MUP30AT-1W12V-B

Summary

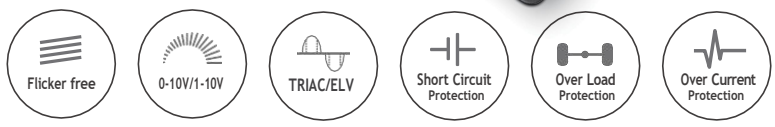
MUP30AT-1W12V-B is a constant voltage mode output LED driver.
The driver supports leading edge (Triac) and trailing edge (ELV) dimmer, 0-10V to achieve a smooth dimming effect.

Application

LED Strip Light

Product Features

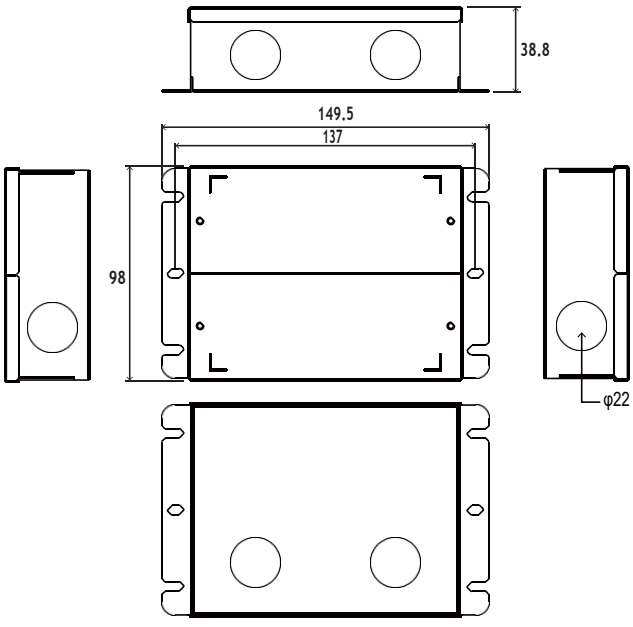
· Single channel constant voltage output,2.5A Max
· Wide input voltage of 120VAC ~ 277VAC
· Dimming range of 1%-100%, and dimming effect smooth, Flicker free
· 100% output when no dimming signal input, can be used as normal power supply
· Protection: Over load; short circuit; Over Current
· IP54, Suitable for LED lighting fixtures



Technical Paramaters

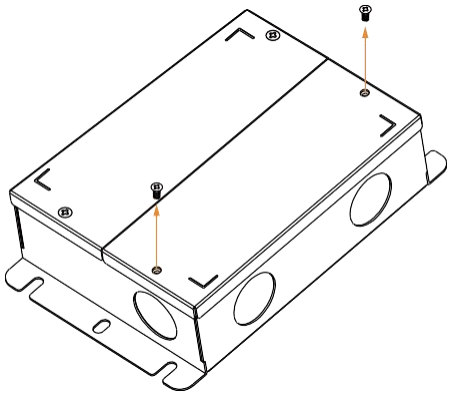
Model	MUP30AT-1W12V-B	
Input	Efficiency	≥74%@120VAC, ≥78%@277VAC, full load
	Voltage	120VAC-277VAC
	Frequency Range(Hz)	50/60Hz
	AC Current(max)	0.40Amax @120VAC, 0.25Amax@230VAC, 0.2Amax@277VAC
	PF	≥0.95@120VAC, ≥0.9@277VAC, full load
	THD	<10%@230VAC, <15%@277VAC, full load
	Inrush Current(max)	Cold start, 5A@120VAC 680us 10A@277VAC 920us
	Standby power	<2.5W@120VAC
	No load power	<2.5W@120VAC
	Turn on delay Time	<0.75s, @120Vac (When the light begins to shine)
Output	Current	2.5A
	Voltage	12VDC
	Voltage Range	12VDC ±5%
	Power	30W
	Channel	1
	Ripple	≤360mV
	PWM Frequency	20K Hz
Function	Dimming Type	0-10V, TRIAC/ELV(@120VAC 60Hz)
	Dimming Range	1%-100%(0-10V) 1%-100%(TRIAC/ELV)
	Dimming curve	Logarithm
	Flicker	Flicker free
Protection	Short Circuit	Hiccup protection, self recovery after troubleshooting
	Over Load	Hiccup protection, self recovery after troubleshooting
	Over Current	Hiccup protection, self recovery after troubleshooting
Safety&EMC	Surge	L-N 2500VAC L-N-PG 2500VAC
	Withstand Voltage	I/P-O/P: 2000Vac/1min/<5mA I/P-PG:1500Vac/1min/<5mA O/P-PG:500Vac/1min/<5mA O/P-DIM(Signal port):500Vac/1min/<5mA
	Safety standards	UL8750 UL1310 CSA25013.CSA Class P
	EMC Eission	FCC PART15B
	EMC Immunity	IEC 61000-4-2-3-4-5-6-8-11
	Insulation Resisance	5MΩ
Others	Working Temp.	-20℃~+60℃ (-4°F-140°F)
	Storage Temp., Humidity	-40℃~85℃, 20-90%RH (-40°F-185°F)
	tc	75℃ (167°F)
	Material	Metal
	IP Rating	IP54
	Lifetime	50,000小时@tc:75℃ (167°F)
	Warranty Condition	5 years
	Switch Cycle	25,000 times
	Packing(weight)	Net weight: 556g (1.23 lb)±5%/PCS; 18PCS/Carton; 11.5kg(25.35 lb)±5%/Carton; Carton Size: 327*327*166mm(12.87*12.87*6.54 Inch)(L*W*H)
	Dimension	150*98*39mm(5.91*3.86*1.54 Inch)(L*W*H)

