current（Max.）	3.10A@110Vac			
	Inrush Current （Typ.）	20A, 50%, 1.9ms @120VAC; 35A, 50% 1.9ms @277VAC			
	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℃±10℃ shut down o/p voltage, automatically recover after cooling.			
Environment	Working TEMP.	-40～+60℃ (see below derating curve)			
	Working Humidity	20～90%RH, non-condensing			
	Storage TEMP. Humidity	-40～+80℃，10～95%RH			
	TEMP .coefficient	±0.03%/℃（0～50℃）			
	Vibration	10～500Hz, 5G 10min./1 cycle,period for 60min. each along X,Y,Z axes			
Safety& EMC	Safety standards	UL8750+UL1310			
	Withstand voltage	I/P-O/P:1.88KVAC			
	Isolation resistance	I/P-O/P:100MΩ/500VDC/25℃/70%RH			
	EMC EMISSION	FCC Part 15 B			
others	Net. Weight	1.45Kg			
	Size	289*132*42.5mm (L*W*H)			
	packing	10PCS/CTN SIZE:340*295*295mm(L*W*H)			
Notes	1. All parameters if NOT specially mentioned are measured at 120VAC input , rated load and 25℃of ambient temperature. 2. To extend the driver's using life ,please reduce the loading at lower input voltage.				

