HP60 - 5 in 1 Dimmable Series

60W Constant Voltage LED Drivers
Triac/0-10v/1-10v/Potentiometer/10V PWM

Features:

- Input Voltage: 200-240V
- Load: 0.01-100%
- High Efficiency: up to 80%
- Flicker-free ERP
- Protection: Short Circuit/Over Loading/Over Temperature
- Build in active PFC, typical power factor >0.95
- 3 years warranty

CE RoHS Compliant SELV

Model No	Power	Output Voltage	Output Current	Weight	Size (L*W*H)	Full Carton Packing
HP60-12	60W	12V	5A	400g	212*56*24mm	20PCS/CTN

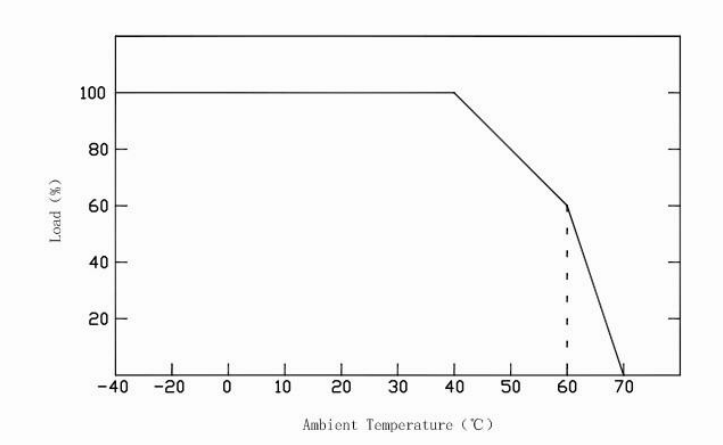
Input	Input Voltage:	200-240VAC
	Input Frequency:	50/60Hz
	Power Factor (Typ.) @ full load	0.95@277VAC
	THD (Type.) @ full load	<20% @277VAC
	Efficiency (Type.) @ full load	12V 86%@277Vac
	Leakage Current	<0.50mA
Output	DC Voltage:	12V
	Rated Current:	2A
	Rated Power:	60W
	Voltage Tolerance:	±0.5V
	Voltage Regulation:	±0.5%
	Load Regulation:	±1%
Protection	Short Circuit	Hiccup mode, recovers automatically after fault condition is removed
	Over Loading	≤120%
	Over temperature	100°C±10°C,Shut down o/p voltage, recover automatically after temperature goes down.
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 .co efficient	±0.03%/°C (0~50°C)
	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
Other	Dimmable	Triac/0-10V/1-10V/10V PWM/Potentiometer
	Ingress Protection	IP20
Notes	1. All parameters if NOT specially mentioned are measured at 120VAC input, rated load and 25° of ambient temperature. 2. To extend the drivers life ,please reduce the loading at lower input voltage.	

Product Advantages:

- Switch to PWM or Voltage regulation output
- Dimming Effect:
  Voltage Reduce mode: 100%-0.01% dim, stepless dimming, flicker-free
  PWM dim mode: 100%-0.01% dim, flicker-free
- Triac dim mode: Forward phase & reverse phase, MLV, ELV dim
- Flexible wiring compartment to adjust the AC and DC wiring space
- Title 24 JA8 compliant
- Constant voltage type, fine tune of output voltage
- Super low loading request, works perfectly at 0.001-100% load
- 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 the lumen depreciation
- Switching different output modes, can be compatible with different types of LED lamps
- Compatible with DC-DC design LED fixture, such as MR16, PAR, wall washer, linear lighting, LED strip/type

