# Universal-2 Dimmable Driver | Power & Control

NOVA FLEX



The Universal 2 Dimmable Drivers are a flexible, high performance LED power supply series designed to seamlessly integrate with a wide range of dimming systems. Utilizing modern Wide Bandgap technology, our driver offers superior energy efficiency, reduced cooling needs, and more reliable operation. This design includes an integrated voltage adjustment knob, which allows users to fine-tune the output voltage for optimal system performance. This feature is valuable when accommodating varying load requirements or compensating for voltage drop across longer cable runs. Coupled with the driver's universal input dimming capability- supporting phase dimming and 0-10V control, the voltage adjustment knob ensures consistent, reliable illumination tailored to the exact needs of each installation. In addition to universal dimming compatibility, this driver offers two selectable output modes to ensure optimal performance based on installation distance:

**PWM (Pulse Width Modulation)** ***for loads located within 25 feet of the driver***

- *PWM is required for Nova Flex Dim To Warm products; dimming range is 100% to 0.1% flicker free*

**CVR (Constant Voltage Reduction)** ***for longer runs extending beyond 25 feet***

- *This functionality allows precise control and consistent illumination across varying project layouts.*
- *Dimming range for CVR is 100% to 0.01% flicker free*

***Note:*** *Always select appropriate AWG cabling to minimize voltage drop.*

## SKUs

| | |
|---|---|
| 30W | NF-PS-UNV2-30W-24V |
| 60W | NF-PS-UNV2-60W-24V |
| 80W | NF-PS-UNV2-80W-24V |
| 96W | NF-PS-UNV2-96W-24V |
| 192W (2x96) | NF-PS-UNV2-192W-24V |
| 288W (3x96) | NF-PS-UNV2-288W-24V |

## Quality, Reliability, Safety

| | |
|---|---|
| **Warranty** | 5 years |
| **Certifications** | cULus listed, Class 2 Unit, Type HL rated, FCC NEMA 4X,T24. RoHS compliant |

c UL us LISTED E507544

| Specification | 30W | 60W | 80W | 96W | 192W | 288W |
|---|---|---|---|---|---|---|
| **Output Voltage** | 24Vdc | 24Vdc | 24Vdc | 24Vdc | 24Vdc | 24Vdc |
| **Input Current** | 900 mA | 900 mA | 1000 mA | 1040 mA | 2000 mA | 2980 mA |
| **Ambient Operating Temp** | -40 to 140F (-40 to 60C) | -40 to 140F (-40 to 60C) | -40 to 140F (-40 to 60C) | -40 to 140F (-40 to 60C) | -40 to 140F (-40 to 60C) | -40 to 140F (-40 to 60C) |
| **IP Rating** | IP66 | IP66 | IP66 | IP66 | IP66 | IP66 |
| **Input Voltage** | 110 to 277 AC | 110 to 277 AC | 110 to 277 AC | 110 to 277 AC | 110 to 277 AC | 110 to 277 AC |
| **Power** | 30W | 60W | 80W | 96W | 192W | 288W |
| **Length** | 6.71" (160.5mm) | 8.92" (226.5mm) | 8.92" (226.5 mm) | 8.92" (226.5mm) | 10" (254mm) | 11.38" (289mm) |
| **Width** | 4.59" (116.5mm) | 4.59" (116.5mm) | 4.63" (117.5 mm) | 4.59" (116.5mm) | 5.17" (131.3mm) | 5.17" (131.3mm) |
| **Height** | 1.67" (42.5mm) | 1.69" (43mm) | 1.67" (42.5 mm) | 1.69" (43mm) | 1.67" (42.5mm) | 1.93" (49mm) |

**Quick Links** | For more information

*Product page contains photometric files, installation guide, power and controls compatibility.*

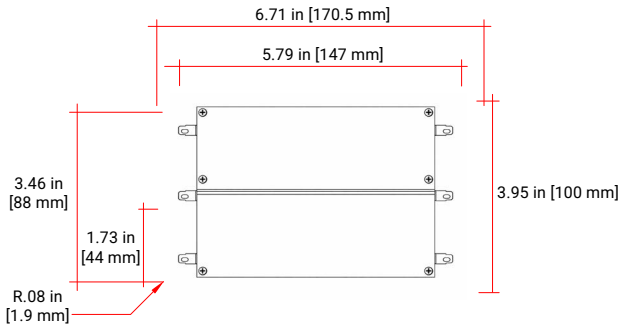
## Notes

- Do not connect black leads together on multichannel versions (doing so voids warranty)
- RE: derating curve
  - 100% load -40 to 40°C
  - Derate at 2% per degree C from 40°C to 60°C