■ Derating Curve

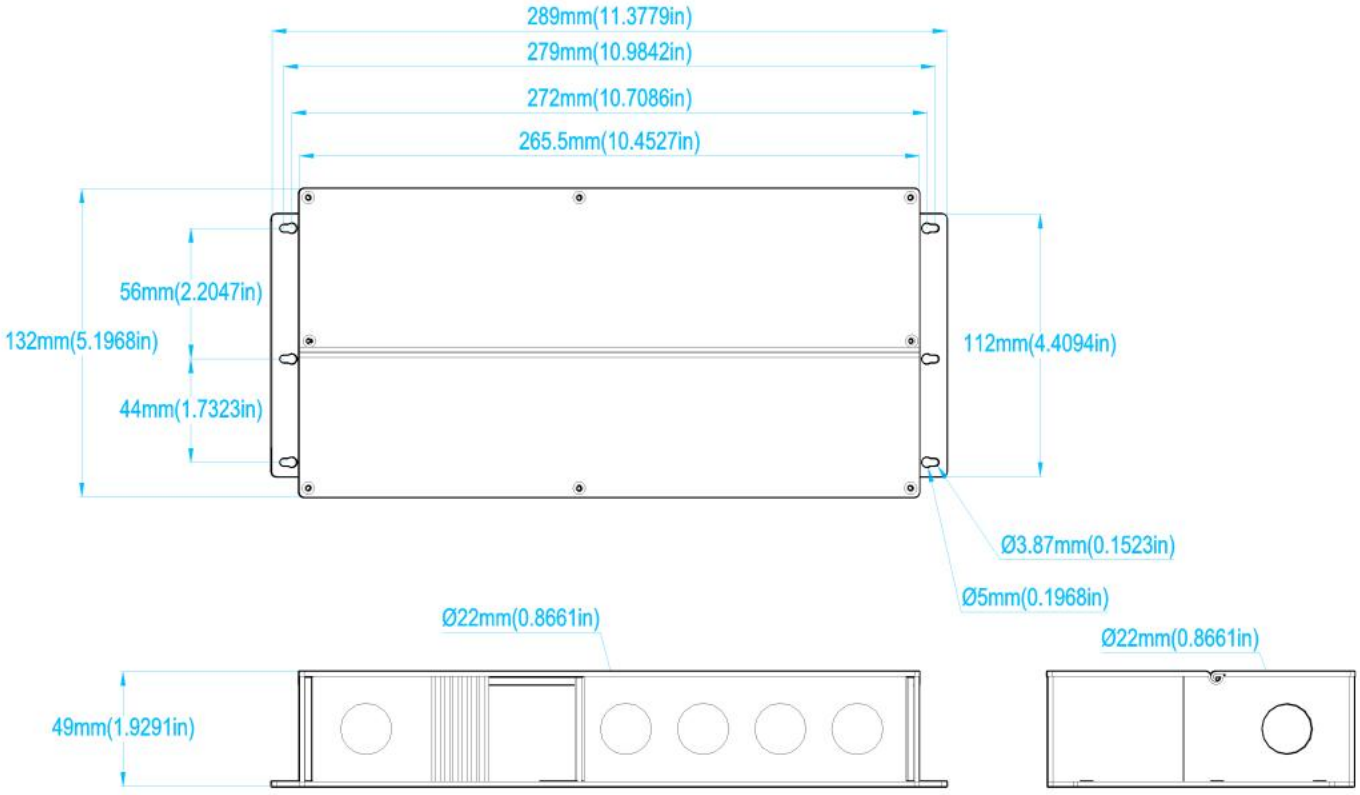


To extend their life, please refer to the Derating Curve and derate according to the temperature.

■ Mechanical Specification

Unite: mm

Tolerance: 0.5-2mm



※ Input wire Black and White to be connected to AC L and N ,Green wire go ground,

※Output wire Red to LED Positive side (+) , Black to LED Negative side (-).

※Please make sure your connect these correctly otherwise your product will not function correctly and could be damaged.

※Note: Any other requests we can customized.

■ Connecting Diagram

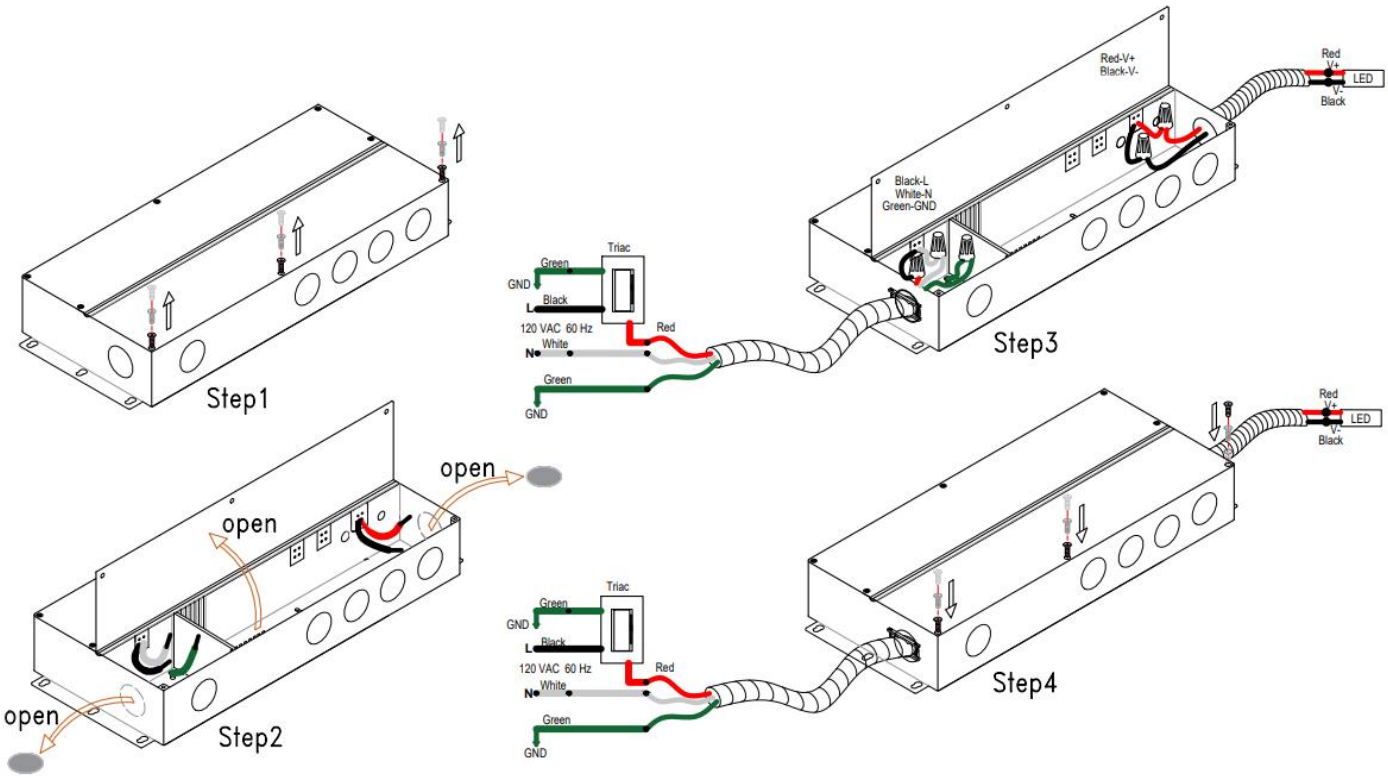
※Using TRIAC/Phase cut dimming

1.The Pulse-Width Modulation (PWM) of output voltage can be adjusted through input terminal of the AC phase line(L) by connection a phase /Triac dimmer of lighting system.

