Thomas
Research Products

# CLASSIC
# LED DRIVERS
## & POWER ACCESSORIES

Intelligent Device
ECOSYSTEM

HUBBELL®

# LED Drivers

classic

Welcome to our Classic LED Driver catalog--fixed output and dimmable models.

Our focus on continuous innovation results in adapting our product line to the changing needs of our industry. We provide three levels of products to fit the needs of the Intelligent Device Ecosystem. First is our Classic driver line, a comprehensive product line to cover most needs of commercial & industrial lighting OEMs for indoor and outdoor applications.

To step up to more integrated components, find our Dynamic and fully Intelligent driver products in our SelectSYNC™ Driver catalog.

Founded in 1997, we design, manufacture and distribute power solutions and accessories from our centrally-located headquarters in Elgin, Illinois USA. TRP designs are optimized for quality, efficiency, longevity, and cost-competitiveness.

We take pride in providing both superior standard products and custom options, tailored to customers' needs. The company is committed to providing superior quality and technology, along with superior service, to both OEM customers and replacement parts channels.

## Custom Drivers & Solutions

We solve problems and create unique products to meet customer applications through our Norlux custom services: Design, testing and manufacturing. Contact us for details.

**Capabilities include:**

- Custom design/engineering for drivers, light engines, electronics and complete luminaires
- Electrical, Optical & Thermal design
- Rapid prototyping
- Fully-equipped development and testing labs
- Fixture electrical and light output testing
- Automated cleanroom manufacturing: class 100,000
- COB production and SMT assembly

NORLUX® CUSTOM SERVICES


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1225 Bowes Rd Elgin IL 60123 USA
T 847-515-3057 | F 847-515-3047

# LED DRIVER ESSENTIALS

## Type TL Drivers

Many of our Classic LED drivers carry UL's Type TL rating. This program assists OEMs in getting new luminaires to market faster. It simplifies compliance testing for luminaires that utilize TL rated drivers, and allows for driver flexibility during production. The program extends the UL8750 standard. All our Classic LED drivers are UL Recognized Components.

***FOR PROGRAMMABLE DRIVERS, PLEASE SEE OUR SELECTSYNC™ PROGRAMMABLE DRIVER CATALOG***

## How Do I Choose The Proper LED Driver For My Application?

- Identify whether a constant-current or constant-voltage source is required to operate your LEDs application
- Identify the number of LEDs used in your application
  - Voltage required is determined by the number of LEDs in series string
  - Current required is determined by number of parallel individual LEDs or strings
- Identify the maximum wattage load the driver will encounter in your application
  - Choose a driver rated slightly higher than your maximum rated load
  - Make sure the driver's output will operate beyond the LED's specified range (voltage range for a constant-current driver, or current range for a constant-voltage driver)
- Identify any dimming needs
- Choose a driver from a manufacturer with US operations (sales and engineering support is just a phone call away), who can also supply your manufacturing locations worldwide

- **For complete product details, refer to our individual data sheets**
- **For information on dimming or choosing the right LED driver, see our website FAQ page**

## Type HL Drivers

A number of our drivers offer models that are Type HL rated for use in Class 1 Div. 2 Hazardous Locations. Includes all PLED series drivers.

## -HV Models

Driver models that offer -HV versions are suitable for high voltage applications (347-480V input).

## SAM Listed Sign Drivers

Sign Component (SAM) Manual Listed drivers simplify utilizing 12V or 24V constant-voltage drivers for outdoor sign applications. These drivers are called out in this catalog by a dot in the SAM column.

## Classic LED Driver Product Families

| | | |
|---|---|---|
| **PERFORMANCE DRIVERS:** | | |
| PLED Series | 60W- 200W | High performance, Small case, dim to <10% |
| TLED Series | 25W, 40W | Flicker-free, Deep dimming |
| **STANDARD DRIVERS:** | | |
| LED Series | 12W-100W | Long life, 0-10V dimming, Dim to 10% |
| **SPECIALTY DRIVERS:** | | |
| -HL Series | 25W, 40W | Hazardous location, Bottom-exit lead options |
| -LT/LE/TE Series | 6W, 9W, 12W, 16W, 20W, 25W, 40W, 96W | Line voltage dimming |
| -HV Series | 25W, 40W, 96W | 347-480V input |

## Features Of LED Drivers From TRP

Long-life LED Drivers from Thomas Research Products represent the latest available technology. Most LED Drivers from TRP feature:

- ***TRUE*** 277V input: Universal 120-277V Nom. (90-305V Min/Max), -HV Series feature 277-480V Nom. Input, 50/60Hz
- UL Recognized in both the US & Canada, many also CE certified
- UL1310, Class 2 compliant or UL8750 as appropriate
- RoHS compliant
- IP20 or IP66 compliant
- Suitable for damp or dry locations
- Output protection: over-voltage, over-current and short-circuit
- Compact, lightweight UV-rated plastic or aluminum case.
- Many feature ***Black Magic Thermally Advantage™*** housings
- **Must typically be loaded to a minimum of 50% of their rated** max power output (wattage) to ensure proper operation
- Power factor ≥ 0.90 (Active Power Factor Correction)
- Minimum Operating Temperature -20°C or lower
- Operating Frequency ≥ 120 Hz
- Meets FCC CFR Part 15 Part B emission limits
- Class A sound rating
- Standard 5-year warranty, exceeding the Energy Star 3 year warranty requirement
- Max driver temperatures vary. *See product data sheets for details.*

# 6W

## LED-LT Series

- **Line Voltage Dimming**
- Compact Black Plastic Case
- OA: 3.35″ x 1.42″ x 0.9″

TYPE **HL**

| Constant Current or Voltage | Dimming | Output Current *(mA)* *(range if CV)* | Output Voltage *(VDC)* *(range if CC)* | Catalog Number | Nominal Input Voltage *(Vac)* | Max Output Power *(Watts)* | Efficiency | In Stock *(typical)* | SAM |
|---|---|---|---|---|---|---|---|---|---|
| C | Triac For Leading Edge (Incandescent) dimmers & ELV For Trailing Edge (Electronic Low Voltage) dimmers | 170 | 22-36 | LED06W120-036-C0170-LT | 120 | 6 | 82% | | |
| | | 200 | 18-30 | LED06W120-030-C0200-LT | | | 82% | | |
| | | 220 | 17-28 | LED06W120-028-C0220-LT | | | 81% | | |
| | | 350 | 12-20 | LED06W120-020-C0350-LT | | | 81% | ● | |
| | | 450 | 8-14 | LED06W120-014-C0450-LT | | | 80% | | |
| | | 500 | 7-12 | LED06W120-012-C0500-LT | | | 80% | ● | |
| | | 170 | 22-36 | LED06W230-036-C0170-LT | 230-277 | 6 | 82% | | |
| | | 200 | 18-30 | LED06W230-030-C0200-LT | | | 82% | | |
| | | 220 | 17-28 | LED06W230-028-C0220-LT | | | 81% | | |
| | | 350 | 12-20 | LED06W230-020-C0350-LT | | | 81% | | |
| | | 450 | 8-14 | LED06W230-014-C0450-LT | | | 80% | | |
| | | 500 | 7-12 | LED06W230-012-C0500-LT | | | 80% | | |