Dimension(mm)

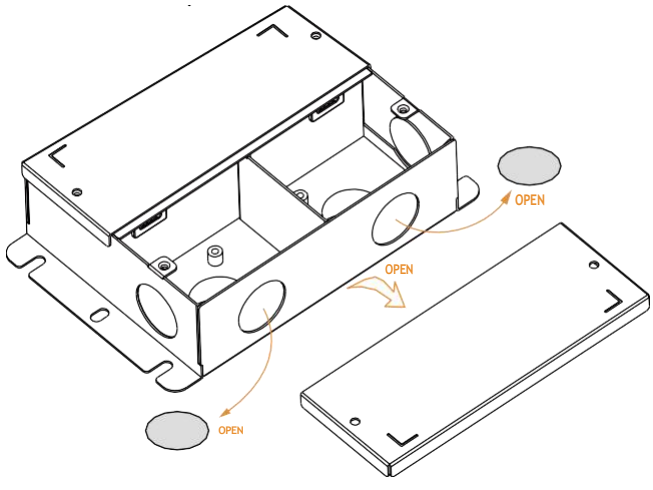


Wiring

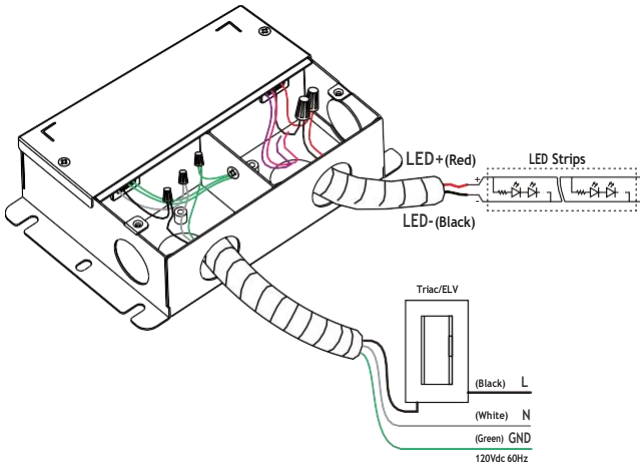
Step 1



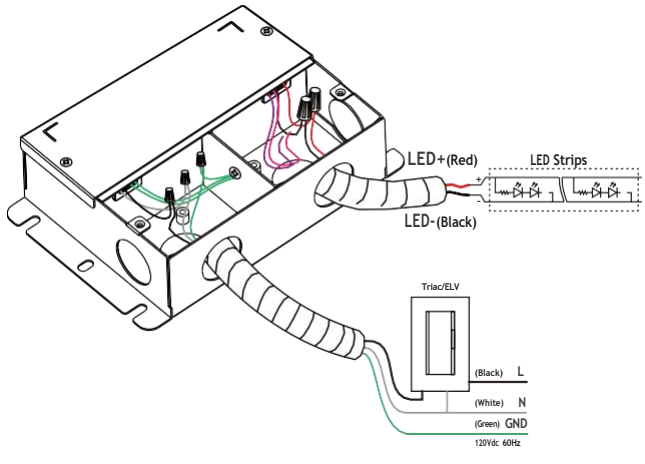
Step 2



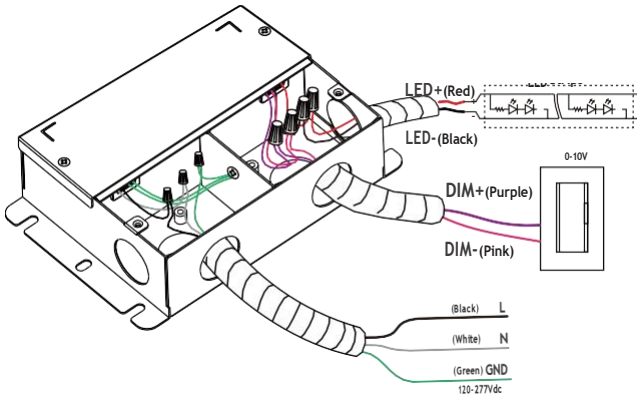
Step 3 UsingTriac MLV wiring diagram



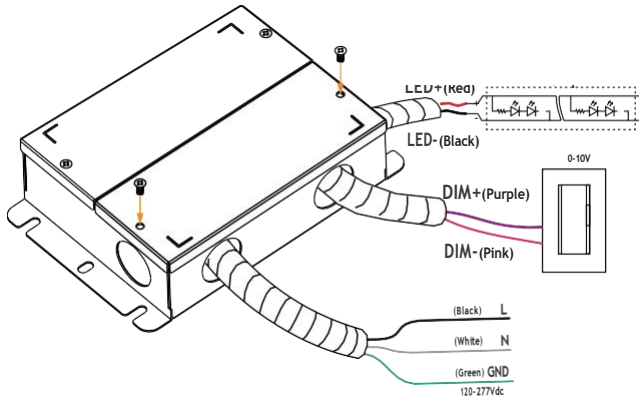
Step 4 UsingTriac ELV wiring diagram



Step 5 0-10V wiring diagram



Step 6

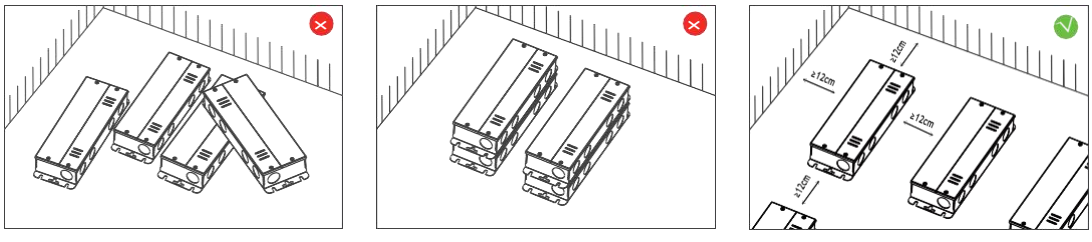


Max. quantity of drivers per miniature circuit breaker

Specification item	Value	Value	Condition
Inrush current I_{peak}	5A (120V)	10A (277V)	Input Voltage120V/277V
Inrush current T_{width}	680us (120V)	920us (277V)	Input Voltage120V/277V, measured ta 50% I_{peak}