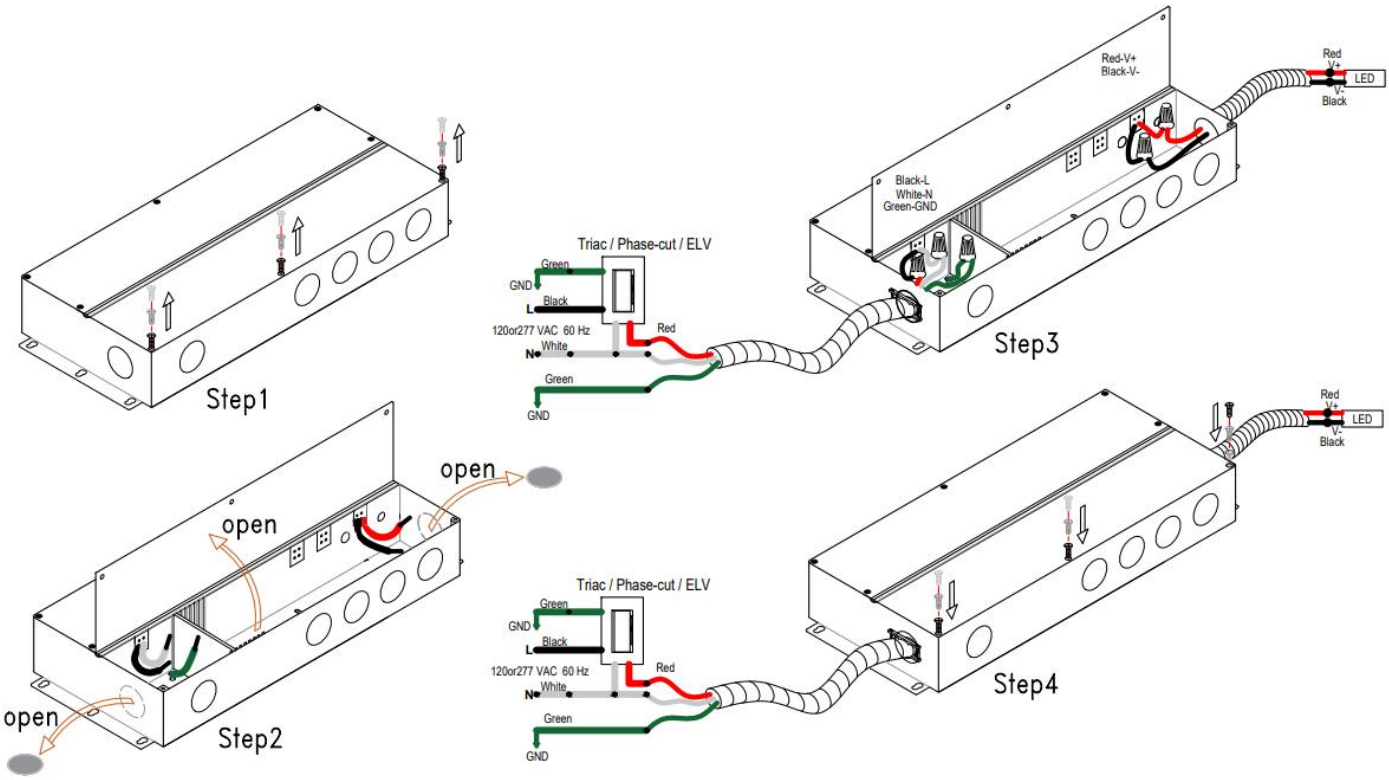
2.Work with forward phase /leading edge ,MLV and reverse phase /trailing edge ,ELV,TRIAC dimmers.

3.Please try to use dimmers with power at least 1.5 times as the output power of the driver.

