

### DUD096IP65 | 96W

#### Constant Voltage Dimmable LED Driver

#### 5-IN-1 Dimming | Triac/0-10V/1-10V/10V PWM/Potentiometer

#### Features

- 5-way universal dimming
- Smooth flicker-free dimming, down to 0.1%
- PF>0.95, dimming range: 0.1-100%, flicker-free
- PWM Output: 4000Hz constant frequency  
(Different frequencies can be customized: 250-20000Hz)
- Short-circuit, over-temperature, over-load protection
- Super low loading request, works perfect at 10-100% load
- High-quality aluminum housing for dry, damp, wet location
- Build in active PFC, typical power factor >0.95,  
THD<10% @ 120V Max. Load.
- Dimming curves can be customized
- 5-year warranty



**NEMA 4X** | **Type HL** | **Class P** | **Class 2**  
**24V OR 48VDC** | **110-277V**

**Description:** Constant voltage dimmable LED driver

**Driver Type:** LED Driver without junction box

**Dimming:** 5-way dimming: forward phase (MLV), reverse phase (ELV), 0-10V, PWM, and potentiometer

**Dimming Range:** 0.1-100%, flicker-free, ultra deep amplitude

**Output Dimming Method:** PWM, 4000Hz Constant frequency

**Flicker:** Meets California Title 24 / JA8

**Input Voltage:** 110-277VAC, 50/60Hz

**Output Voltage:** DC24V or 48V

**Wattage:** 96W

**Application:** Suitable for dry, damp and wet location

**Certifications:** UL, FCC

**Warranty:** 5-Year

| Model          | Max Power | Output |
|----------------|-----------|--------|
| DUD096IP65-24V | 96W       | 24V    |
| DUD096IP65-48V | 96W       | 48V    |

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## Constant Voltage Dimmable LED Driver

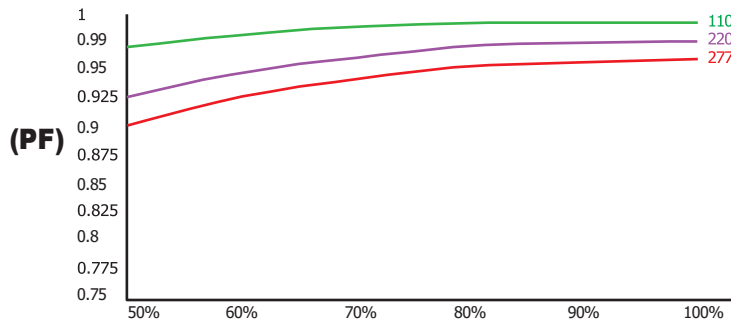
### 5-IN-1 Dimming | Triac/0-10V/1-10V/10V PWM/Potentiometer

| Model Number |                        | DUD096IP65-24V                                                                       | DUD096IP65-48V |
|--------------|------------------------|--------------------------------------------------------------------------------------|----------------|
| Output       | Rated Power            | 96W                                                                                  |                |
|              | Rated Voltage          | DC24V                                                                                | DC48V          |
|              | Rated Current          | 4A                                                                                   | 2A             |
|              | Voltage Tolerance      | ±0.5V                                                                                |                |
|              | Voltage Regulation     | ±0.5%                                                                                |                |
|              | Load Regulation        | ±1%                                                                                  |                |
| Input        | Voltage Range          | 110-277V                                                                             |                |
|              | Frequency Range        | 47-63Hz                                                                              |                |
|              | Efficiency (Typ.)      | 89% @120VAC 90% @277VAC                                                              |                |
|              | THD                    | THD<15% (@100% load)                                                                 |                |
|              | Power Factor (Typ.)    | 0.99@120VAC 0.98@277VAC                                                              |                |
|              | AC Current (Typ.)      | 1.02A                                                                                |                |
|              | Inrush Current (Typ.)  | 25A                                                                                  |                |
|              | Leakage Current        | <0.5mA                                                                               |                |
| Protection   | Short Circuit          | Hiccup mode, recovers automatically after fault condition is removed.                |                |
|              | Overload               | Intelligently reduce the output voltage, auto-recovery or re-power on to recovery    |                |
|              | Over Temperature       | 100℃±10℃ shut down o/p voltage, automatically recover after cooling.                 |                |
| Environment  | Working Temp.          | Tcase = -40~+140°F (-40~+60°C) (Please refer to "OUTPUTLOAD vs TEMPERATURE" section) |                |
|              | Working Humidity       | 20 ~ 95% RH non-condensing                                                           |                |
|              | Storage Temp. Humidity | -40~+194°F (-40~+90°C), 10~95% RH                                                    |                |
|              | Temp. Coefficient      | ±0.03%/°C (0~50°C)                                                                   |                |
|              | Vibration              | 10~500 Hz, 5G 10min./1 cycle, period for 60min. each along X,Y,Z axes                |                |
| Safety & EMC | Safety Standards       | UL8750, Class 2                                                                      |                |
|              | 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                                                  |                |

