



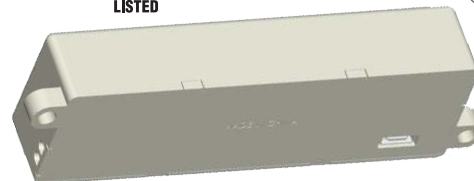
KTLD-12-UV-SC500-56-VDIM-AF1/USB

CONSTANT POWER PROGRAMMABLE LED DRIVER

DESCRIPTION

LED Driver | 12W | 120–277V Input | 120–500mA Programmable Output Current

| | |
|---|----------------------------------|
| TOTAL POWER: 12W | OUTPUT CURRENT: 120–500mA |
| INPUT VOLTAGE: 120–277Vac $\pm 10\%$ | DIMMING: 0–10V |
| INPUT FREQUENCY: 50/60 Hz | WARRANTY: 5 Years |



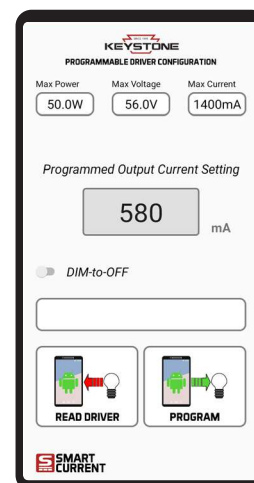
PRODUCT FEATURES

- Built in USB-C Port for easy programming
- Meets FCC Part 15 (Class B) consumer limits
- Short circuit overload and open load protection
- Dimmable with 0–10V dimmer (down to 1% at max. output current)
- THD: < 20%
- –40°C/–40°F to 60°C/140°F operating temperature
- 90°C/194°F maximum case temperature
- Input frequency: 60 Hz
- Programmable output current via USB-C cable and an Android device (plus Keystone app) or PC (plus Keystone software)
- Class A Sound Rating

PROGRAMMING FEATURES

- Drive current (10mA increments)
- Minimum dimming level (1%, 3%, 5%, 7%, or 10%)
- Dimming curve (linear log, inverse log, or square-law)
- Minimum dimming voltage (1V, 1.5V, or 2V)
- Maximum dimming voltage (7V, 8V, or 9V)
- Dim-to-off voltage (0.8V, 1V, 1.2V, or N/A)
- Thermal foldback temperature (75°C/167°F, 80°C/176°F, 85°C/185°F, or 90°C/194°F)

WHAT'S NEEDED?
A Smart Current Programmable LED Driver, USB-C Cable, and a computer or phone



REQUIRED ACCESSORIES

| Order Code | Description |
|--------------|---|
| KTLD-SC-USBC | USB-C to USB-C Cable (included with driver) |

ELECTRICAL SPECIFICATIONS

| | |
|----------------------------------|---|
| Input Voltage Range | 120–277Vac $\pm 10\%$ |
| Frequency | 50/60 Hz |
| Power Factor | >0.9 under 120Vac Input with 80~100% load condition (for all output currents) |
| Inrush Current | 24A _{peak} @ 277Vac, $i^2t = 0.01728 \text{ A}^2\text{s}$ |
| Max. Input Current | 0.14A @120V, 0.07A @240V, 0.06A @277V |
| THD | <20% under 120Vac input with 80~100% load condition (for all output currents) |
| Load Regulation | $\pm 2\%$ |
| Line Regulation | $\pm 1\%$ |
| Output Tolerance | $\pm 5\%$ at full load condition |
| Turn-On Delay Time | <0.50 seconds at full load condition |
| Overshoot | <10% at full load condition |
| No Load Power Consumption | <1W |
| Ripple and Noise (pk-pk) | <10% |
| Withstand Voltage | Input to output, 2,800Vdc, 2mA |
| Leakage Current | Maximum 0.5mA at 277Vac, 60Hz input |
| Protection | <ul style="list-style-type: none"> • Over Voltage Protection: Hiccup mode. Protection will trigger when load voltage exceeds specified output voltage and will auto recover after the fault mode is removed. • Over Current Protection: Hiccup mode. Protection will trigger when load current exceeds specified output current and will auto recover after the fault mode is removed. • Short Circuit Protection: Hiccup mode. Protection will trigger when short circuit and will auto recover after the fault mode is removed. |