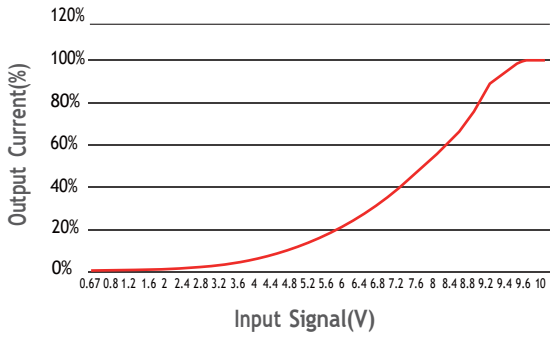
MCB	Input Voltage 120V Drivers	Input Voltage 277V Drivers	MCB	Input Voltage 120V Drivers	Input Voltage 277V Drivers
B10	25pcs	8pcs	C10	25pcs	13pcs
B13	32pcs	10pcs	C13	32pcs	17pcs
B16	40pcs	12pcs	C16	40pcs	21pcs
B20	50pcs	16pcs	C20	50pcs	26pcs
			D16	40pcs	42pcs

Installation Precautions

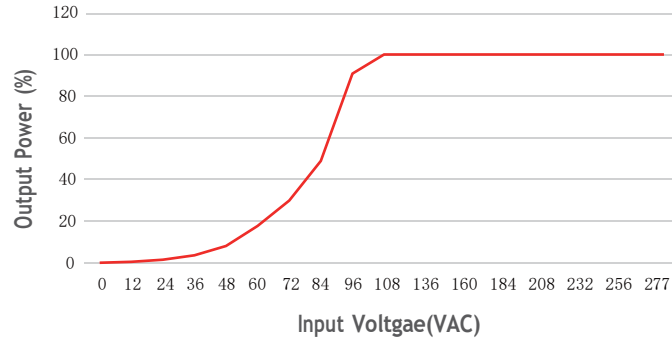


Please do not stack the products. The distance between two products should be>12cm so as not to affect heat dissipation and the lifespan of the products.