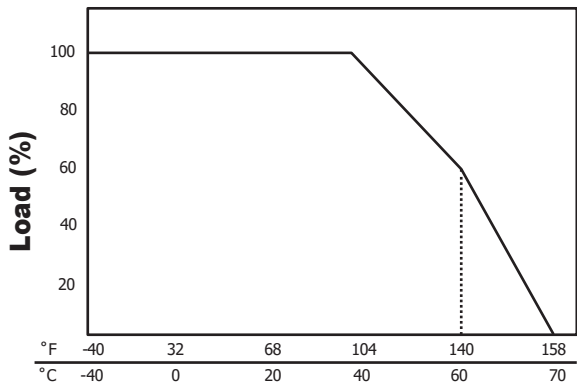
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## PFC Load Graph

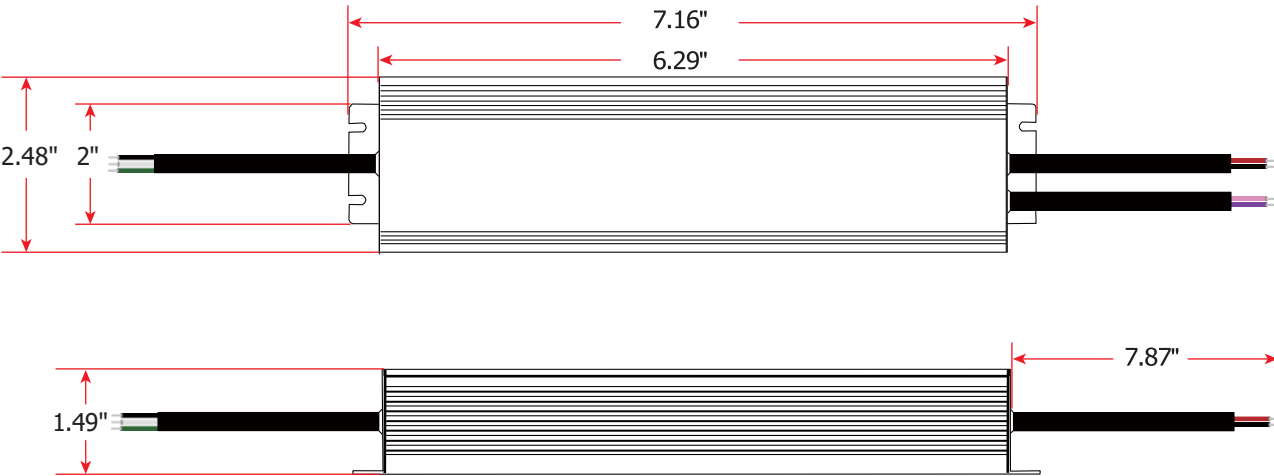


## Load vs Ambient Temperature



## MECHANICAL DIAGRAMS

Dimension: 182x63x38mm (L\*W\*H)  
 7.16"x2.48"x1.49" (L\*W\*H)



## Wire Specification

| PMA-A | Input    |       |       | Output   |       |       | 0/1-10V Dimming |        |       |
|-------|----------|-------|-------|----------|-------|-------|-----------------|--------|-------|
| Power | Function | Color | Spec. | Function | Color | Spec. | Function        | Color  | Spec. |
| 96W   | AC L     | Black | 18AWG | DC+      | Red   | 18AWG | Dim+            | Purple | 18AWG |
|       | AC N     | White | 18AWG | DC-      | Black | 18AWG | Dim-            | Pink   | 18AWG |
|       | Ground   | Green | 18AWG | /        | /     | /     | /               | /      | /     |

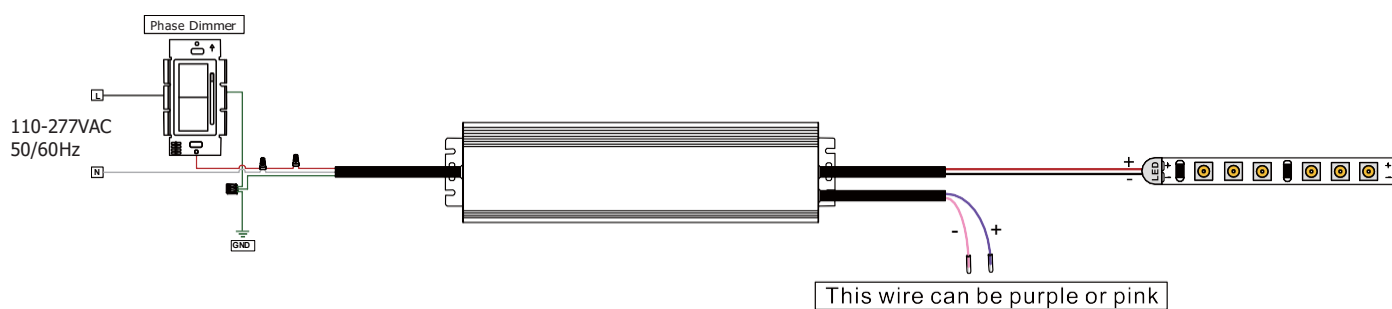
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#### Constant Voltage Dimmable LED Driver