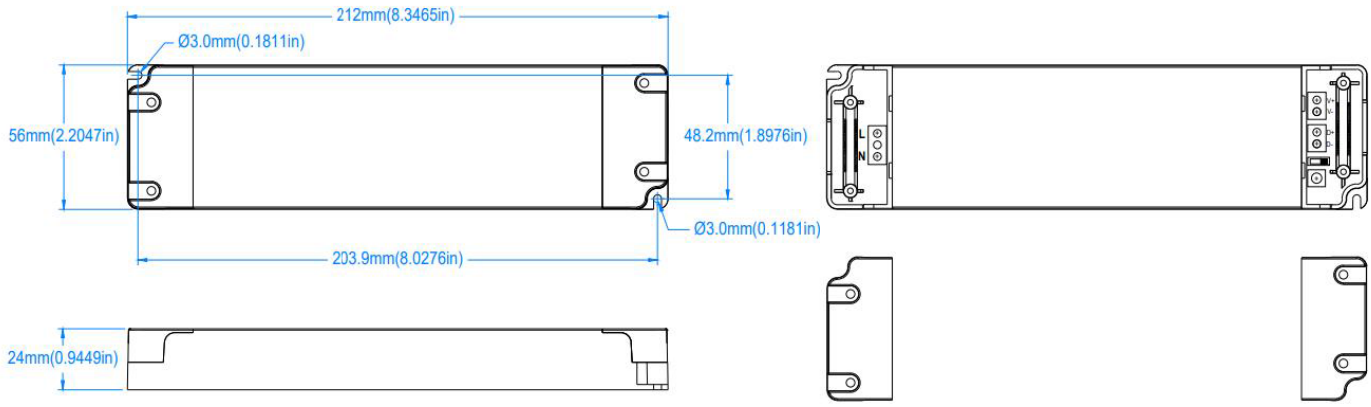
Derating Curve



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

Mechanical Specification

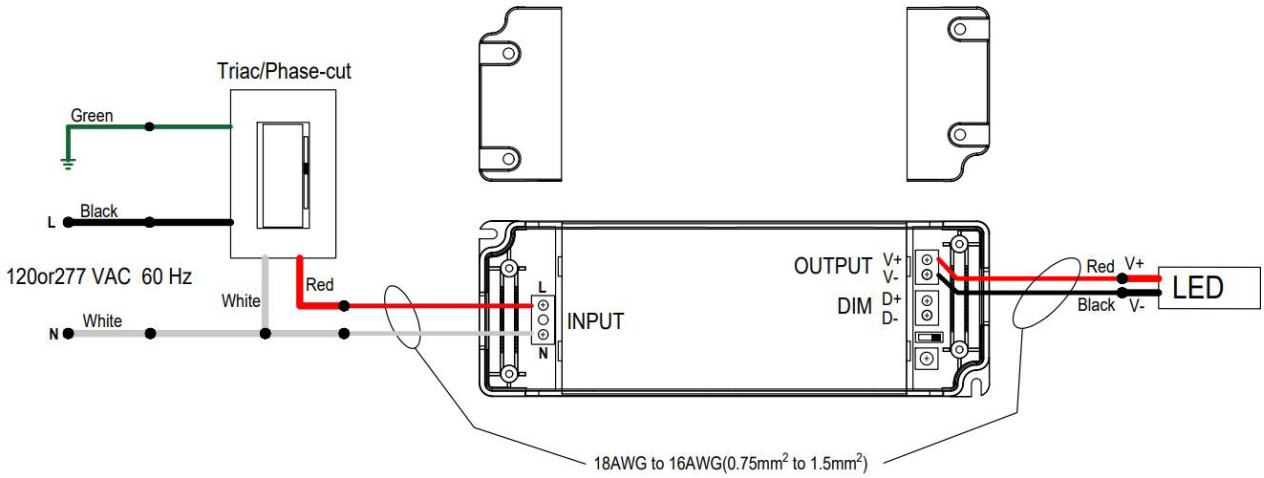
Unite: mm
Tolerance: 0.5-2mm



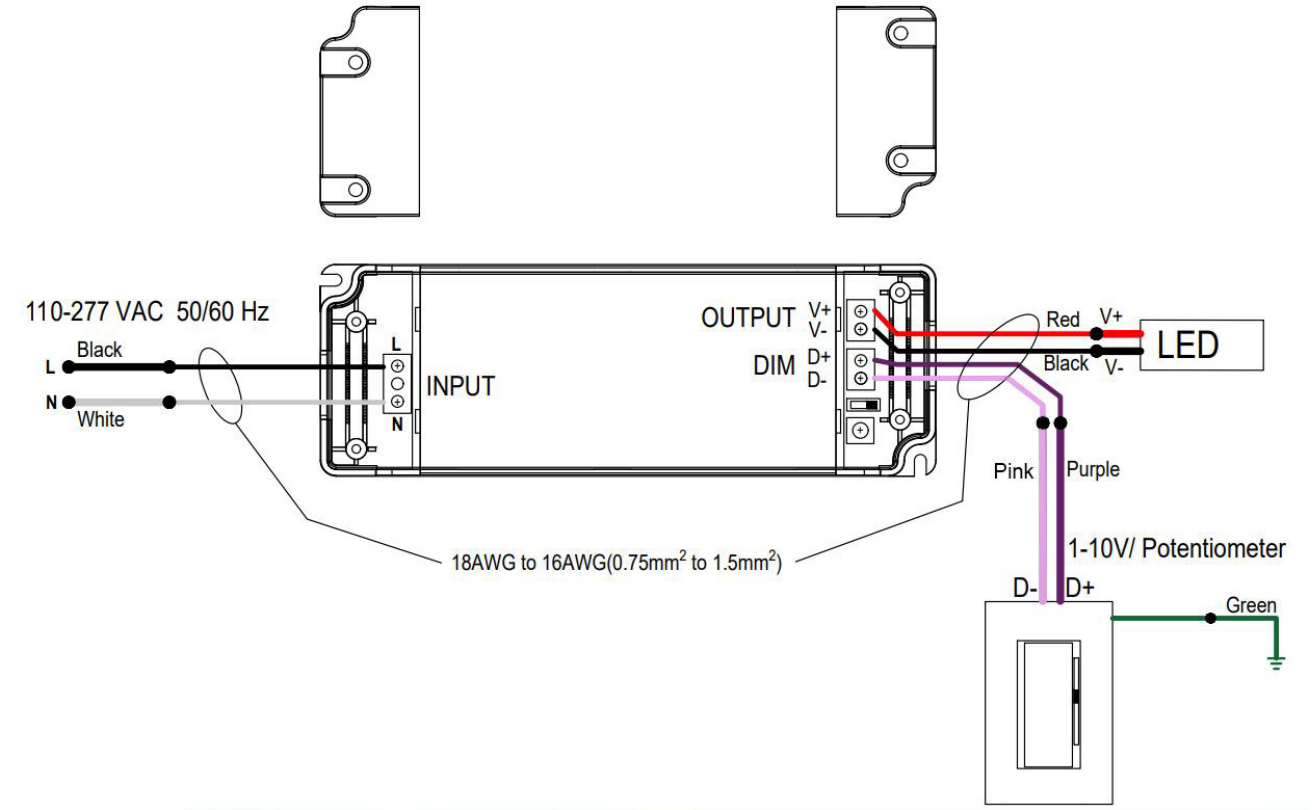
- Input with terminals Live(L) and Neutral(N) wires to be connected AC
- Output LED SEC output Positive (LED+) , output negative(LED-). Connected to LED light.
- Output terminals DIM (+) to 0/1-10V dimmer signal(+),DIM (-) white connect to 0/1-10V dimmer signal (-)
- Please DO NOT connect “DIM-“ to “LED-“, “DIM+” to “ LED+” ,or other incorrect connection
- Please make sure your connect these correctly otherwise your product will not function correctly and could be damaged

