Thomas Research Products
SSL Solutions Faster Than The Speed Of Light

LED Driver Essentials

Thomas Research Products offers an extensive line of long-life LED Drivers, representing the latest technology available. Detailed specification sheets are available on our website.

Choosing a Driver

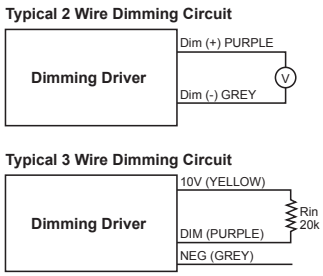
- Identify whether a constant-current or constant-voltage source is required to operate the LEDs in your application.
- Identify the maximum wattage load the driver will encounter in your application.
  - Choose a driver rated at or slightly higher than your maximum rated load.
  - Make sure the drivers output will operate within its specified range (voltage range for a constant-current driver, current range for a constant-voltage driver)
- Specify a dimming capable driver if dimming is required.
- Chose a driver manufacturer who:
  - Offers a 5-year driver warranty
  - Has US operations: sales and engineering support is just a phone call away
  - Can supply your manufacturing locations worldwide

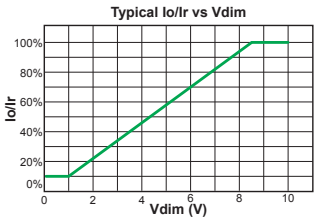
Design Notes

- Drivers MUST be loaded to a minimum of 50% of their rated maximum power output (wattage) to ensure proper operation
- Universal Input Voltage: 120-277V (TSC/TSV Series: 277-480V)
- Single output with constant-current or constant-voltage mode
- All Drivers operate on either 50 or 60 Hz line-voltage frequency
- All Drivers are RoHS compliant
- All Drivers are IP66 or IP67 compliant, suitable for damp or dry locations, indoors or outdoors
- UL1310, Class 2 compliant or UL8540 as appropriate
- Compact, lightweight with UV-rated plastic or aluminum cases, many feature ***Black Magic Thermally Advantaged™*** housings
- Output over-voltage protection, output over-current protection and output short-circuit protection
- Active Power Factor Correction
- All Drivers are UL Recognized in both the US and Canada, many are also CE certified
- 5-year warranty on all LED Drivers

Dimming Notes

- Dimming drivers are designed to allow LEDs to be dimmed down to 10% to 25% light output, depending on model.
- Dimming drivers designed to be operated on 0-10Vdc dimmers only. Specific models are compatible with line-voltage dimmers.
- Dimming drivers include a 10V source lead for use with potentiometer dimmers. Cap off yellow lead when using a 0-10V dimmer.





Energy Star

Nearly all Thomas Research Products LED Drivers meet or exceed the ENERGY STAR Program Requirements for SSL Luminaires – Version 1.1:

- Power factor ≥ 0.90
- Minimum Operating Temperature -20°C or lower
- Operating Frequency ≥ 120 Hz
- Meets FCC CFR Part 15 Part A emission limits
- Complies with IEEE C.62.41-1991transient protection requirements
- Class A sound rating
- TRP 5-year warranty exceeds Energy Star 3-year requirement

Custom Drivers

Can't find a standard driver that meets the particular requirements of your application?

Thomas Research Products takes great pride in customer problem solving, analyzing needs, and producing unique products tailored to meet customer applications. We have the ability to quickly design and deliver custom LED Drivers for your specific requirements. Some of our custom designs include:

- **"Tuned" Output Orivers** to meet requirements of your specific application. Outputs (constant-current or constant-voltage) of 60W, 90W, and 100W Drivers can be factory-tuned for your specific application.
- **Multi-channel Drivers.** We can design high-wattage drivers with multiple output channels to keep groups of LEDs within a fixture operating independently of each other. This will ensure that a fixture continues to operate at a reduced light-output level in the unlikely event that an LED fails. Multi-channel drivers are also a good solution to avoid connecting multiple LED arrays in parallel, which could lead to "current hogging".

Contact us for details.

Thomas Research Products • 11548 Smith Dr. • Huntley, IL 60142 • T: 847-515-3057• F: 847-515-3047 • www.trpssl.com