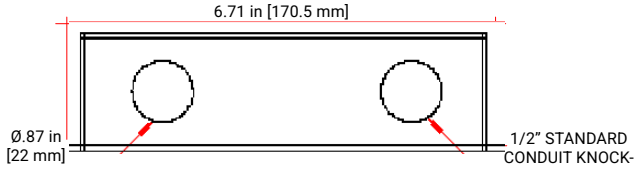
## Dimensions

### NF-PS-UNV2-30W-24V

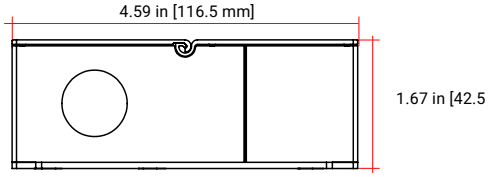
TOP VIEW




FRONT VIEW

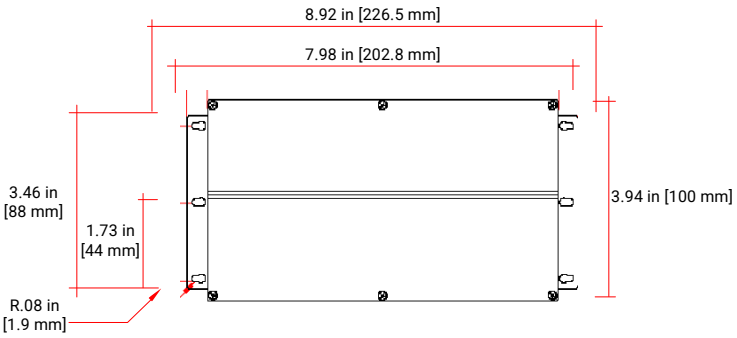



SIDE VIEW

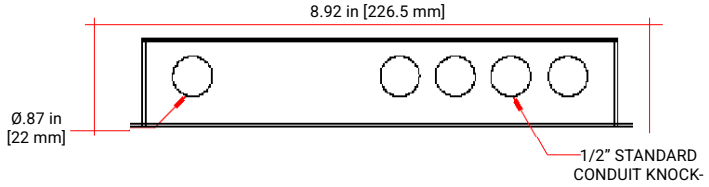



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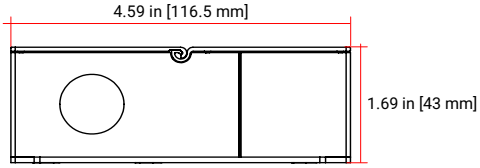
TOP VIEW




FRONT VIEW

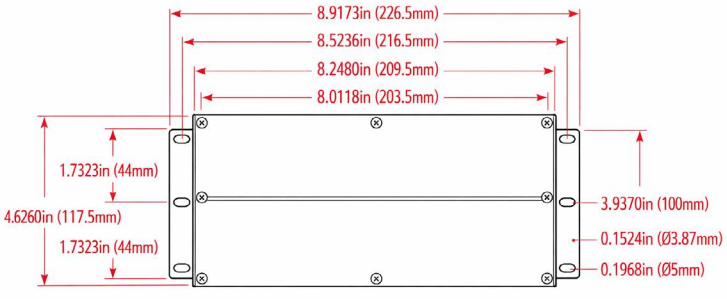



SIDE VIEW

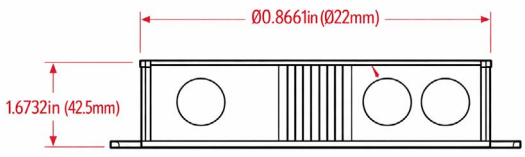



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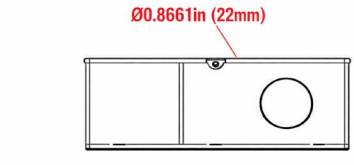
TOP VIEW