Wiring Diagram for Triac/Phase cut dimming

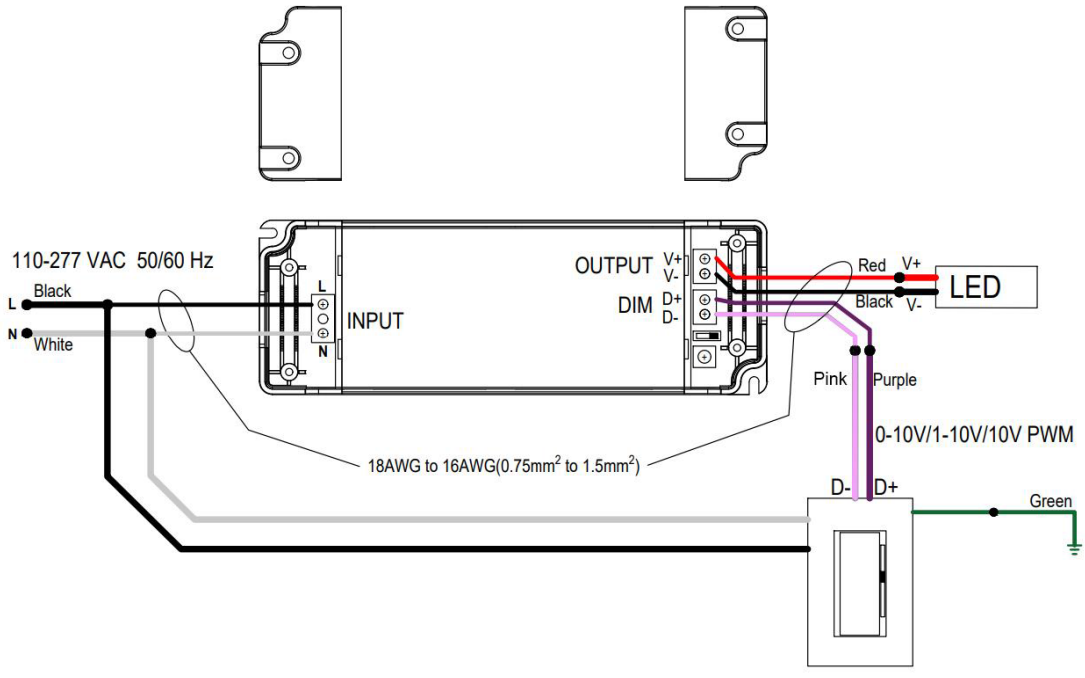
1. The Pulse-Width Modulation (PWM) of output voltage can be adjusted through the input terminal of the AC phase line (L) by connection of a phase/Triac dimmer
2. Works with forward phase/leading edge, MLV and reverse phase/trailing edge, ELV, TRIAC dimmers
3. Please try to use dimmers with power at least 1.5 times as the output power of the driver