# 9W

## LED-LT Series

- **Line Voltage Dimming**
- Compact Black Plastic Case
- OA: 3.35″ x 1.42″ x 0.9″

TYPE **HL**

| Constant Current or Voltage | Dimming | Output Current *(mA)* *(range if CV)* | Output Voltage *(VDC)* *(range if CC)* | Catalog Number | Nominal Input Voltage *(Vac)* | Max Output Power *(Watts)* | Efficiency | In Stock *(typical)* | SAM |
|---|---|---|---|---|---|---|---|---|---|
| C | Triac For Leading Edge (Incandescent) dimmers & ELV For Trailing Edge (Electronic Low Voltage) dimmers | 250 | 22-36 | LED09W120-036-C0250-LT | 120 | 9 | 85% | | |
| | | 300 | 18-30 | LED09W120-030-C0300-LT | | | 85% | | |
| | | 350 | 17-28 | LED09W120-028-C0350-LT | | | 84% | ● | |
| | | 450 | 12-20 | LED09W120-020-C0450-LT | | | 84% | | |
| | | 700 | 8-14 | LED09W120-014-C0700-LT | | | 83% | ● | |
| | | 750 | 7-12 | LED09W120-012-C0750-LT | | | 83% | | |
| | | 250 | 22-36 | LED09W230-036-C0250-LT | 230-277 | 9 | 85% | | |
| | | 300 | 18-30 | LED09W230-030-C0300-LT | | | 85% | | |
| | | 350 | 17-28 | LED09W230-028-C0350-LT | | | 84% | | |
| | | 450 | 12-20 | LED09W230-020-C0450-LT | | | 84% | | |
| | | 700 | 8-14 | LED09W230-014-C0700-LT | | | 83% | | |
| | | 750 | 7-12 | LED09W230-012-C0750-LT | | | 83% | | |

# 12W

## LED Series

- Standard
- Compact Black Plastic Case
- OA: 3.35″ x 1.42″ x 0.9″

| Constant Current or Voltage | Dimming | Output Current *(mA)* *(range if CV)* | Output Voltage *(VDC)* *(range if CC)* | Catalog Number | Nominal Input Voltage *(Vac)* | Max Output Power *(Watts)* | Efficiency | In Stock *(typical)* | SAM |
|---|---|---|---|---|---|---|---|---|---|
| C | No | 250 | 24-48 | LED12W-48-C0250 | 100-277 | 12 | 82% | ● | |
| | | 350 | 18-36 | LED12W-36-C0350 | | 12.6 | 81% | ● | |
| | | 350 | 16.4-24 | LED12W-24-C0350 | | 8.2 | 80% | ● | |
| | | 500 | 12-24 | LED12W-24-C0500 | | 12 | 80% | ● | |
| | | 700 | 11.2-16 | LED12W-16-C0700 | | 11.2 | 79% | ● | |
| | | 800 | 8-16 | LED12W-16-C0800 | | 12.8 | 79% | ● | |
| | | 1000 | 6-12 | LED12W-12-C1000 | | 12 | 78% | ● | |
| V | No | 250-1000 | 12 | LED12W-12 | 100-277 | 12 | 78% | ● | ● |
| | | 200-800 | 16 | LED12W-16 | | 12.8 | 79% | | |
| | | 125-500 | 24 | LED12W-24 | | 12 | 80% | ● | ● |
| | | 88-350 | 36 | LED12W-36 | | 12.6 | 81% | | |
| | | 63-250 | 48 | LED12W-48 | | 12 | 82% | | |

# 12W

## LED Series

- Dimming
- Compact Black Plastic Case
- OA: 4.04" x 1.48" x 0.95"

TYPE **HL**

| Constant Current or Voltage | Dimming | Output Current (mA) (range if CV) | Output Voltage (VDC) (range if CC) | Catalog Number | Nominal Input Voltage (Vac) | Max Output Power (Watts) | Efficiency | In Stock (typical) | SAM |
|---|---|---|---|---|---|---|---|---|---|
| C | 0-10V | 250 | 12-36 | LED12W-36-C0250-D | 120-277 | 9 | 77% | ● | |
| | | 250 | 16-48 | LED12W-48-C0250-D | | 12 | 80% | ● | |
| | | 350 | 12-36 | LED12W-36-C0350-D | | 12.6 | 80% | ● | |
| | | 500 | 8-24 | LED12W-24-C0500-D | | 12 | 78% | ● | |
| | | 700 | 6-16 | LED12W-16-C0700-D | | 11.2 | 78% | ● | |
| | | 800 | 6-16 | LED12W-16-C0800-D | | 12.8 | 78% | ● | |
| | | 1000 | 4-12 | LED12W-12-C1000-D | | 12 | 77% | ● | |

# 12W

## LED-LT Series

- **Line Voltage Dimming**
- Compact Black Plastic Case
- OA: 3.35" x 1.42" x 0.9"

TYPE **HL**

| Constant Current or Voltage | Dimming | Output Current (mA) (range if CV) | Output Voltage (VDC) (range if CC) | Catalog Number | Nominal Input Voltage (Vac) | Max Output Power (Watts) | Efficiency | In Stock (typical) | SAM |
|---|---|---|---|---|---|---|---|---|---|
| C | Triac For Leading Edge (Incandescent) dimmers & ELV For Trailing Edge (Electronic Low Voltage) dimmers | 250 | 29-48 | LED12W120-048-C0250-LT | 120 | 12 | 85% | ● | |
| | | 300 | 24-40 | LED12W120-040-C0300-LT | | | 85% | | |
| | | 350 | 22-36 | LED12W120-036-C0350-LT | | | 84% | ● | |
| | | 500 | 14-24 | LED12W120-024-C0500-LT | | | 83% | ● | |
| | | 800 | 10-16 | LED12W120-016-C0800-LT | | | 82% | ● | |
| | | 1000 | 7-12 | LED12W120-012-C1000-LT | | | 81% | ● | |
| | | 250 | 29-48 | LED12W230-048-C0250-LT | 230-277 | 12 | 85% | | |
| | | 300 | 24-40 | LED12W230-040-C0300-LT | | | 85% | | |
| | | 350 | 22-36 | LED12W230-036-C0350-LT | | | 84% | | |
| | | 500 | 14-24 | LED12W230-024-C0500-LT | | | 83% | | |
| | | 800 | 10-16 | LED12W230-016-C0800-LT | | | 82% | | |
| | | 1000 | 7-12 | LED12W230-012-C1000-LT | | | 81% | | |

# 16W

## LED-LT Series

- **Line Voltage Dimming**
- Compact Black Plastic Case
- OA: 3.74" x 1.61" x 0.98"