FRONT VIEW



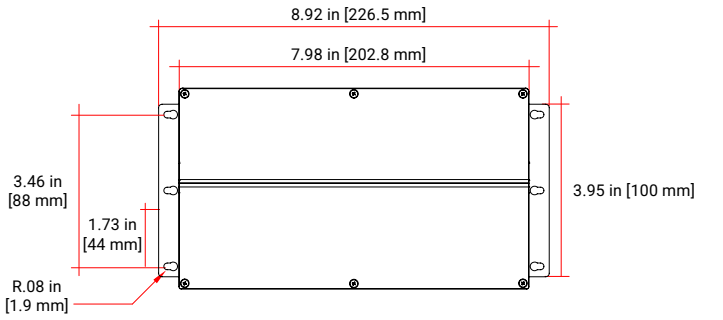

SIDE VIEW



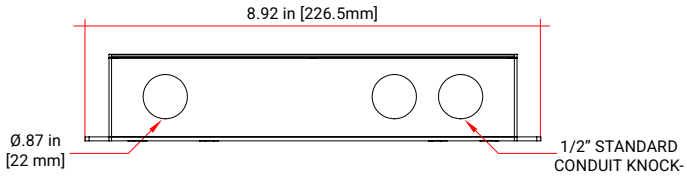
## Dimensions

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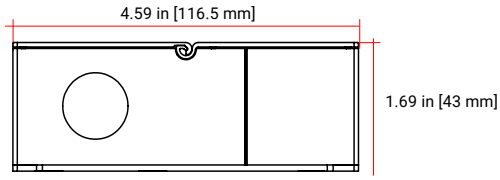
TOP VIEW




FRONT VIEW

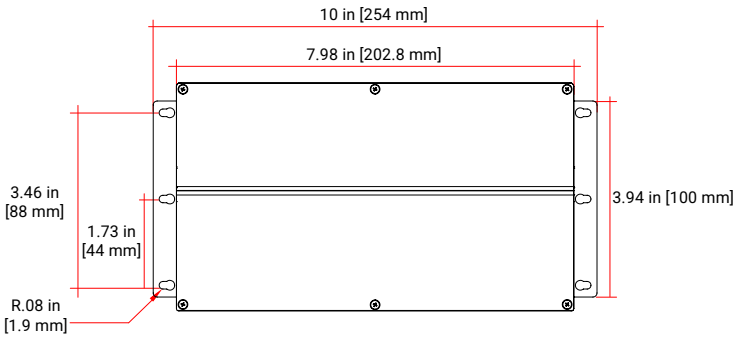



SIDE VIEW

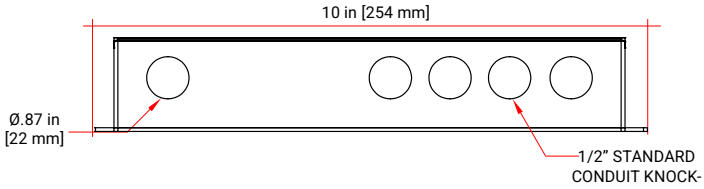



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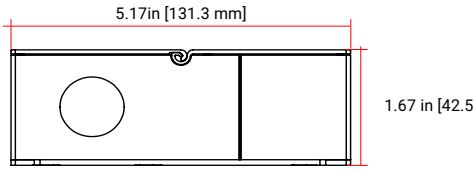
TOP VIEW




FRONT VIEW



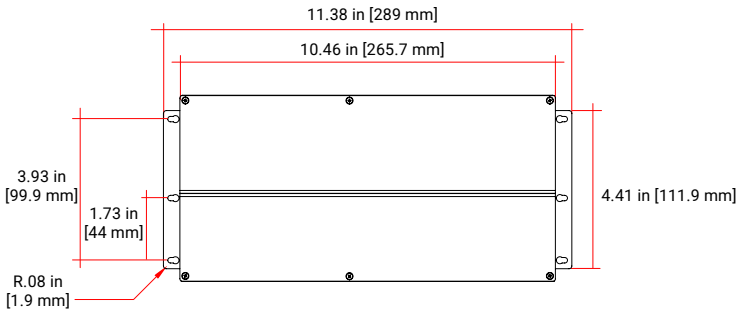

SIDE VIEW



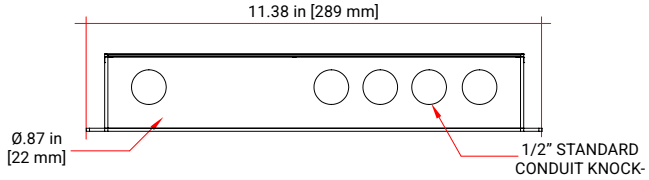
## Dimensions

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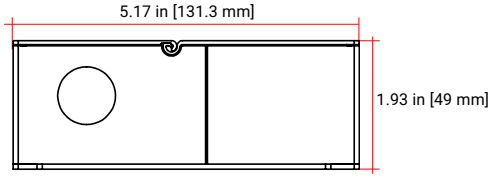
TOP VIEW