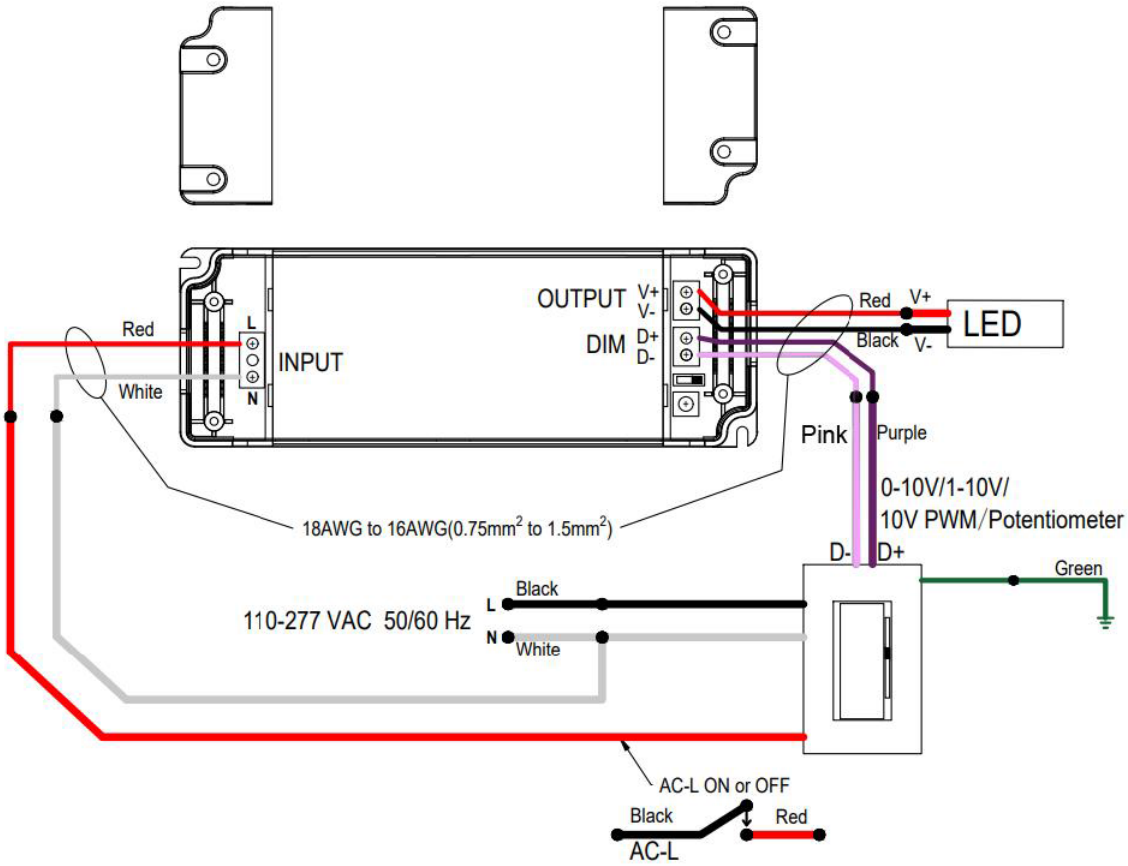
Wiring Diagram for 0-10/1-10V Dimming (1)



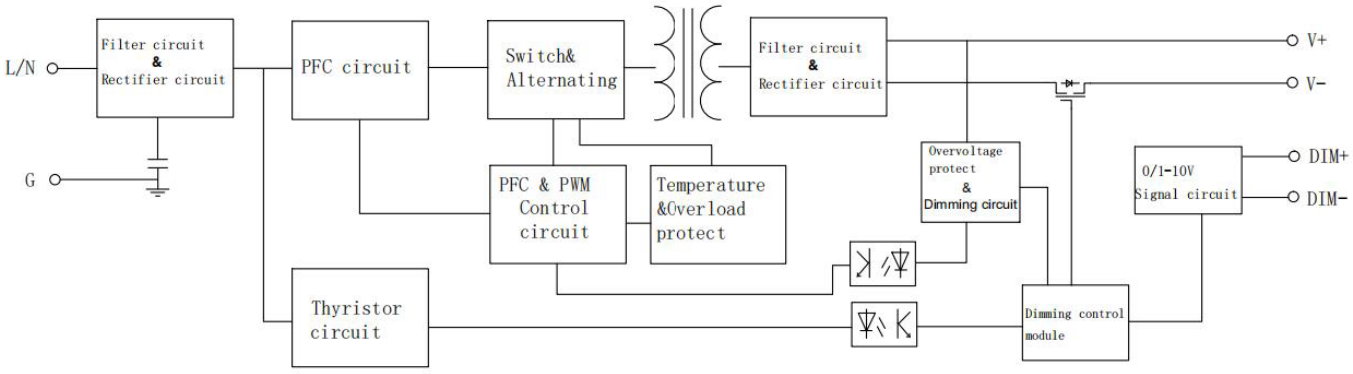
Wiring Diagram for 0-10/1-10V Dimming (2)



