



SPECIFICATION SHEET
PS-CVD-24V-200W

Constant Voltage LED Driver
COB Tape Compatible



NEMA 4X Class P Class 2 RoHS

Feature	Description
Universal 5-in-1 Dimming	Compatible with Triac (forward/reverse phase), MLV, ELV, 0-10V, 1-10V, PWM, and Potentiometer dimming
Fine-Tuned Constant Voltage	Adjustable output voltage for performance precision and voltage drop compensation
Flicker-Free Operation	Smooth dimming from 0.1% to 100% with PWM output at 4000Hz (customizable 250-20,000Hz)
Power Factor & Efficiency	PF > 0.95, with 87-88% typical efficiency depending on input voltage
Built-In Protection	Over-temperature, overload, and short-circuit protection with auto-recovery
Flexible Mounting	Flat, side and vertical configurations supported
Aluminum Housing	Premium "clamshell" design with large wiring space and superior heat dissipation
Indoor/Outdoor Rated	IP65 – suitable for dry, damp, and wet locations
Dimming Curve Customization	TIP65 – suitable for dry, damp, and wet locations
Certified & Compliant	Meets Title 24 / JA8, FCC Part 15 Class B, UL8750 standards

www.colorbeamlighting.com

SPECIFICATION

Output	Rated Power	200W
	Rated Voltage	DC24V
	Rated Current	8.33A
	Voltage Tolerance	±0.5V
	Voltage Regulation	±0.5%
	Load Regulation	±1%
Input	Voltage Range	110-277V
	Frequency Range	47-63Hz
	Efficiency (Typ.)	90%@120VAC 91%@277VAC
	THD	THD<15% (@100% load)
	Power Factor (Typ.)	0.99@120VAC 0.98@277VAC
	AC Current (Typ.)	2.06A
	Inrush Current (Typ.)	30A
	Leakage Current	<0.5mA
Protection	Short Circuit	Shut down o/p voltage, re-power on to recover after fault condition is removed
	Over Load	Intelligently reduce the output voltage, auto-recovery or re-power on to recovery.
	Over Temperature	100°C±10°C shut down o/p voltage, automatically recover after cooling.
	Working Temp.	Tcase=-40~+140oF (-40~+60°C) (Please refer to "OUTPUTLOAD vs TEMPERATURE" section)
	Working Humidity	20 ~ 95% RH non-condensing
	Storage Temp. Humidity	-40~+194oF (-40~+90°C), 10~95% RH
	Temp. Coefficient	±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
	Withstand Voltage	I/P-O/P:1.88KVAC
	Isolation Resistance	I/P-O/P:100M Ohms / 500VDC / 25°C/ 70% RH
	EMC Emission	Compliance to FCC part 15 Subpart B
Other	Dimension	10.15"L X 4.85"W X 1.65"H
	Net Weight	1.3kg

FUNCTION INTRODUCTION



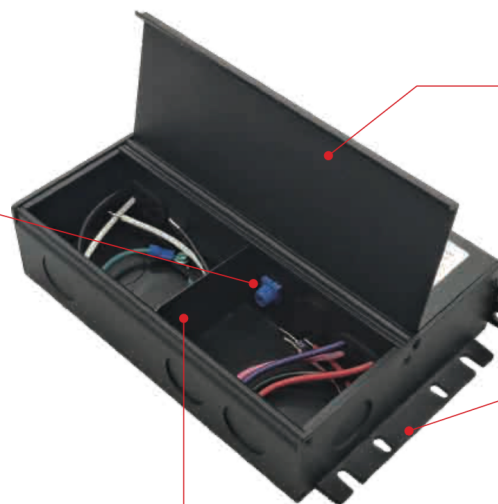
Fine Tune the Output Voltage

See below:

24V Output: 17V-25V

With fine tuning voltage knob,

- 1) +1V: compensates for light attenuation and overcome voltage drop during installation and wiring.
- 2) Fine adjustment can be used as a dimmer: customers can also adjust a certain brightness when using without a dimmer. (dimming range: 30% -100%)