TYPE **HL**

| Constant Current or Voltage | Dimming | Output Current (mA) (range if CV) | Output Voltage (VDC) (range if CC) | Catalog Number | Nominal Input Voltage (Vac) | Max Output Power (Watts) | Efficiency | In Stock (typical) | SAM |
|---|---|---|---|---|---|---|---|---|---|
| C | Triac For Leading Edge (Incandescent) dimmers & ELV For Trailing Edge (Electronic Low Voltage) dimmers | 350 | 28-46 | LED16W120-046-C0350-LT | 120 | 16 | 85% | ● | |
| | | 450 | 22-36 | LED16W120-036-C0450-LT | | | 85% | ● | |
| | | 550 | 18-30 | LED16W120-030-C0550-LT | | | 84% | ● | |
| | | 600 | 17-28 | LED16W120-028-C0600-LT | | | 84% | | |
| | | 700 | 14-24 | LED16W120-024-C0700-LT | | | 83% | ● | |
| | | 1140 | 8-14 | LED16W120-014-C1140-LT | | | 82% | | |
| | | 1330 | 7-12 | LED16W120-012-C1330-LT | | | 82% | | |
| | | 350 | 28-46 | LED16W230-046-C0350-LT | 230-277 | 16 | 85% | | |
| | | 450 | 22-36 | LED16W230-036-C0450-LT | | | 85% | | |
| | | 550 | 18-30 | LED16W230-030-C0550-LT | | | 84% | | |
| | | 600 | 17-28 | LED16W230-028-C0600-LT | | | 84% | | |
| | | 700 | 14-24 | LED16W230-024-C0700-LT | | | 83% | | |
| | | 1140 | 8-14 | LED16W230-014-C1140-LT | | | 82% | | |
| | | 1330 | 7-12 | LED16W230-012-C1330-LT | | | 82% | | |

# 17W

## LED Series

- **Line Voltage Dimming**
- Compact Black Plastic Case
- OA: 3.35" x 1.42" x 0.9"

| Constant Current or Voltage | Dimming | Output Current (mA) (range if CV) | Output Voltage (VDC) (range if CC) | Catalog Number | Nominal Input Voltage (Vac) | Max Output Power (Watts) | Efficiency | In Stock (typical) | SAM |
|---|---|---|---|---|---|---|---|---|---|
| C | No | 470 | 18-36 | LED17W-036-C0470 | 100-277 | 17 | 83% | | |
| | | 700 | 12-24 | LED17W-024-C0700 | | | 82% | ● | |
| | | 1400 | 6-12 | LED17W-012-C1400 | | | 82% | | |
| V | No | 350-1400 | 12 | LED17W-012 | 100-277 | 17 | 82% | | ● |
| | | 175-700 | 24 | LED17W-024 | | | 82% | ● | ● |
| | | 118-470 | 36 | LED17W-036 | | | 83% | | |

# 20W LED Series

- Standard
- Compact Black Plastic Case
- OA: 3.74" x 1.61" x 0.98"

| Constant Current or Voltage | Dimming | Output Current *(mA)* (range if CV) | Output Voltage *(VDC)* (range if CC) | Catalog Number | Nominal Input Voltage *(Vac)* | Max Output Power *(Watts)* | Efficiency | In Stock *(typical)* | SAM |
|---|---|---|---|---|---|---|---|---|---|
| C | No | 350 | 19-57 | LED20W-57-C0350 | 100-277 | 20 | 84% | | |
| | | 350 | 16-48 | LED20W-48-C0350 | | 16.8 | 83% | | |
| | | 460 | 15-43 | LED20W-43-C0460 | | 20 | 83% | | |
| | | 500 | 14-40 | LED20W-40-C0500 | | 20 | 82% | | |
| | | 550 | 18-36 | LED20W-36-C0550 | | 20 | 82% | ● | |
| | | 700 | 10-28 | LED20W-28-C0700 | | 20 | 81% | ● | |
| | | 830 | 8-24 | LED20W-24-C0830 | | 20 | 81% | ● | |
| | | 910 | 12-22 | LED20W-22-C0910 | | 20 | 81% | | |
| | | 1100 | 10-18 | LED20W-18-C1100 | | 20 | 80% | ● | |
| | | 1330 | 9-15 | LED20W-15-C1330 | | 20 | 80% | | |
| | | 1540 | 7-13 | LED20W-13-C1540 | | 20 | 79% | | |
| | | 1660 | 7-12 | LED20W-12-C1660 | | 20 | 78% | | |
| C | 0-10V | 350 | 19-57 | LED20W-57-C0350-D | 100-277 | 20 | 84% | ● | |
| | | 350 | 16-48 | LED20W-48-C0350-D | | 16.8 | 83% | ● | |
| | | 460 | 15-43 | LED20W-43-C0460-D | | 20 | 83% | | |
| | | 500 | 14-40 | LED20W-40-C0500-D | | 20 | 82% | ● | |
| | | 550 | 12-36 | LED20W-36-C0550-D | | 20 | 82% | ● | |
| | | 700 | 10-28 | LED20W-28-C0700-D | | 20 | 81% | ● | |
| | | 830 | 8-24 | LED20W-24-C0830-D | | 20 | 81% | | |
| | | 910 | 7-22 | LED20W-22-C0910-D | | 20 | 81% | | |
| | | 1100 | 6-18 | LED20W-18-C1100-D | | 20 | 80% | ● | |
| | | 1330 | 6-15 | LED20W-15-C1330-D | | 20 | 80% | | |
| | | 1540 | 4-13 | LED20W-13-C1540-D | | 20 | 79% | | |
| | | 1660 | 4-12 | LED20W-12-C1660-D | | 20 | 78% | | |
| V | No | 415-1660 | 12 | LED20W-12 | 100-277 | 20 | 82% | ● | ● |
| | | 385-1540 | 13 | LED20W-13 | | 20 | 82% | | |
| | | 333-1330 | 15 | LED20W-15 | | 20 | 83% | | |
| | | 275-1100 | 18 | LED20W-18 | | 20 | 83% | | |
| | | 228-910 | 22 | LED20W-22 | | 20 | 84% | | |
| | | 208-830 | 24 | LED20W-24 | | 20 | 84% | ● | ● |
| | | 175-700 | 28 | LED20W-28 | | 20 | 84% | | |
| | | 138-550 | 36 | LED20W-36 | | 20 | 85% | | |
| | | 125-500 | 40 | LED20W-40 | | 20 | 85% | | |
| | | 115-460 | 43 | LED20W-43 | | 20 | 85% | | |
| | | 88-350 | 48 | LED20W-48 | | 16.8 | 85% | | |
| | | 88-350 | 57 | LED20W-57 | | 20 | 85% | | |

# 20W LED-LT Series

- **Line Voltage Dimming**
- Compact Black Plastic Case
- OA: 3.74" x 1.61" x 0.98"

TYPE **HL**

| Constant Current or Voltage | Dimming | Output Current *(mA)* (range if CV) | Output Voltage *(VDC)* (range if CC) | Catalog Number | Nominal Input Voltage *(Vac)* | Max Output Power *(Watts)* | Efficiency | In Stock *(typical)* | SAM |
|---|---|---|---|---|---|---|---|---|---|
| C | **Triac** For Leading Edge (Incandescent) dimmers **& ELV** For Trailing Edge (Electronic Low Voltage) dimmers | 350 | 34-57 | LED20W120-057-C0350-LT | 120 | 20 | 85% | ● | |
| | | 460 | 26-43 | LED20W120-043-C0460-LT | | | 85% | | |
| | | 500 | 24-40 | LED20W120-040-C0500-LT | | | 85% | ● | |
| | | 550 | 22-36 | LED20W120-036-C0550-LT | | | 83% | ● | |
| | | 700 | 17-28 | LED20W120-028-C0700-LT | | | 82% | ● | |
| | | 830 | 14-24 | LED20W120-024-C0830-LT | | | 82% | | |
| | | 1100 | 11-18 | LED20W120-018-C1100-LT | | | 81% | ● | |
| | | 1660 | 7-12 | LED20W120-012-C1660-LT | | | 80% | | |
| | | 350 | 34-57 | LED20W230-057-C0350-LT | 230-277 | 20 | 85% | | |
| | | 460 | 26-43 | LED20W230-043-C0460-LT | | | 85% | | |
| | | 500 | 24-40 | LED20W230-040-C0500-LT | | | 85% | | |
| | | 550 | 22-36 | LED20W230-036-C0550-LT | | | 83% | | |
| | | 700 | 17-28 | LED20W230-028-C0700-LT | | | 82% | | |
| | | 830 | 14-24 | LED20W230-024-C0830-LT | | | 82% | | |
| | | 1100 | 11-18 | LED20W230-018-C1100-LT | | | 81% | | |
| | | 1660 | 7-12 | LED20W230-012-C1660-LT | | | 80% | | |