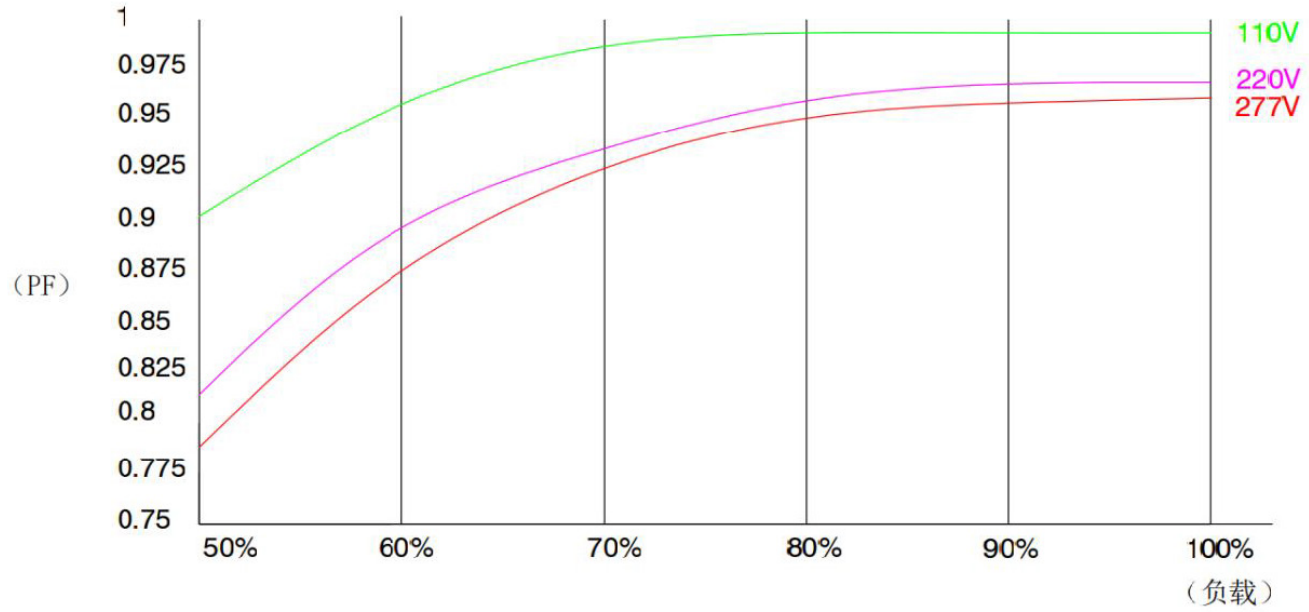
Wiring Diagram for 0-10/1-10V Dimming (3)