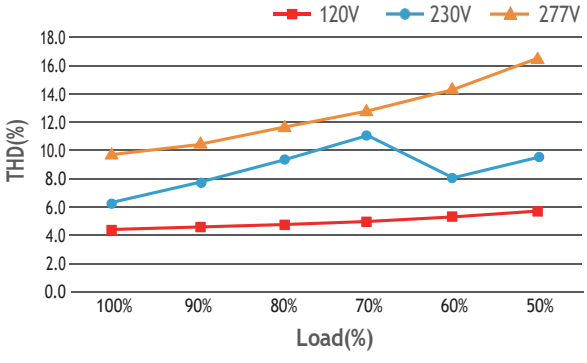
0-10V Dimming Curve



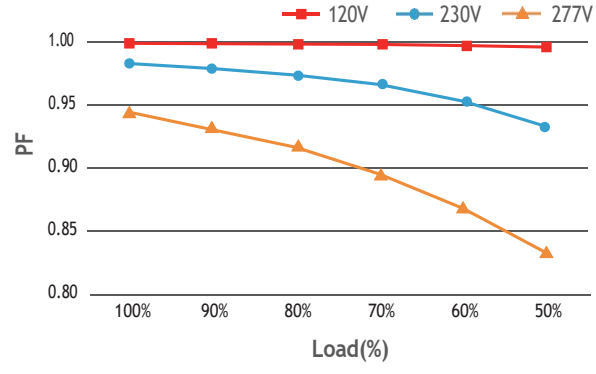
Trailing edge (ELV) Dimming Curve



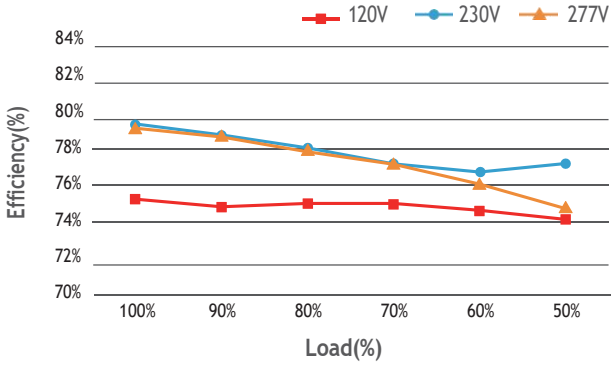
THD vs Load



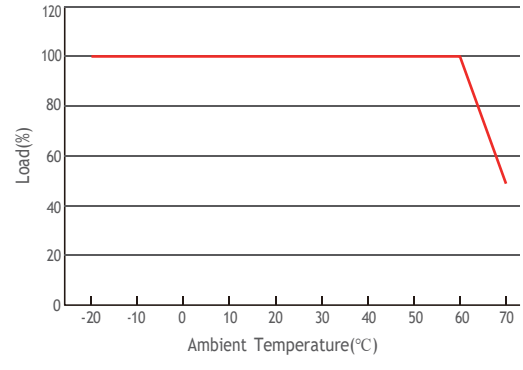
PF vs Load



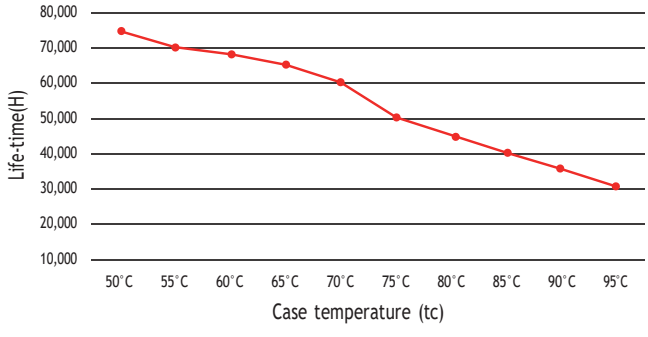
Efficiency vs Load%



Derating Curve



Life-time vs. case temperature



The life-time of the led driver is shown in the figure above
(calculated based on the 90% survival rate).
The relation of tc ta temperature depends also on the luminaire design.

Cautions

This product must be installed and adjusted by a qualified professional.		
1	Confirmation of installation conditions	· **Waterproof and Protection:** Install in a suitable location according to the waterproof and protection requirements of the power supply. Products without waterproof function should be protected from direct sunlight and rain. When installing outdoors, please use a waterproof box for protection. · **Heat dissipation requirements:** The drive power supply should avoid exposure to high temperature environments. Please ensure that the working environment temperature is within the recommended range. To ensure proper heat dissipation of the drive power supply, a well ventilated area should be selected for installation. Good heat dissipation conditions can help extend product lifespan.
2	Power check	· Before use, check the product parameters and confirm that the output voltage and current of the LED power supply meet the requirements
3	Safe wiring	· Use cables that meet the specifications to ensure that the cross-section of the wire matches the requirements of the driving power supply. Solid cables typically measuring 0.75-2.5 mm^2 , (Please refer to the silk screen printing or wiring diagram in the instruction manual for specific wire diameter requirements). · If the power supply (metal casing) is installed on a grounded lighting component or equipment, the power supply needs to be grounded.