# 96W

# PLED Series

- Performance
- Black Aluminum Case
- OA: 6.30" x 2.32" x 1.46"

TYPE **TL** TYPE **HL**

| Constant Current or Voltage | Dimming | Output Current *(mA)* *(range if CV)* | Output Voltage *(VDC)* *(range if CC)* | Catalog Number | Nominal Input Voltage *(Vac)* | Max Output Power *(Watts)* | Efficiency | In Stock *(typical)* | SAM |
|---|---|---|---|---|---|---|---|---|---|
| C | No | 350 | 92-274 | PLED96W-274-C0350 | 100-277 | 96 | 92% | | |
| | | 450 | 71-213 | PLED96W-213-C0450 | | | 92% | | |
| | | 700 | 46-137 | PLED96W-137-C0700 | | | 92% | | |
| | | 1050 | 31-92 | PLED96W-092-C1050 | | | 91% | | |
| | | 1400 | 23-69 | PLED96W-069-C1400 | | | 91% | | |
| | | 1750 | 18-54 | PLED96W-054-C1750 | | 94.5 | 91% | | |
| | | 2000 | 16-48 | PLED96W-048-C2000 | | 96 | 90% | | |
| | | 2100 | 16-46 | PLED96W-046-C2100 | | | 90% | | |
| | | 2450 | 14-39 | PLED96W-039-C2450 | | | 89% | | |
| | | 2660 | 12-36 | PLED96W-036-C2660 | | | 89% | | |
| | | 2800 | 12-34 | PLED96W-034-C2800 | | | 89% | | |
| | | 3150 | 10-30 | PLED96W-030-C3150 | | | 89% | | |
| | | 3500 | 9-27 | PLED96W-027-C3500 | | | 88% | | |
| | | 3840 | 9-25 | PLED96W-025-C3840 | | | 88% | | |
| | | 4000 | 8-24 | PLED96W-024-C4000 | | | 88% | | |
| | | 4800 | 7-20 | PLED96W-020-C4800 | | | 87% | | |
| | | 5350 | 6-18 | PLED96W-018-C5350 | | | 86% | | |
| C | 0-10V *Optional: 3-wire (-D3)* | 350 | 92-274 | PLED96W-274-C0350-D | 100-277 | 96 | 92% | ● | |
| | | 450 | 71-213 | PLED96W-213-C0450-D | | | 92% | ● | |
| | | 700 | 46-137 | PLED96W-137-C0700-D | | | 92% | ● | |
| | | 1050 | 31-92 | PLED96W-092-C1050-D | | | 91% | ● | |
| | | 1400 | 23-69 | PLED96W-069-C1400-D | | | 91% | ● | |
| | | 1750 | 18-54 | PLED96W-054-C1750-D | | 94.5 | 91% | ● | |
| | | 2000 | 16-48 | PLED96W-048-C2000-D | | 96 | 90% | | |
| | | 2100 | 16-46 | PLED96W-046-C2100-D | | | 90% | ● | |
| | | 2450 | 14-39 | PLED96W-039-C2450-D | | | 89% | ● | |
| | | 2660 | 12-36 | PLED96W-036-C2660-D | | | 89% | | |
| | | 2800 | 12-34 | PLED96W-034-C2800-D | | | 89% | ● | |
| | | 3150 | 10-30 | PLED96W-030-C3150-D | | | 89% | ● | |
| | | 3500 | 9-27 | PLED96W-027-C3500-D | | | 88% | ● | |
| | | 3840 | 9-25 | PLED96W-025-C3840-D | | | 88% | | |
| | | 4000 | 8-24 | PLED96W-024-C4000-D | | | 88% | ● | |
| | | 4800 | 7-20 | PLED96W-020-C4800-D | | | 87% | | |
| | | 5350 | 6-18 | PLED96W-018-C5350-D | | | 86% | | |
| V | No | 1338-5350 | 18 | PLED96W-018 | 100-277 | 96 | 86% | | |
| | | 1200-4800 | 20 | PLED96W-020 | | | 87% | | |
| | | 1000-4000 | 24 | PLED96W-024 | | | 88% | ● | ● |
| | | 960-3840 | 25 | PLED96W-025 | | | 88% | | |
| | | 875-3500 | 27 | PLED96W-027 | | | 88% | | |
| | | 788-3150 | 30 | PLED96W-030 | | | 89% | | |
| | | 700-2800 | 34 | PLED96W-034 | | | 89% | | |
| | | 665-2660 | 36 | PLED96W-036 | | | 89% | | |
| | | 613-2450 | 39 | PLED96W-039 | | | 89% | | |
| | | 525-2100 | 46 | PLED96W-046 | | | 90% | | |
| | | 500-2000 | 48 | PLED96W-048 | | | 90% | | |
| | | 438-1750 | 54 | PLED96W-054 | | | 91% | | |
| | | 350-1400 | 69 | PLED96W-069 | | | 91% | | |
| | | 263-1050 | 92 | PLED96W-092 | | | 91% | | |
| | | 175-700 | 137 | PLED96W-137 | | | 92% | | |
| | | 113-450 | 213 | PLED96W-213 | | | 92% | | |
| | | 88-350 | 274 | PLED96W-274 | | | 92% | | |

# 96W

# PLED-HV
## Series

- **High Voltage 277- 480V Input**
- Black Aluminum Case
- OA: 5.95″ x 2.32″ x 1.47″