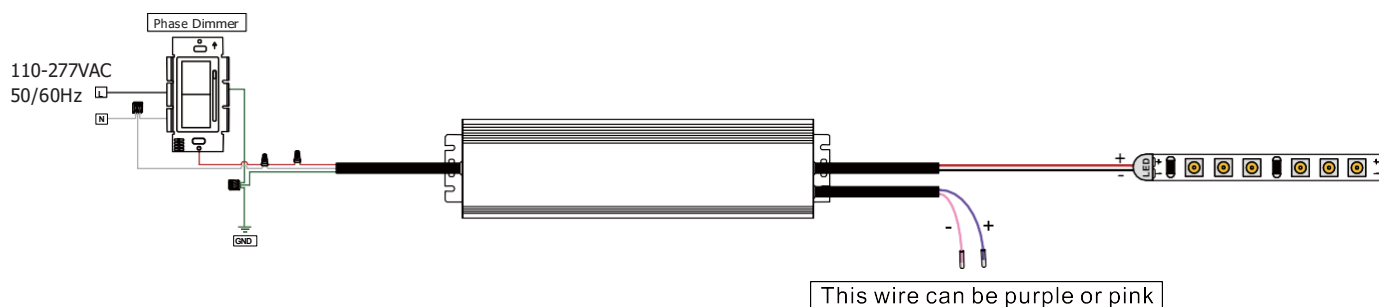
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### Wiring Diagram

#### A. TRIAC/MLV (Leading Edge) Dimmer Wiring Diagram

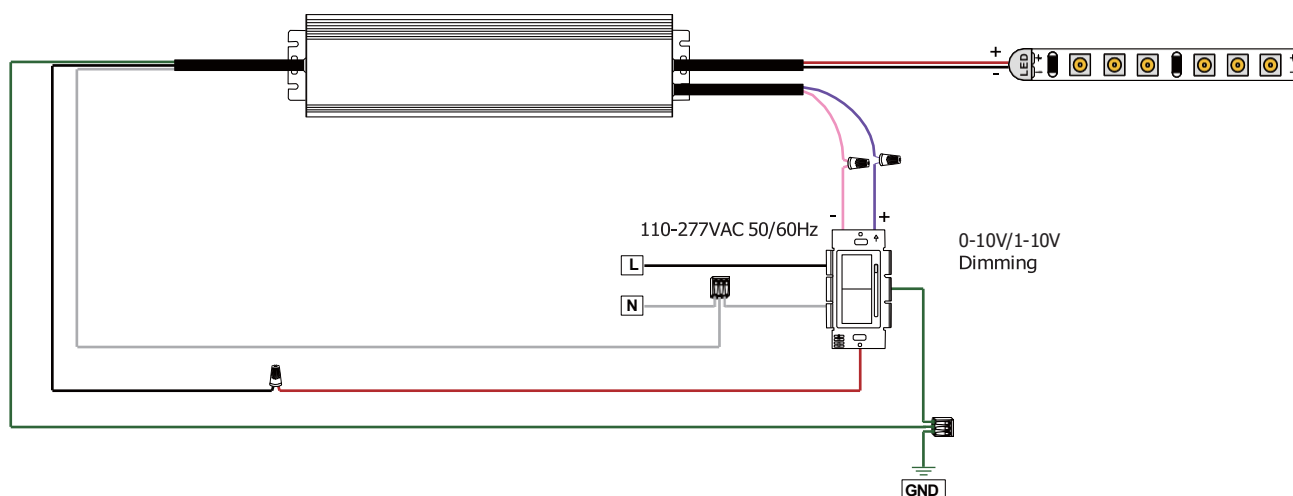


#### B. Electronic Low Voltage (ELV) Dimmer Wiring Diagram



**DUD096IP65 | 96W****Constant Voltage Dimmable LED Driver****5-IN-1 Dimming | Triac/0-10V/1-10V/10V PWM/Potentiometer****Wiring Diagram****C.0-10V/1-10V Dimmer Wiring Diagram**

(The driver input is connected to the dimmer.)

**D.0-10V/1-10V Dimmer Wiring Diagram**

(The driver is independently connected to the input.)