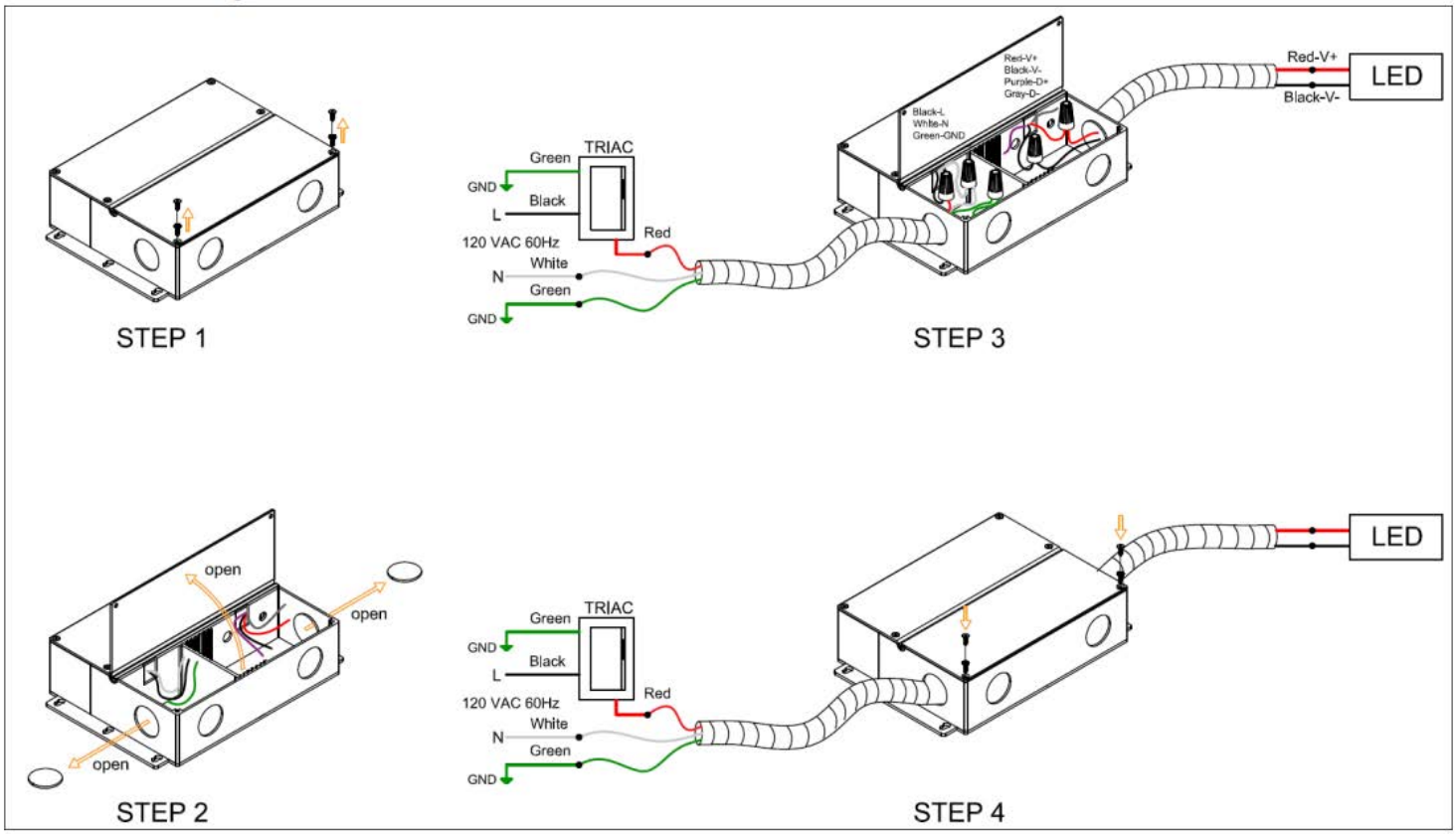

FRONT VIEW



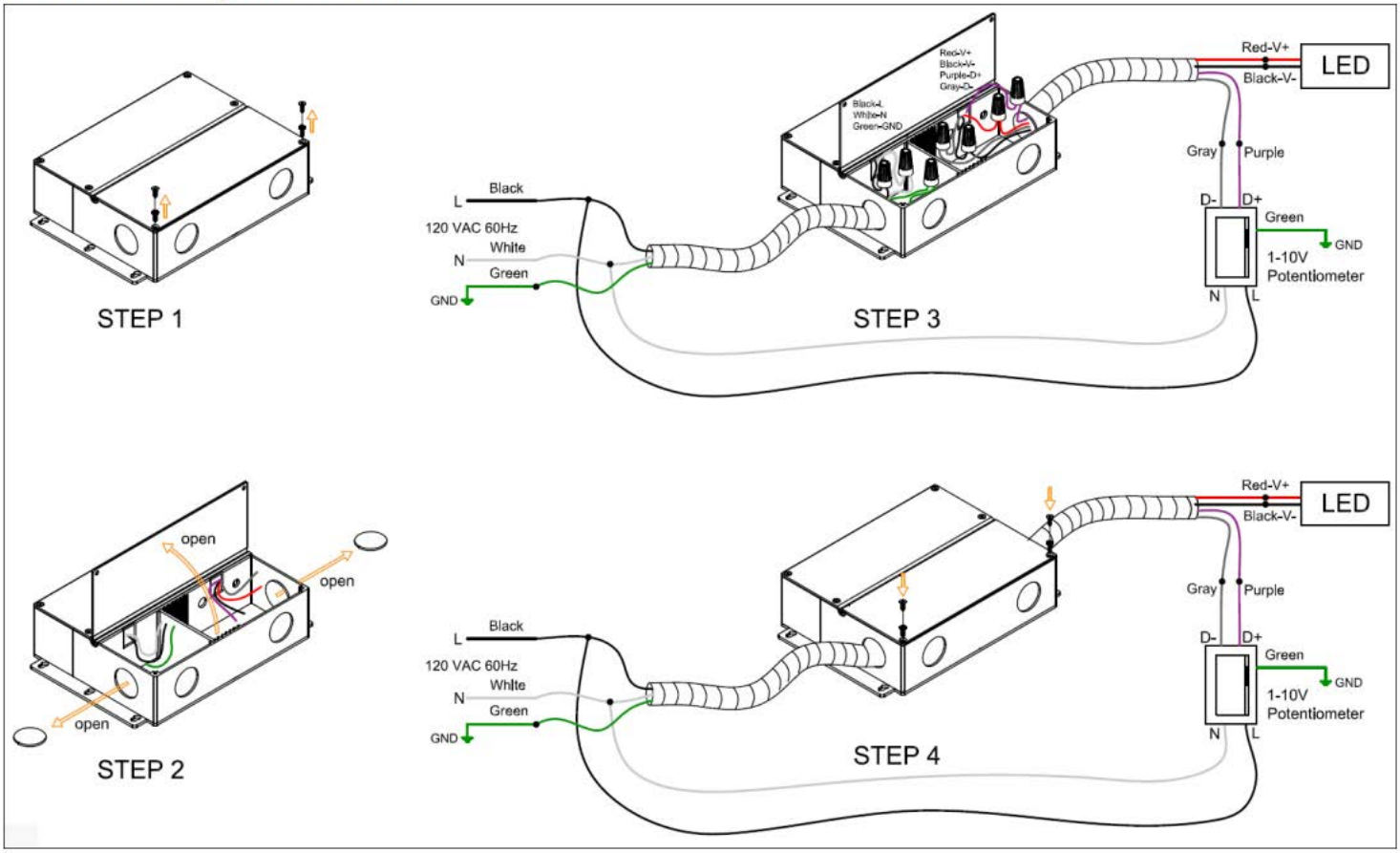

SIDE VIEW



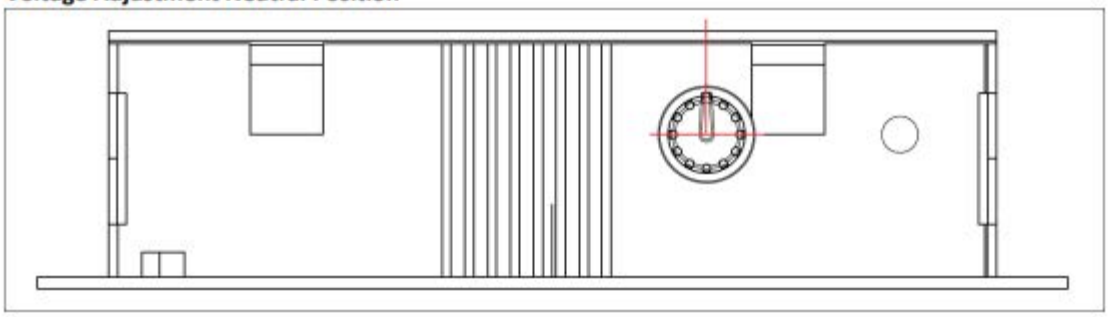
## Phase Dimming Installation




## 0-10V Dimming Installation



Voltage Adjustment Neutral Position



## Installation Instructions

1. Power OFF the branch circuit where the LED driver will be installed.
2. Remove the cover of the driver and any desired knockouts (if applicable) in the driver wiring compartment.
3. Physically secure the driver in the installation location using the mounting points on the driver chassis.
4. Connect the line voltage wiring (minimum 18 AWG) and ground (earth) wires from the branch circuit or dimmer to the matching wires on the LED driver. Wire connections are indicated on the driver label.
5. If using, connect the 0-10V dimming wires to an appropriate dimmer. Wire connections are indicated on the driver label.
6. Connect the low voltage wiring to the desired LED lighting. The connected LED lighting must match the LED driver output voltage and have a total rated wattage less than the rated wattage of the LED driver output(s). Wire connections are indicated on the driver label.
7. Double check that all wiring connections are correct and secure.
