



## KTLD-50-UV-SC1400-56-VDIM-U7

CONSTANT CURRENT PROGRAMMABLE LED DRIVER

## **DESCRIPTION**

LED Driver | 50W | 120 -277V Input | 470 -1400mA Programmable Output Current

TOTAL POWER: 50W OUTPUT CURRENT: 470 -1400mA

INPUT VOLTAGE: 120 –277Vac ±10% DIMMING: 0 –10V INPUT FREQUENCY: 50/60 Hz WARRANTY: 5 Years



C UL US

#### **PRODUCT FEATURES**

- 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%
- Auxiliary Power: 12Vdc; 200mA max.

- -40°C/-40°F to 50°C/122°F operating temperature
- 90°C/194°F maximum case temperature
- Input frequency: 50/60 Hz

**Class P** 

- Programmable output current via Keystone supplied programming jig
- 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 SmartCurrent Programmable LED Driver, the SmartCurrent Cradle, and a computer.





## **ELECTRICAL SPECIFICATIONS**

| Input Voltage Range       | 120-277Vac ±10%  |
|---------------------------|--|
| Frequency                 | 50/60 Hz   |
| Power Factor              | >0.9 under 120~277Vac Input with 80~100% load condition (for all output currents)  |
| Inrush Current            | 10A @120V  |
| Max. Input Current        | 0.52A @120V, 0.28A @240V, and 0.24A @277V  |
| THD                       | <20% under 120~277Vac input with 80~100% load condition (for all output currents)  |
| Load Regulation           | ± 2%   |
| Line Regulation           | ± 1%   |
| Output Tolerance          | ± 5% at full load condition  |
| Turn-On Delay Time        | <2 seconds at full load condition  |
| Overshoot                 | <10% at full load condition  |
| No Load Power Consumption | <1.5W  |
| Ripple and Noise (pk-pk)  | <3%  |
| Withstand Voltage         | Input to output, 2,800Vdc, 2mA   |
| Leakage Current           | Maximum 0.5mA at 277Vac, 60Hz input  |
| Protection                | <ul> <li>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.</li> <li>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.</li> </ul> |
|                           | <ul> <li>Short Circuit Protection: Hiccup mode. Protection will trigger when short circuit and will auto recover after the fault mode is removed.</li> <li>Over Temperature Protection: Protection will trigger when driver overheats and auto-recovery when cooled down.</li> </ul>   |





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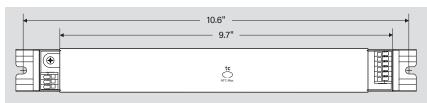
## PRODUCT SPECIFICATIONS

| Max. Output | Output<br>Current | Output<br>Voltage | ocv | Typical Efficiency<br>at 120V         | Typical Efficiency<br>at 240V         | Typical Efficiency                    | Remote Mounting Distance (#18 AWG) |          | Class 2 |
|-------------|-------------------|-------------------|-----|---------------------------------------|---------------------------------------|---------------------------------------|------------------------------------|----------|---------|
| Power       |                   |                   |     |                                       |                                       | at 277V                               |                                    | US       | Canada  |
| 50W         | 470-1400mA        | 10-56V            | 60V | 85%@ 1.4A, 36Vdc<br>84%@ 0.47A, 56Vdc | 86%@ 1.4A, 36Vdc<br>83%@ 0.47A, 56Vdc | 85%@ 1.4A, 36Vdc<br>83%@ 0.47A, 56Vdc | 26 ft.                             | <b>√</b> |         |

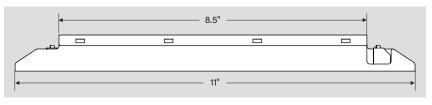
## **PHYSICAL SPECIFICATIONS**



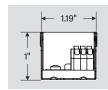
#### **TOP VIEW**



## **FRONT VIEW**

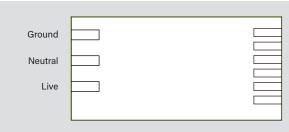


## **SIDE VIEW**



## WIRING SPECIFICATIONS

| INPUT   | Terminal Block |  |  |  |
|---------|----------------|--|--|--|
| OUTPUT  | Terminal Block |  |  |  |
| DIMMING | Terminal Block |  |  |  |
|         |                |  |  |  |



VO (-): LED load, negative (-)BTIN

VO (+): LED load, positive (+)

**PRG/BTIN:** For programming and bluetooth accessories

Aux 12Vdc (+): Auxiliary 12Vdc output, positive (+)

accessories

RTN: Dimming and auxiliary output, negative (-) accessories

Dimming (+): Dimming, positive (+)





## KTLD-50-UV-SC1400-56-VDIM-U7

## CONSTANT CURRENT PROGRAMMABLE LED DRIVER

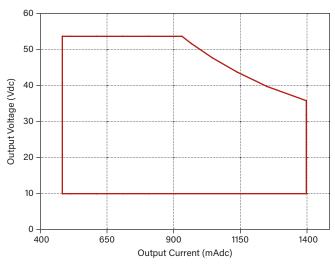
### **ENVIRONMENTAL SPECIFICATIONS**

| Operating Temperature    | -40°C/-4°F to 50°C/122°F  |
|--------------------------|---|
| Storage Temperature      | -40°C/-4°F to 85°C/185°F  |
| Humidity                 | 5% to 95%   |
| MTBF                     | 397,500 hours at 40°C/104°F ambient (~70°C/~94°F case temperature)      |
| Life Rating              | 85,000 hours at 120Vac input, 100% load and 60°C/140°F case temperature |
| Maximum Case Temperature | 90°C/194°F  |

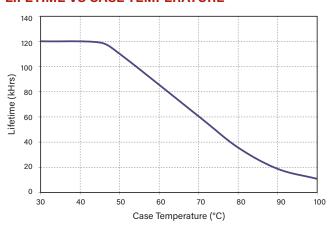
### SAFETY AND EMC COMPLIANCE

| UL/cUL             | UL 8750, Class P, Type HL,<br>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<br>Class C        |

### LED DRIVER OUTPUT WINDOW



## LIFETIME VS CASE TEMPERATURE



Note: driver is in constant power mode from 900mA to 1400mA.

### ORDERING INFORMATION

| ORDER CODE                      | PACKAGING STYLE | PACK QUANTITY | ITEM STATUS |
|---------------------------------|-----------------|---------------|-------------|
| KTLD-50-UV-SC1400-56-VDIM-U7-CP | Carton Pack     | TBD           | Quick Ship  |

## **CATALOG NUMBER BREAKDOWN**

# KTLD-50-UV-SC1400-56-VDIM-U7-CP

- 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 Packaging Style