**TYPE TL** **TYPE HL**

| Constant Current or Voltage | Dimming | Output Current *(mA)* *(range if CV)* | Output Voltage *(VDC)* *(range if CC)* | Catalog Number | Nominal Input Voltage *(Vac)* | Max Output Power *(Watts)* | Efficiency | In Stock *(typical)* | SAM |
|---|---|---|---|---|---|---|---|---|---|
| C | No | 350 | 92-274 | PLED96W-274-C0350-HV | 277-480 | 96 | 92% | | |
| | | 450 | 71-213 | PLED96W-213-C0450-HV | | | 92% | | |
| | | 700 | 46-137 | PLED96W-137-C0700-HV | | | 92% | | |
| | | 1050 | 31-92 | PLED96W-092-C1050-HV | | | 91% | | |
| | | 1400 | 23-69 | PLED96W-069-C1400-HV | | | 91% | | |
| | | 1750 | 18-54 | PLED96W-054-C1750-HV | | 94.5 | 91% | | |
| | | 2000 | 16-48 | PLED96W-048-C2000-HV | | 96 | 90% | | |
| | | 2100 | 16-46 | PLED96W-046-C2100-HV | | | 90% | | |
| | | 2450 | 14-39 | PLED96W-039-C2450-HV | | | 89% | | |
| | | 2660 | 12-36 | PLED96W-036-C2660-HV | | | 89% | | |
| | | 2800 | 12-34 | PLED96W-034-C2800-HV | | | 89% | | |
| | | 3150 | 10-30 | PLED96W-030-C3150-HV | | | 89% | | |
| | | 3500 | 9-27 | PLED96W-027-C3500-HV | | | 88% | | |
| | | 3840 | 9-25 | PLED96W-025-C3840-HV | | | 88% | | |
| | | 4000 | 8-24 | PLED96W-024-C4000-HV | | | 88% | | |
| | | 4800 | 7-20 | PLED96W-020-C4800-HV | | | 87% | | |
| | | 5350 | 6-18 | PLED96W-018-C5350-HV | | | 86% | | |
| C | 0-10V | 350 | 92-274 | PLED96W-274-C0350-D-HV | 277-480 | 96 | 88% | | |
| | | 450 | 71-213 | PLED96W-213-C0450-D-HV | | | 88% | | |
| | | 700 | 46-137 | PLED96W-137-C0700-D-HV | | | 86% | | |
| | | 1050 | 31-92 | PLED96W-092-C1050-D-HV | | | 86% | | |
| | | 1400 | 23-69 | PLED96W-069-C1400-D-HV | | | 86% | | |
| | | 1750 | 18-54 | PLED96W-054-C1750-D-HV | | | 85% | | |
| | | 2000 | 16-48 | PLED96W-048-C2000-D-HV | | | 85% | | |
| | | 2100 | 16-46 | PLED96W-046-C2100-D-HV | | | 85% | | |
| | | 2450 | 14-39 | PLED96W-039-C2450-D-HV | | | 84% | | |
| | | 2660 | 12-36 | PLED96W-036-C2660-D-HV | | | 84% | | |
| | | 2800 | 12-34 | PLED96W-034-C2800-D-HV | | | 84% | | |
| | | 3150 | 10-30 | PLED96W-030-C3150-D-HV | | | 84% | | |
| | | 3500 | 9-27 | PLED96W-027-C3500-D-HV | | | 84% | | |
| | | 3840 | 9-25 | PLED96W-025-C3840-D-HV | | | 84% | | |
| | | 4000 | 8-24 | PLED96W-024-C4000-D-HV | | | 81% | | |
| | | 4800 | 7-20 | PLED96W-020-C4800-D-HV | | | 81% | | |
| | | 5350 | 6-18 | PLED96W-018-C5350-D-HV | | | 81% | | |
| V | No | 1338-5350 | 18 | PLED96W-018-HV | 277-480 | 96 | 81% | | |
| | | 1200-4800 | 20 | PLED96W-020-HV | | | 87% | | |
| | | 1000-4000 | 24 | PLED96W-024-HV | | | 86% | | |
| | | 960-3840 | 25 | PLED96W-025-HV | | | 87% | | |
| | | 875-3500 | 27 | PLED96W-027-HV | | | 87% | | |
| | | 788-3150 | 30 | PLED96W-030-HV | | | 86% | | |
| | | 700-2800 | 34 | PLED96W-034-HV | | | 85% | | |
| | | 665-2660 | 36 | PLED96W-036-HV | | | 87% | | |
| | | 613-2450 | 39 | PLED96W-039-HV | | | 86% | | |
| | | 525-2100 | 46 | PLED96W-046-HV | | | 87% | | |
| | | 500-2000 | 48 | PLED96W-048-HV | | | 87% | | |
| | | 438-1750 | 54 | PLED96W-054-HV | | | 86% | | |
| | | 350-1400 | 69 | PLED96W-069-HV | | | 85% | | |
| | | 263-1050 | 92 | PLED96W-092-HV | | | 86% | | |
| | | 175-700 | 137 | PLED96W-137-HV | | | 86% | | |
| | | 113-450 | 213 | PLED96W-213-HV | | | 88% | | |
| | | 88-350 | 217 | PLED96W-274-HV | | | 88% | | |



UL/CSA Class2

# 100W

## LED-WPS1 Series

- **True Power Supply**
- White Steel Case
- OA: 9.49" x 1.69" x 1.18"

TYPE **HL**

| Constant Current or Voltage | Dimming | Output Current *(mA)* *(range if CV)* | Output Voltage *(VDC)* *(range if CC)* | Catalog Number | Nominal Input Voltage *(Vac)* | Max Output Power *(Watts)* | Efficiency | In Stock *(typical)* | SAM |
|---|---|---|---|---|---|---|---|---|---|
| V | No | 0-4150 | 24 | LED100WPS1-24 | 120-277 | 100 | 88% | | ● |

# 120W

## PLED Series

- Performance
- Black Aluminum Case
- OA: 7.60" x 2.32" x 1.48"

TYPE **TL** TYPE **HL**

| Constant Current or Voltage | Dimming | Output Current *(mA)* *(range if CV)* | Output Voltage *(VDC)* *(range if CC)* | Catalog Number | Nominal Input Voltage *(Vac)* | Max Output Power *(Watts)* | Efficiency | In Stock *(typical)* | SAM |
|---|---|---|---|---|---|---|---|---|---|
| C | No | 350 | 171-343 | PLED120W-343-C0350 | 100-277 | 120 | 93% | | |
| | | 450 | 133-266 | PLED120W-266-C0450 | | | 93% | | |
| | | 700 | 85-171 | PLED120W-171-C0700 | | | 93% | | |
| | | 1050 | 57-114 | PLED120W-114-C1050 | | | 92% | | |
| | | 1400 | 43-86 | PLED120W-086-C1400 | | | 92% | | |
| | | 1750 | 34-68 | PLED120W-068-C1750 | | | 92% | | |
| | | 2100 | 28-57 | PLED120W-057-C2100 | | | 92% | | |
| | | 2450 | 24-49 | PLED120W-049-C2450 | | | 92% | | |
| | | 2800 | 21-43 | PLED120W-043-C2800 | | | 91% | | |
| | | 3150 | 19-38 | PLED120W-038-C3150 | | | 91% | | |
| | | 3500 | 17-34 | PLED120W-034-C3500 | | | 91% | | |
| | | 4200 | 14-28 | PLED120W-028-C4200 | | | 91% | | |
| | | 5000 | 12-24 | PLED120W-024-C5000 | | | 89% | | |
| | 0-10V *Optional: 3-wire (-D3)* | 350 | 171-343 | PLED120W-343-C0350-D | | | 93% | ● | |
| | | 450 | 133-266 | PLED120W-266-C0450-D | | | 93% | | |
| | | 700 | 85-171 | PLED120W-171-C0700-D | | | 93% | ● | |
| | | 1050 | 57-114 | PLED120W-114-C1050-D | | | 92% | ● | |
| | | 1400 | 43-86 | PLED120W-086-C1400-D | | | 92% | ● | |
| | | 1750 | 34-68 | PLED120W-068-C1750-D | | | 92% | | |
| | | 2100 | 28-57 | PLED120W-057-C2100-D | | | 92% | ● | |
| | | 2450 | 24-49 | PLED120W-049-C2450-D | | | 92% | | |
| | | 2800 | 21-43 | PLED120W-043-C2800-D | | | 91% | ● | |
| | | 3150 | 19-38 | PLED120W-038-C3150-D | | | 91% | | |
| | | 3500 | 17-34 | PLED120W-034-C3500-D | | | 91% | | |
| | | 4200 | 14-28 | PLED120W-028-C4200-D | | | 91% | | |
| | | 5000 | 12-24 | PLED120W-024-C5000-D | | | 89% | | |
| V | No | 1250-5000 | 24 | PLED120W-024 | 100-277 | 120 | 89% | ● | ● |
| | | 1050-4200 | 28 | PLED120W-028 | | | 91% | | |
| | | 875-3500 | 34 | PLED120W-034 | | | 91% | | |
| | | 788-3150 | 38 | PLED120W-038 | | | 91% | | |
| | | 700-2800 | 43 | PLED120W-043 | | | 91% | | |
| | | 613-2450 | 49 | PLED120W-049 | | | 92% | | |
| | | 525-2100 | 57 | PLED120W-057 | | | 92% | | |
| | | 438-1750 | 68 | PLED120W-068 | | | 92% | | |
| | | 350-1400 | 86 | PLED120W-086 | | | 92% | | |
| | | 263-1050 | 114 | PLED120W-114 | | | 92% | | |
| | | 175-700 | 171 | PLED120W-171 | | | 93% | | |
| | | 113-450 | 266 | PLED120W-266 | | | 93% | | |
| | | 88-350 | 343 | PLED120W-343 | | | 93% | | |