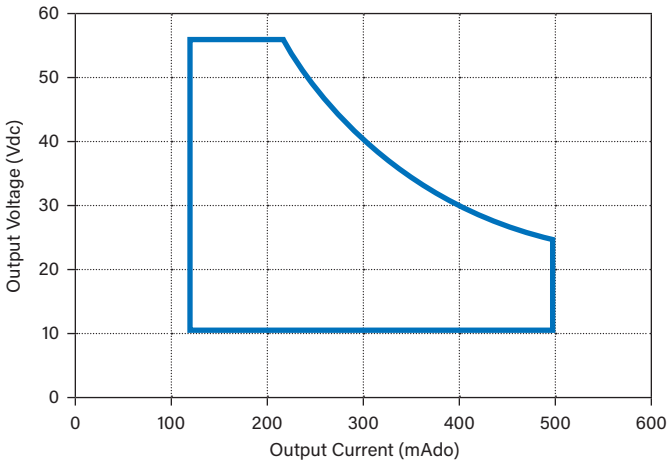
KTLD-12-UV-SC500-56-VDIM-AF1/USB

CONSTANT POWER PROGRAMMABLE LED DRIVER

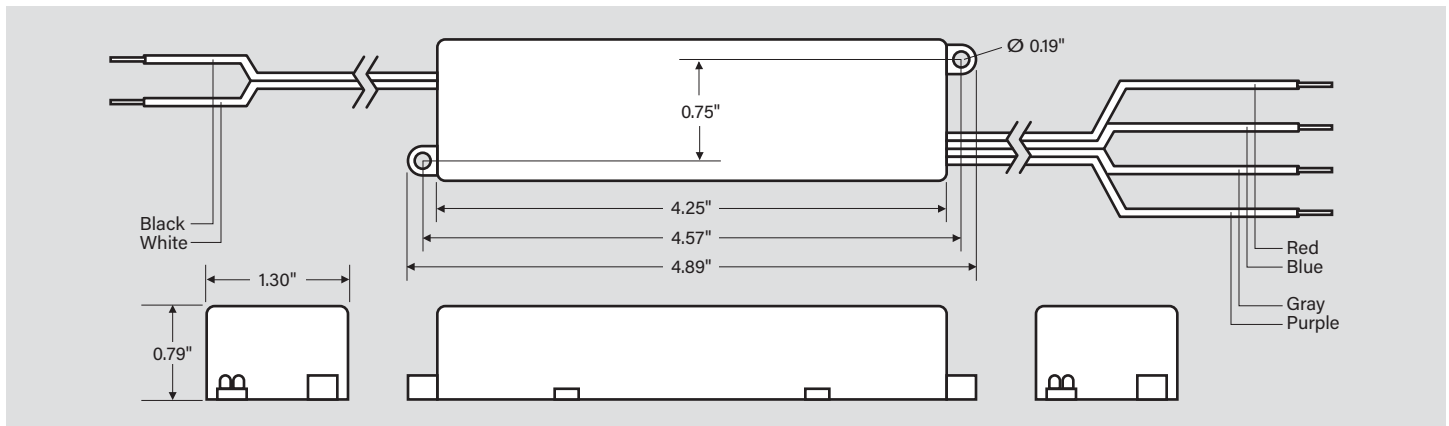
PRODUCT SPECIFICATIONS

| Max. Output Power | Output Current | Output Voltage | OCV | Typical Efficiency at 120V | Typical Efficiency at 240V | Typical Efficiency at 277V | Remote Mounting Distance (#22 AWG) | Class 2 | |
|-------------------|----------------|----------------|-----|----------------------------|----------------------------|----------------------------|------------------------------------|---------|--------|
| | | | | | | | | US | Canada |
| 12W | 120-500mA | 10-56V | 60V | 85% | 84% | 83% | 24 ft. | ✓ | |

LED DRIVER OUTPUT WINDOW



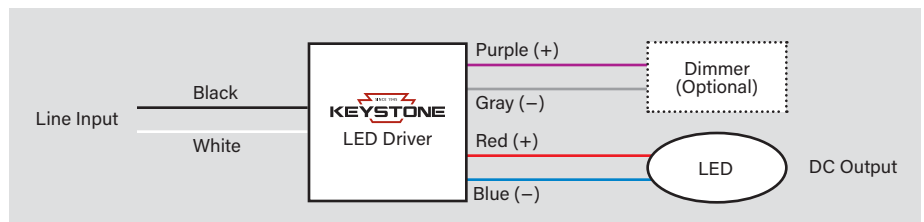
PHYSICAL SPECIFICATIONS



WIRING SPECIFICATIONS

| | | |
|---------|--------|------------------------|
| Input | Black | 12.00", UL 1316 #18AWG |
| | White | 12.00", UL 1316 #18AWG |
| Output | Blue | 12.00", UL 1430 #22AWG |
| | Red | 12.00", UL 1430 #22AWG |
| Dimming | Purple | 12.00", UL 1430 #22AWG |
| | Gray | 12.00", UL 1430 #22AWG |

WIRING DIAGRAM





KTLD-12-UV-SC500-56-VDIM-AF1/USB

CONSTANT POWER PROGRAMMABLE LED DRIVER

ENVIRONMENTAL SPECIFICATIONS

| | |
|---|-------------------------------|
| Operating Temperature | -40°C/-40°F to 60°C/140°F |
| Storage Temperature | -40°C/-40°F to 85°C/185°F |
| Humidity | 5% to 95% |
| MTBF | 358,000 hrs at 40C ambient |
| Life Rating | 85,000 hrs at 120V, 100% load |
| Maximum Case Temperature | 90°C/194°F |
| Maximum Case Temperature (tc) for 5-Year Warranty | 75°C/167°F |

SAFETY AND EMC COMPLIANCE

| | |
|--------------------|--|
| UL/cUL | UL 8750 pending, UL1310 Class 2 |
| CE | EN61347-1, EN61347-2-13 |
| FCC, 47CFR Part 15 | ANSI C63.4:2009 Class B (consumer limit) |
| EN61000-3-2 | Harmonic Current Emissions Class C |

ORDERING INFORMATION

| ORDER CODE | PACK QUANTITY | EASY CODE | UPC |
|-----------------------------------|---------------|-----------|--------------|
| KTLD-12-UV-SC500-56-VDIM-AF1 /USB | 40 | FIN-26 | 843654140803 |

CATALOG NUMBER BREAKDOWN

KTLD-12-UV-SC500-56-VDIM-AF1 /USB

1

2

3

4

5

6

7

8

9

- 1 Keystone Technologies LED Driver
- 2 Max. Output Wattage
- 3 120-277V Input
- 4 Smart Current
- 5 Max. Output Current
- 6 Max. Output Voltage
- 7 0-10V Dimming
- 8 Case Style
- 9 USB Port