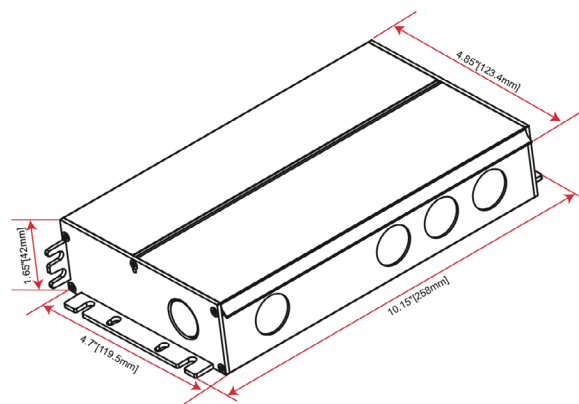
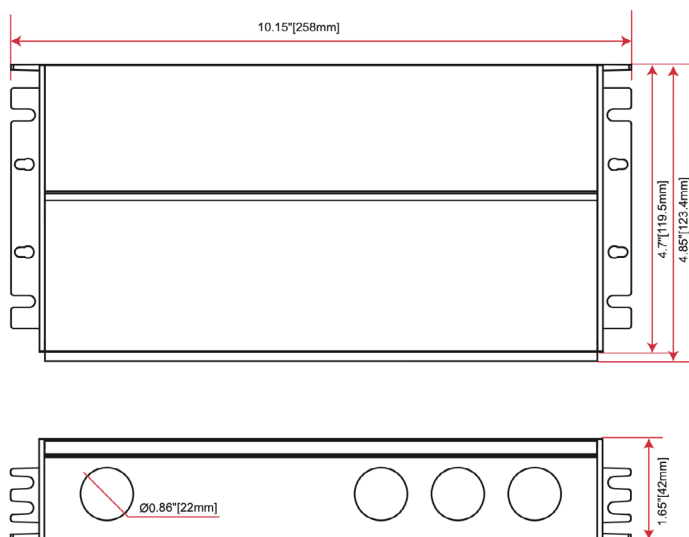
Exclusive patent design of "Clamshell" aluminum junction box. (Screw-free to close the box)

Flexible Mounting:
flat mounting,
side mounting,
vertical mounting

Large space for wiring
Mobile baffle to isolate strong and weak electric

Dimension:
10.15"L X 4.85"W X 1.65"H

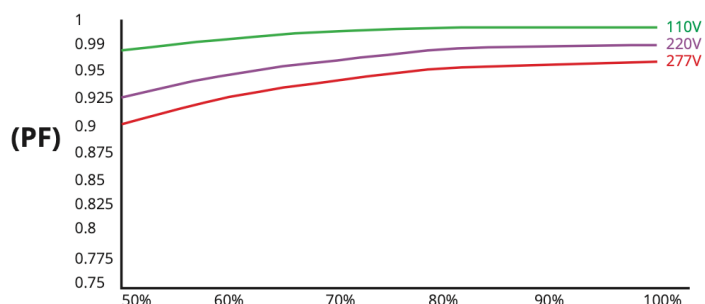
Mechanical Diagrams



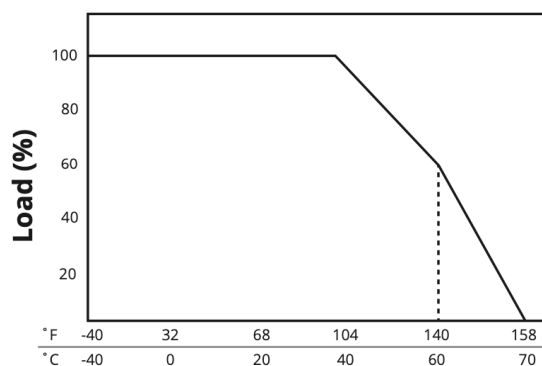
10.15"L X 4.85"W X 1.65"H

Graphs

PFC Load Graph



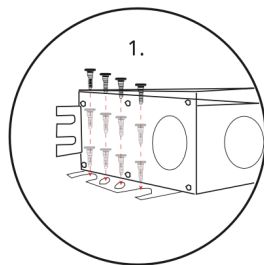
Load vs Ambient Temperature



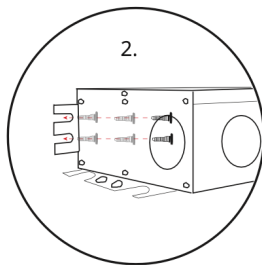
Installation

Mounting

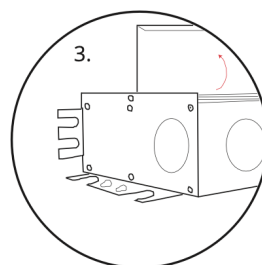
1. This driver must be installed in a well-ventilated area free from explosive gases and vapors. Air circulation is essential for heat dissipation.
2. Recommended spacing between LED drivers should be a minimum of 4" (100mm).
3. Do not mount driver close to or above objects that can radiate heat. Vertical mounting is highly recommended.
4. Select an appropriate location that is able to support the weight of the product.
5. Use the mounting tabs on the left and right side of the driver to mount the product.