# 150W

## PLED Series

- **AC or DC input**
- Black Aluminum Case
- OA: 7.60" x 2.32" x 1.48

**TYPE TL** **TYPE HL**

| Constant Current or Voltage | Dimming | Output Current *(mA)* *(range if CV)* | Output Voltage *(VDC)* *(range if CC)* | Catalog Number | Nominal Input Voltage *(Vac)* | Max Output Power *(Watts)* | Efficiency | In Stock *(typical)* | SAM |
|---|---|---|---|---|---|---|---|---|---|
| C | No | 350 | 142-428 | PLED150W-428-C0350 | 100-277 | 150 | 92% | | |
| | | 450 | 111-333 | PLED150W-333-C0450 | | | 92% | | |
| | | 530 | 95-283 | PLED150W-283-C0530 | | | 91% | | |
| | | 700 | 72-214 | PLED150W-214-C0700 | | | 91% | | |
| | | 1050 | 48-142 | PLED150W-142-C1050 | | | 91% | | |
| | | 1400 | 36-107 | PLED150W-107-C1400 | | | 91% | | |
| | | 1750 | 29-85 | PLED150W-085-C1750 | | | 90% | | |
| | | 2100 | 24-71 | PLED150W-071-C2100 | | | 90% | | |
| | | 2450 | 21-61 | PLED150W-061-C2450 | | | 90% | | |
| | | 2800 | 18-53 | PLED150W-053-C2800 | | | 90% | | |
| | | 3150 | 16-48 | PLED150W-048-C3150 | | | 89% | | |
| | | 3500 | 14-42 | PLED150W-042-C3500 | | | 89% | | |
| | | 4200 | 12-35 | PLED150W-035-C4200 | | | 89% | | |
| | | 4900 | 10-30 | PLED150W-030-C4900 | | | 88% | | |
| | | 6250 | 8-24 | PLED150W-024-C6250 | | | 88% | | |
| | 0-10V *Optional: 3-wire (-D3)* | 350 | 142-428 | PLED150W-428-C0350-D | 100-277 | 150 | 92% | ● | |
| | | 450 | 111-333 | PLED150W-333-C0450-D | | | 92% | | |
| | | 530 | 95-283 | PLED150W-283-C0530-D | | | 91% | | |
| | | 700 | 72-214 | PLED150W-214-C0700-D | | | 91% | ● | |
| | | 1050 | 48-142 | PLED150W-142-C1050-D | | | 91% | | |
| | | 1400 | 36-107 | PLED150W-107-C1400-D | | | 91% | | |
| | | 1750 | 29-85 | PLED150W-085-C1750-D | | | 90% | | |
| | | 2100 | 24-71 | PLED150W-071-C2100-D | | | 90% | ● | |
| | | 2450 | 21-61 | PLED150W-061-C2450-D | | | 90% | | |
| | | 2800 | 18-53 | PLED150W-053-C2800-D | | | 90% | ● | |
| | | 3150 | 16-48 | PLED150W-048-C3150-D | | | 89% | | |
| | | 3500 | 14-42 | PLED150W-042-C3500-D | | | 89% | | |
| | | 4200 | 12-35 | PLED150W-035-C4200-D | | | 89% | | |
| | | 4900 | 10-30 | PLED150W-030-C4900-D | | | 88% | | |
| | | 6250 | 8-24 | PLED150W-024-C6250-D | | | 88% | | |
| V | No | 1563-6250 | 24 | PLED150W-024 | 100-277 | 150 | 88% | | ● |
| | | 1225-4900 | 30 | PLED150W-030 | | | 88% | | |
| | | 1050-4200 | 35 | PLED150W-035 | | | 89% | | |
| | | 875-3500 | 42 | PLED150W-042 | | | 89% | | |
| | | 788-3150 | 48 | PLED150W-048 | | | 89% | | |
| | | 700-2800 | 53 | PLED150W-053 | | | 90% | | |
| | | 613-2450 | 61 | PLED150W-061 | | | 90% | | |
| | | 525-2100 | 71 | PLED150W-071 | | | 90% | | |
| | | 438-1750 | 85 | PLED150W-085 | | | 90% | | |
| | | 350-1400 | 107 | PLED150W-107 | | | 91% | | |
| | | 263-1050 | 142 | PLED150W-142 | | | 91% | | |
| | | 175-700 | 214 | PLED150W-214 | | | 91% | | |
| | | 133-530 | 283 | PLED150W-283 | | | 91% | | |
| | | 113-450 | 333 | PLED150W-333 | | | 92% | | |
| | | 88-350 | 428 | PLED150W-428 | | | 92% | | |