4	Wiring confirmation	· Before power on debugging, ensure that the wiring is secure and avoid poor contact to prevent unstable current or equipment damage.
5	Repair suggestions	· If the product malfunctions, please do not repair it without authorization. If you have any questions, please contact the supplier or sales team for assistance.

※ The contents of this manual are updated without prior notice. If the function of the product you are using is inconsistent with the instructions,the function of the product shall prevail. Please contact us if you have any questions .

Warranty Agreement

1. Warranty periods from the date of delivery : 5 years.
2. Free repair or replacement services for quality problems are provided within warranty periods.

Warranty exclusions below:

The following situations are not covered by the free warranty or replacement service:

1. Exceeding the warranty period.
2. Damage caused by human factors such as high voltage, overload, and improper operation.
3. The appearance of the product is severely damaged or deformed.
4. Wear or aging that occurs during normal use of the product.
5. Damage caused by natural disasters or force majeure factors.
6. The quality inspection label of the product is damaged (QC PASS).
7. No contract or valid invoice proof signed with EUCHIPS has been provided.

※Remedial measures: Repair or replacement is the only remedy provided by Oches to the customer, and Oches shall not be liable for incidental damages arising from repair or replacement, unless within the scope of applicable law.

※Adjustment of Warranty Terms: EUCHIPS reserves the right to modify or adjust the warranty terms, which shall be published in writing.