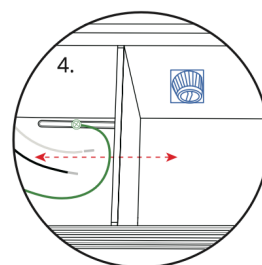
Vertical mounting



Horizontal mounting

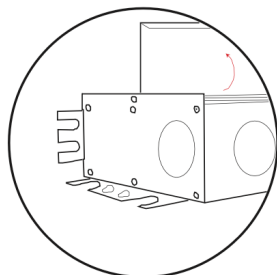


Rotary flap without screws structure

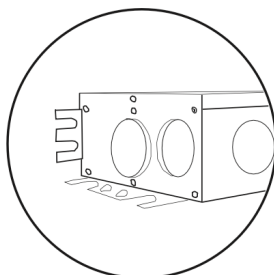


Mobile baffle, strong and weak electric isolation, flexible adjustment of strong and weak electric space size.

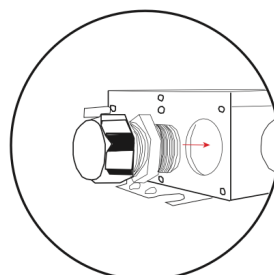
Connection Preparation



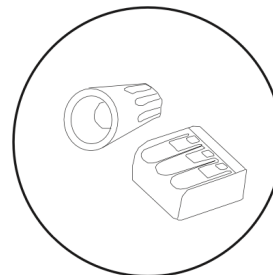
Open face cover



Remove the desired knockouts for both input and output

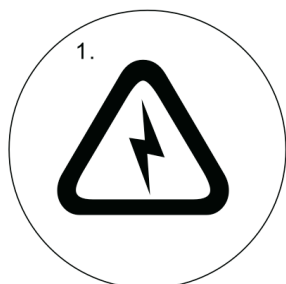


Use the appropriate sized wire gauge and connectors. (Not included)

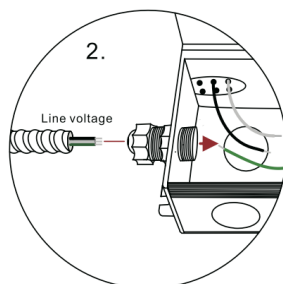


Only use certified components in accordance with national and local electric codes.

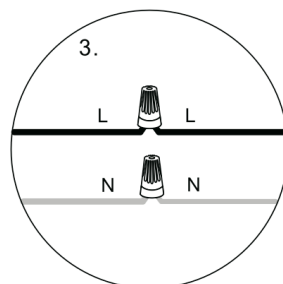
Input Connections & Grounding



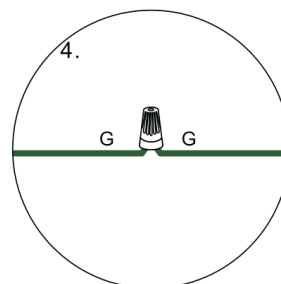
Ensure power is disconnected at the source



Route line voltage input wires and ground wire through strain relief and knockout.

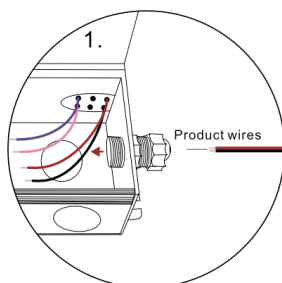


Connect black input wire (L) and input wire (N) to line voltage.

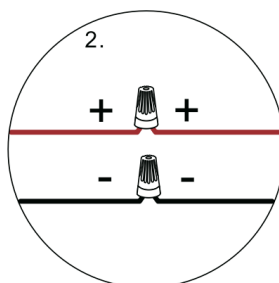


Connect green wire (ground) to input ground wire.

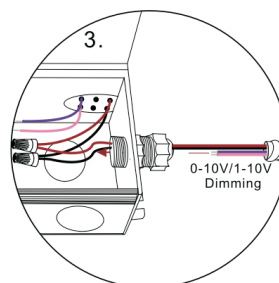
Output Connections



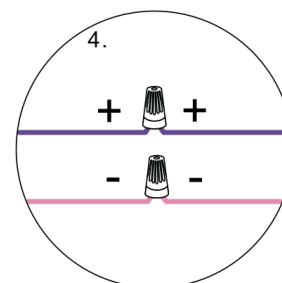
Route low voltage product wires through strain relief and knockout.



Securely connect driver's black wire(-) and red wire(+) to low voltage product, matching polarity.



If available, route 0-10V/1-10V dimming wires through strain relief and knockout.



Connect pink wire (-) and purple wire (+) to dimmer, matching polarity. Secure wire compartment cover when completed.