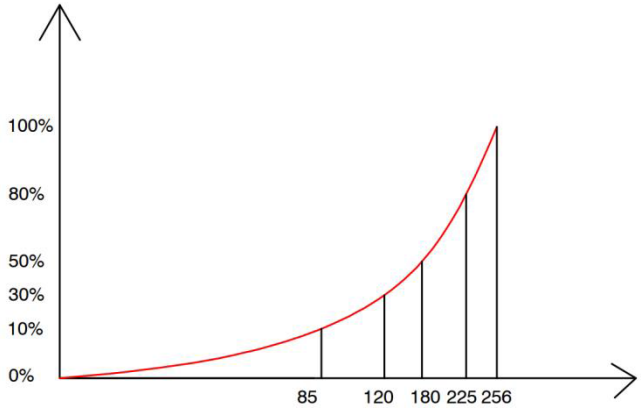
The Topology



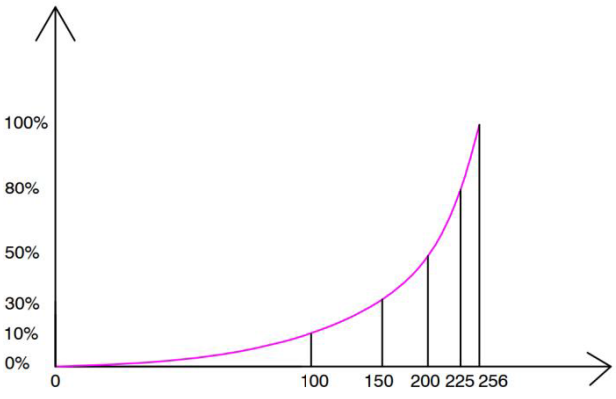
PFC load graph



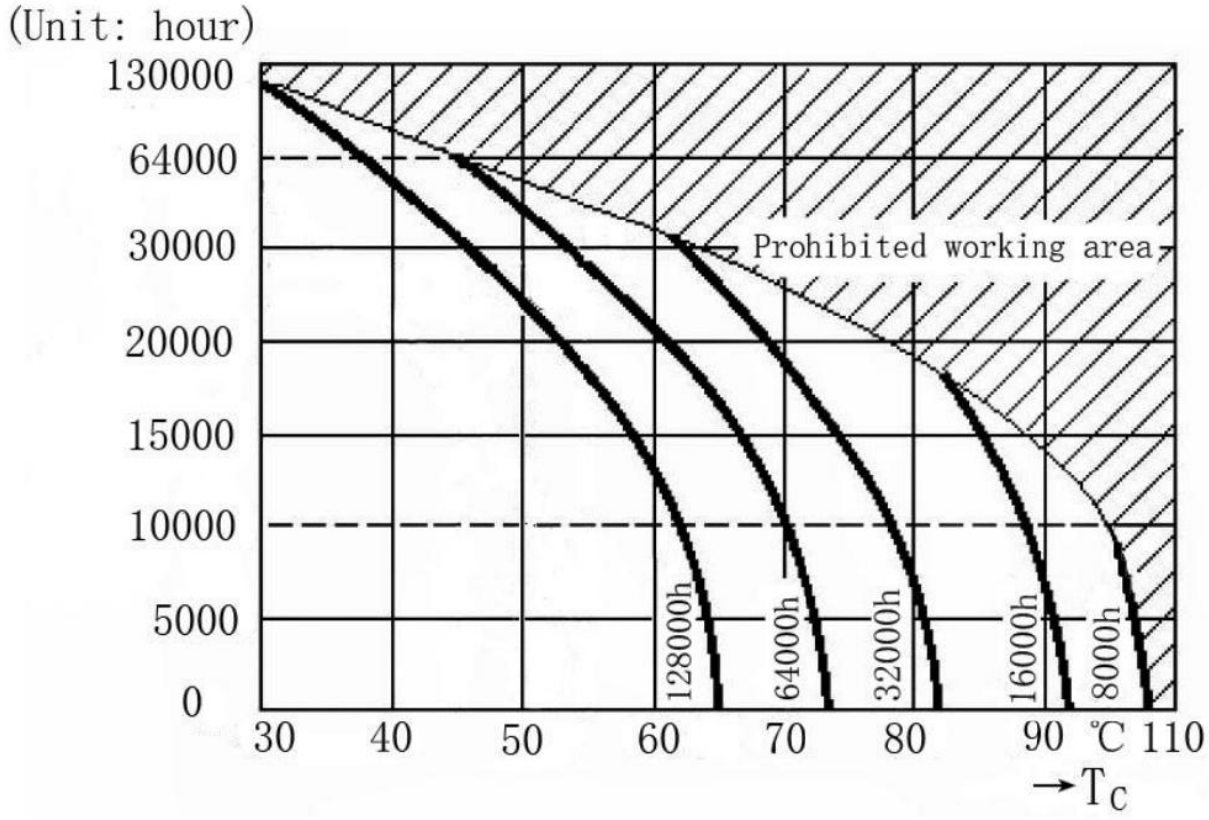
PWM Dimming Curve



VR Dimming Curve



Instructions

1. This driver should be installed by a qualified and professional person
2. Please make sure this 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 damaage

Power supply operating temperature and life curve