# 200W

# PLED Series

- Performance
- Black Aluminum Case
- OA: 9.32" x 2.32" x 1.48

TYPE **TL** TYPE **HL**

| Constant Current or Voltage | Dimming | Output Current *(mA)* *(range if CV)* | Output Voltage *(VDC)* *(range if CC)* | Catalog Number | Nominal Input Voltage *(Vac)* | Max Output Power *(Watts)* | Efficiency | In Stock *(typical)* | SAM |
|---|---|---|---|---|---|---|---|---|---|
| C | No | 450 | 149-445 | PLED200W-445-C0450 | 100-277 | 200 | 93% | | |
| | | 700 | 95-285 | PLED200W-285-C0700 | | | 93% | | |
| | | 1050 | 64-190 | PLED200W-190-C1050 | | | 93% | | |
| | | 1400 | 48-142 | PLED200W-142-C1400 | | | 93% | | |
| | | 1750 | 38-114 | PLED200W-114-C1750 | | | 92% | | |
| | | 2100 | 32-95 | PLED200W-095-C2100 | | | 92% | | |
| | | 2450 | 27-81 | PLED200W-081-C2450 | | | 92% | | |
| | | 2800 | 24-71 | PLED200W-071-C2800 | | | 91% | | |
| | | 3150 | 21-63 | PLED200W-063-C3150 | | | 91% | | |
| | | 3500 | 19-57 | PLED200W-057-C3500 | | | 91% | | |
| | | 4200 | 16-47 | PLED200W-047-C4200 | | | 91% | | |
| | | 4900 | 14-40 | PLED200W-040-C4900 | | | 91% | | |
| | | 5600 | 12-35 | PLED200W-035-C5600 | | | 91% | | |
| | | 6300 | 11-32 | PLED200W-032-C6300 | | | 91% | | |
| | | 8330 | 8-24 | PLED200W-024-C8330 | | | 90% | | |
| | **0-10V** *Optional: 3-wire (-D3)* | 450 | 149-445 | PLED200W-445-C0450-D | 100-277 | 200 | 93% | | |
| | | 700 | 95-285 | PLED200W-285-C0700-D | | | 93% | ● | |
| | | 1050 | 64-190 | PLED200W-190-C1050-D | | | 93% | ● | |
| | | 1400 | 48-142 | PLED200W-142-C1400-D | | | 93% | ● | |
| | | 1750 | 38-114 | PLED200W-114-C1750-D | | | 92% | | |
| | | 2100 | 32-95 | PLED200W-095-C2100-D | | | 92% | ● | |
| | | 2450 | 27-81 | PLED200W-081-C2450-D | | | 92% | | |
| | | 2800 | 24-71 | PLED200W-071-C2800-D | | | 91% | | |
| | | 3150 | 21-63 | PLED200W-063-C3150-D | | | 91% | | |
| | | 3500 | 19-57 | PLED200W-057-C3500-D | | | 91% | | |
| | | 4200 | 16-47 | PLED200W-047-C4200-D | | | 91% | | |
| | | 4900 | 14-40 | PLED200W-040-C4900-D | | | 91% | | |
| | | 5600 | 12-35 | PLED200W-035-C5600-D | | | 91% | | |
| | | 6300 | 11-32 | PLED200W-032-C6300-D | | | 91% | | |
| | | 8330 | 8-24 | PLED200W-024-C8330-D | | | 90% | | |
| V | No | 2083-8330 | 24 | PLED200W-024 | 100-277 | 200 | 90% | ● | ● |
| | | 1575-6300 | 32 | PLED200W-032 | | | 91% | | |
| | | 1400-5600 | 35 | PLED200W-035 | | | 91% | | |
| | | 1225-4900 | 40 | PLED200W-040 | | | 91% | | |
| | | 1050-4200 | 47 | PLED200W-047 | | | 91% | | |
| | | 875-3500 | 57 | PLED200W-057 | | | 91% | | |
| | | 788-3150 | 63 | PLED200W-063 | | | 91% | | |
| | | 700-2800 | 71 | PLED200W-071 | | | 91% | | |
| | | 613-2450 | 81 | PLED200W-081 | | | 92% | | |
| | | 525-2100 | 95 | PLED200W-095 | | | 92% | | |
| | | 438-1750 | 114 | PLED200W-114 | | | 92% | | |
| | | 350-1400 | 142 | PLED200W-142 | | | 93% | | |
| | | 163-1050 | 190 | PLED200W-190 | | | 93% | | |
| | | 175-700 | 285 | PLED200W-285 | | | 93% | | |
| | | 113-450 | 445 | PLED200W-445 | | | 93% | | |

# SURGE PROTECTORS

TRP's most effective surge protectors advance the lighting industry. They provide LED Drivers with an additional level of protection from dangerous power-line disturbances in industrial and commercial settings. Perfect for critical 24/7 applications.

- Protects Line-Ground, Line-Neutral & Neutral-Ground in accordance with IEEE / ANSI C62.41.2 guidelines
- High-temp, flameproof plastic enclosure with 85ºC max surface rating
- Surge Location Rated Category C3
- Operate on AC or DC circuits

## BSP3

- 10,000 Amp protection for 120 to 480V power
- 1.55" Ø x 2.82" Nom, three leads

| BSP3 Model | Max Mains Voltage | Max Clamping Voltage 8/20 µS @ 10kA | UL1449 | UL935/ UL1029 |
|---|---|---|---|---|
| BSP3-120 | 120 | 600 | | ✓ |
| BSP3-208/240 | 240 | 1000 | | ✓ |
| BSP3-277 | 277 | 1500 | ✓ | ✓ |
| BSP3-347 | 347 | 1900 | | ✓ |
| BSP3-480 | 480 | 2500 | ✓ | ✓ |

| Pulse Rating | |
|---|---|
| Strikes | Surge |
| 1 | 10,000 A |
| 2 | 6,500 A |
| 10 | 3,000 A |
| 100 | 1,500 A |

## BSP3 (LC)

- Same protection in low-cost, compact housing
- 1.55" Ø x 1.51" Nom, three leads

| BSP3 (LC) Model | Max Mains Voltage | Max Clamping Voltage 8/20 µS @ 10kA | UL1449 | UL935/ UL1029 |
|---|---|---|---|---|
| BSP3-120 (LC) | 120 | 600 | | ✓ |
| BSP3-208/240(LC) | 240 | 1000 | | ✓ |
| BSP3-277 (LC) | 277 | 1500 | ✓ | ✓ |
| BSP3-347 (LC) | 347 | 1900 | | ✓ |
| BSP3-480 (LC) | 480 | 2500 | ✓ | ✓ |

| Pulse Rating | |
|---|---|
| Strikes | Surge |
| 1 | 10,000 A |
| 2 | 6,500 A |
| 10 | 3,000 A |
| 100 | 1,500 A |

## BSP3-20KA

- 20,000 Amp protection for 277V or 480V power
- Available "TN" option includes threaded nipple
- 1.55" Ø x 2.25" Nom, three leads

| BSP3-20KA Model | Mains Voltage | Max Clamping Voltage 8/20 µS @ 20kA | UL1449 |
|---|---|---|---|
| BSP3-277-20KA | 100-277 | 2600 | ✓ |
| BSP3-480-20KA | 480 | 3800 | ✓ |

| Pulse Rating | |
|---|---|
| Strikes | Surge |
| 1 | 20,000 A |
| 2 | 15,000 A |
| 15 | 10,000 A |
| 120 | 3,000 A |

## FSP3-277-20KA, FSP3-480-20KA

- Includes In-line fusing
- **Operating Indicator**: Green LED lights up to show unit is functioning. Unlit indicates unit needs replacing.
- NI option eliminates indicator
- At End-of-Life, turns off the fixture
- 20,000 Amp protection for 277V or 480V power
- 7.0 Amp maximum load
- 1.89" Ø x 2.95" Nom
- Patent Pending

| FSP-277-20KA Model | Mains Voltage | Max Clamping Voltage 8/20 µS @ 20kA | UL1449 | LED Indicator |
|---|---|---|---|---|
| FSP3-277-20KA | 100-277 | 2600 | ✓ | Local |
| FSP3-277-20KA-NI | 100-277 | 2600 | ✓ | none |
| FSP3-480-20KA | 480V | 3800 | ✓ | Local |
| FSP3-480-20KA-NI | 480V | 3800 | ✓ | none |

| Pulse Rating | |
|---|---|
| Strikes | Surge |
| 1 | 20,000 A |
| 2 | 15,000 A |
| 15 | 10,000 A |
| 120 | 3,000 A |