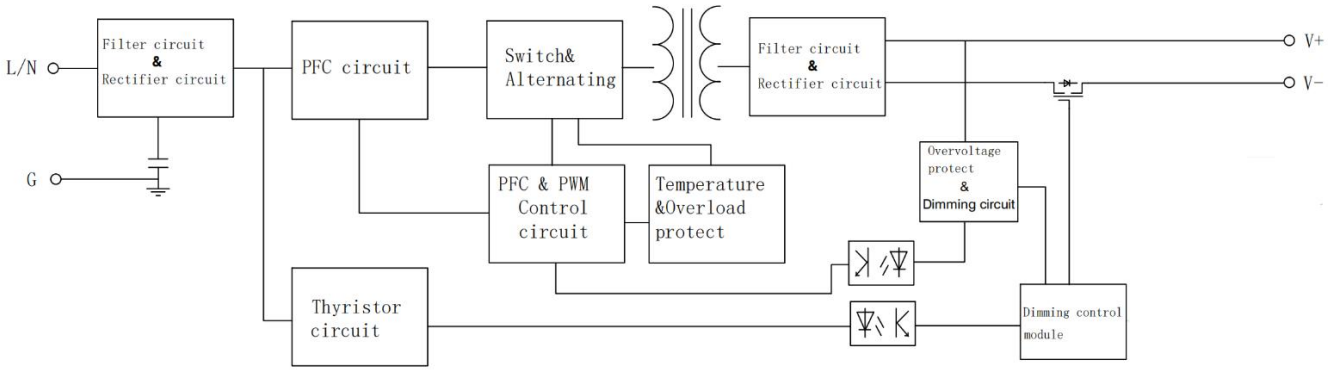
UsingTriac MLV wiring diagram



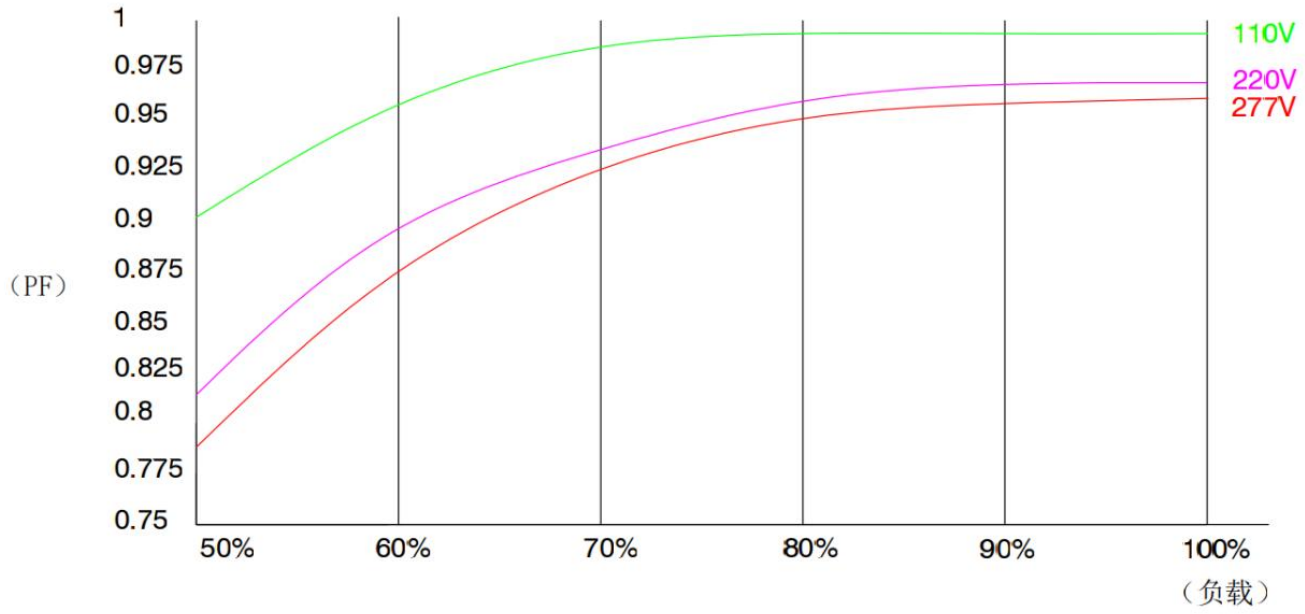
UsingTriac ELV wiring diagram



※The topology

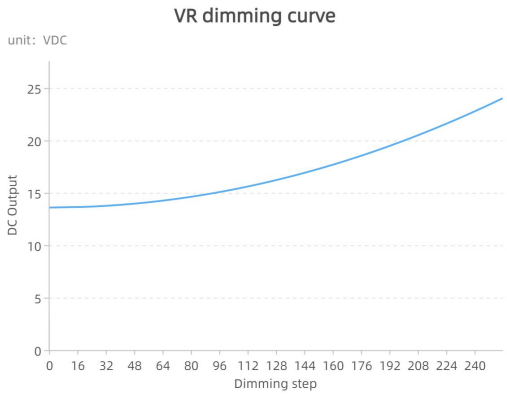


※PFC load graph



※PWM dimming curve

※VR dimming curve



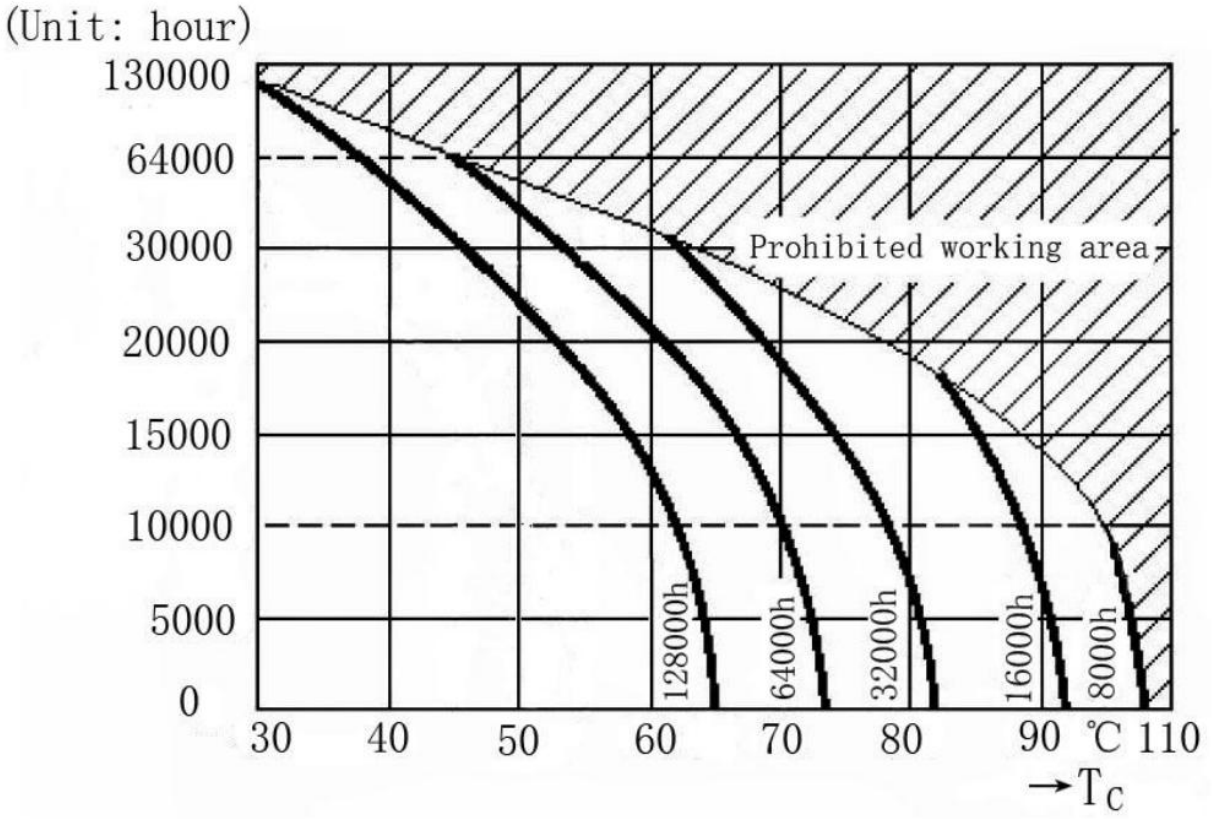
■ Instruction:

1)This driver should be installed by qualified and professional person;

2)Please make sure the driver is installed with adequate ventilation around it to allow for heat dissipation.

3)Ensure that wiring is correct before test in order to avoid light and power supply damage;

Power supply operating temperature and life curve



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