8. Replace all wiring covers and reapply power to the branch circuit.

## Warnings

- RISK OF ELECTRIC SHOCK – installation should only be done by qualified individuals.
- AC power should be disconnected during installation to minimize risk.
- All wiring must be rated for the appropriate voltage and at least 90°C.
- NO USER SERVICEABLE PARTS – do not open the sealed driver compartment.

2789 Clearwater Rd Suite X
St. Cloud, MN 56301
800.595.6302
www.novaflexled.com

# Application Notes: UNV2 Power Supplies

The UNV2 series of power supplies features integrated wiring compartments with knockouts for standard ½-inch conduit and fittings.

UNV2 power supplies must be disconnected from power in order to switch between PWM and CVR output settings. Flipping the switch with power connected will have no effect. PWM dimming provides maximum consistency between multiple power supplies and is recommended when the LED load is located less than 25 feet (7.6m) from the power supply. CVR dimming reduces parasitic effects in long runs of wire and is recommended for any wire runs greater than 25 feet (7.6m) from the power supply to LEDs.

The voltage adjustment feature of the UNV2 power supplies allows for some voltage compensation (from 18V to 25V) to balance brightness or compensate for some voltage drop in the lead wires. To compensate for different apparent brightness levels in different areas, voltage in the brighter areas can be reduced by turning the adjustment knob counter-clockwise. The output voltage should only be increased (clockwise turn of the knob) if the voltage can be checked at the connection point to the LED load. The voltage delivered to the LED load should not exceed the rated input voltage.

**Please also note:**

- These drivers have 5 in 1 “universal” dimming
  - Triac dimming on AC input:
    - MLV (leading-edge)
    - ELV (trailing-edge)
  - 0-10V (ANSI C137.1-2022 compliant, 0V = electric off)
  - 10V external PWM (pink and purple 0-10V input)
  - Potentiometer connected as rheostat (pink and purple 0-10V input)
    - Regardless of dimming signal type, output to the LEDs can be PWM, since this signal is software derived from the input signal; filtering techniques eliminate or greatly reduce any tendency to flash at low dim levels. The PWM frequency is in the No Effect of IEEE 1789, minimizing the risk of non-visual flicker issues.
- Dimming applies equally to all outputs on multi-channel UNV2’s