TEST QUALIFIED FOR TEXAS DOT, DEPARTMENTAL MATERIALS SPECIFICATION FOR LED ROADWAY LIGHTING

## EOL3-277-20KA

- Includes In-line fusing
- **End-of-Life Indicator**: Blue LED lights up when unit needs to be replaced.
- LED indicator flashes at "power-up" to confirm that LED is functional.
- At End-of-Life, turns off the fixture
- Two models:
  - L model includes local LED indicator
  - R model operates a remote-mounted LED indicator *(purchased separately)*
- 20,000 Amp protection for 277V power
- 7.0 Amp maximum load
- 1.89" Ø x 3.44" Nom
- Patent Pending

| EOL3-277-20KA Model | Mains Voltage | Max Clamping Voltage 8/20 µS @ 20kA | UL1449 | LED Indicator |
|---|---|---|---|---|
| EOL3-277-20KA-L | 100-277 | 2600 | ✓ | Local |
| EOL3-277-20KA-R | 100-277 | 2600 | ✓ | Remote |
| EOL3-LED-18-B | LED (blue) assembly with 18" leads | | | |

| Pulse Rating | |
|---|---|
| Strikes | Surge |
| 1 | 20,000 A |
| 2 | 15,000 A |
| 15 | 10,000 A |
| 120 | 3,000 A |

## SSP3

- Low Profile
- Cost-effective 3 point protection.
- Universal input voltage ranges: up to 277V or 480V
- UL1449 Type 5 Recognized Component.
- At end-of-life, individual surge protection elements will be in short circuit mode for one or more coupling modes
- 20,000 Amp protection for 277V or 480V power

| SSP3 Model | Mains Voltage | Line-Neutral | Line-Ground / Neutral-Ground | UL1449 |
|---|---|---|---|---|
| | | Max Clamping Voltage 8/20 µS @ 20kA | Max Clamping Voltage 8/20 µS @ 12kA | |
| SSP3-277 | 100-277 | 2600 | 1800 | ✓ |

| SSP3 Model | Mains Voltage | Phase1-Phase2 | Phase1-Ground / Phase2-Ground | UL1449 |
|---|---|---|---|---|
| | | Max Clamping Voltage 8/20 µS @ 20kA | Max Clamping Voltage 8/20 µS @ 12kA | |
| SSP3-480 | 347-480 | 3800 | 2700 | ✓ |

| Line-Neutral | |
|---|---|
| Pulse Rating | |
| Strikes | Surge |
| 1 | 20,000 A |
| 2 | 15,000 A |
| 15 | 10,000 A |
| 100 | 3,000 A |

| Line-Ground Neutral-Ground | |
|---|---|
| Pulse Rating | |
| Strikes | Surge |
| 1 | 12,000 A |
| 2 | 8,000 A |
| 100 | 3,000 A |
| 1600 | 750 A |

| Phase1-Phase2 | |
|---|---|
| Pulse Rating | |
| Strikes | Surge |
| 1 | 20,000 A |
| 2 | 15,000 A |
| 15 | 10,000 A |
| 100 | 3,000 A |

| Phase1-Ground Phase2-Ground | |
|---|---|
| Pulse Rating | |
| Strikes | Surge |
| 1 | 12,000 A |
| 2 | 6,000 A |
| 40 | 3,000 A |
| 1600 | 750 A |

# STEP-DOWN AUTO TRANSFORMERS

## F-CAN STYLE

Allow 100-277V Universal Voltage LED drivers to run on 347-480V mains. Also for Electronic Fluorescent & HID Ballasts.

- UL Listed
- Thermally protected.

| Model | Input | Output | VA Rating | Dimensions |
|---|---|---|---|---|
| 480V:277-250VA-L | 347-480V | 277V/200V | 250 | 9.45″ x 1.69″ x 1.22″ |
| 480V:277-375VA-L | 347-480V | 277V/200V | 375 | 11.69″ x 1.69″ x 1.22″ |

## TRADITIONAL STYLE

Allow 100-277V LED drivers to run on 347-480V mains. Also for Electronic Fluorescent & HID Ballasts. Step-up transformers are also available.

| Model | Input | Output | VA Rating | Dimensions |
|---|---|---|---|---|
| 480:347:277-125VA | 347-480V | 277V | 125 | 3.74″ x 2.56″ x 2.36″ |
| 480:347:277:220-245VA | 347-480V | 277V & 220V | 245 | 3.39″ x 3.07″ x 3.34″ |
| 480:347:277-460VA | 347-480V | 277V | 460 | 3.82″ x 3.34″ x 3.74″ |

## STEP-DIMMING MODULES

Use two standard wall switches for quick switching between light levels in 120V applications. Eliminates the need for dimming switches. Works with occupancy sensors.

- Compatible with TRP 0-10V dimmable LED drivers
- IP66

3.35″ x 1.42″ x 0.75″

| Model | Output Levels | Max Pass Current | LED Driver Max Power | Insertion Loss |
|---|---|---|---|---|
| SD2-120 | 50-100% | 1.0 A | 100W | <1.5W |
| SD3-25-120 | 25-50-100% | 1.0 A | 100W | <1.5W |
| SD3-33-120 | 33-66-100% | 1.0 A | 100W | <1.5W |

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Thomas Research Products warrants to the Purchaser that its LED drivers, surge protectors, and lighting transformers will be free from defects in material and workmanship and will be of the designated kind and quality for five years from the date of manufacture. (EXCEPT: BLED Drivers, which are two years.) All other electronic circuits will be free from defects in material and workmanship and will be of the designated kind and quality for one year from the date of manufacture.

This warranty is not applicable to any circuit not installed and operated in accordance with the current edition of National Electrical Code and Underwriters Laboratories, Inc. Standards for Safety.

If it appears within our circuit warranty period that any circuit does not meet the warranty specified above, the Purchaser must notify in writing by United States mail of its warranty claim and return the circuits promptly at Purchaser's expense to Thomas Research Products. Thomas Research Products shall thereupon at Thomas Research Products expense, make available a repaired or new replacement part.

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Thomas Research Products

# INNOVATION IN ILLUMINATION

## Product Lines:

**SelectSYNC™ LED Drivers**
- Intelligent Programmable Drivers
- Dynamic Programmable Drivers
- Classic Fixed Output Drivers

**Lighting Controls**
- Intelligent Wireless Lighting Controls
- Classic Energy-saving Controls
- Classic Lighting Step-down Transformers
- Classic HID Quartz Restrike Controllers

**Surge Protectors**
- Classic Surge Protectors
- Classic Low Profile Surge Protectors

**Light Engines**
- Classic LED Light Engines
- Custom LED Light Engines

**A Name You Can Trust**

Thomas Research Products provides complete component solutions for OEMs utilizing LEDs. Products include high-performing LED drivers, LED light engines, surge protectors and lighting controls. The company also offers Norlux brand custom design, testing and manufacturing services.

Founded in 1997, Thomas Research Products is a division of Hubbell Lighting, one of the largest lighting manufacturers in North America. Hubbell Lighting brands offer products for commercial, industrial and residential markets. The company's history of innovation extends back to 1886 and Harvey Hubbell's invention of the very first lighting control device—the pull chain switch.



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TRPCAT (04/2017)