OSRAM OTi 50/120-277/1A4 DIM-1 L G2

OSRAM OPTOTRONIC OTi 50/120-277/1A4 DIM-1 L G2 LED Driver Instruction Manual

Brand: OSRAM | Model: OTi 50/120-277/1A4 DIM-1 L G2

1. Introduction

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the OSRAM OPTOTRONIC OTi 50/120-277/1A4 DIM-1 L G2 LED Driver. This device is a 50-watt, 120/277 volt, 50-60Hz, dimmable, constant current LED driver designed for various lighting applications.

Please note that as of November 16, 2021, Acuity Brands announced the transition of OPTOTRONIC LED driver product families to the eldoLED brand. Product labels, specification sheets, and datasheets now incorporate the eldoLED logo.

Figure 1: An overview of ten OSRAM OPTOTRONIC OTi 50/120-277/1A4 DIM-1 L G2 LED drivers, showcasing their linear form factor.

2. Features

- OPTOTRONIC Linear Programmable LED Driver
- Constant Current, 0-10V Dimmable LED Driver
- Input Voltage: 120-277VAC 50/60 Hz
- Output Power (Pout): 50W
- Output Voltage (Vout): 10-55VDC
- Output Current (Iout): 400-1400mA
- UL Class 2 output for safe operation, Class P
- Suitable for Dry and Damp Locations
- Slim Form Factor: 11 x 1.15 x 1 inches; 8.7 ounces
- Architectural Dimming Features: Synchronize ON/OFF Timing and Dimming Controls, True 1% Dimming, Dim-to-OFF, Dimming Interface Protection

Figure 2: A detailed view of the OSRAM OPTOTRONIC LED driver highlighting its programmable linear constant current dimmable capabilities, 50-watt output, dimmable function, suitability for dry/damp locations, and UL Class 2 certification. The model number OTi50/120-277/1A4/DIM-1/L G2 is visible.

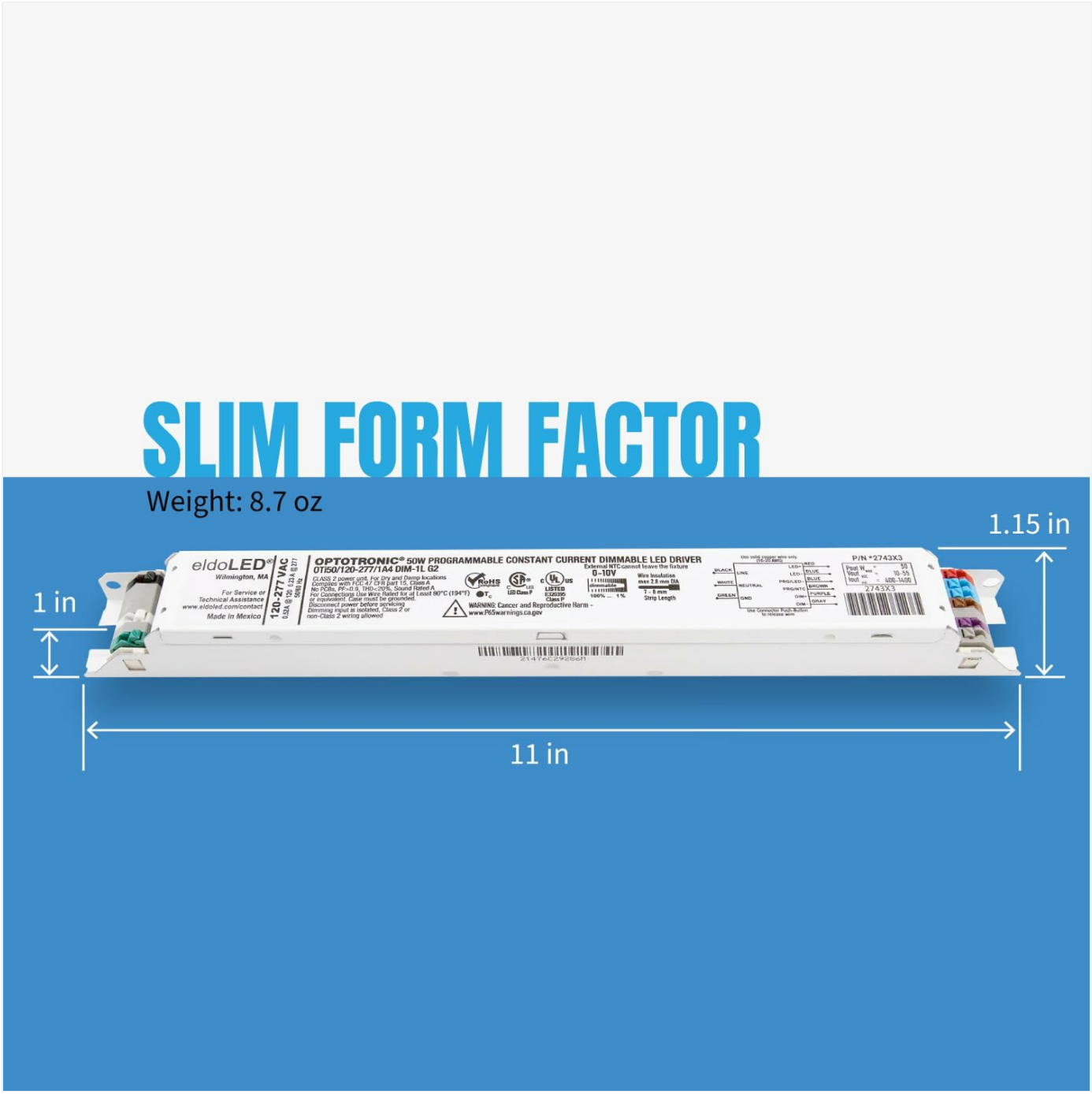

Figure 3: The OSRAM OPTOTRONIC LED driver illustrating its slim form factor with dimensions: 11 inches length, 1.15 inches width, and 1 inch height. The weight is approximately 8.7 oz. Part Number P/N 2743X3 is visible.

3. Setup

Installation of the OSRAM OPTOTRONIC LED Driver should be performed by a qualified electrician in accordance with all national and local electrical codes. Ensure power is disconnected before beginning any installation or wiring procedures.

1. **Mounting:** Securely mount the LED driver in a suitable enclosure or fixture. Ensure adequate ventilation to prevent overheating. The driver is suitable for dry and damp locations.
2. **Input Wiring:** Connect the AC input (120-277VAC, 50/60Hz) to the designated input terminals. Observe correct line, neutral, and ground connections.
3. **Output Wiring:** Connect the LED load to the DC output terminals. Ensure the LED load's voltage and current requirements are within the driver's specifications (10-55VDC, 400-1400mA).
4. **Dimming Control Wiring:** For 0-10V dimming functionality, connect the dimming control wires to the dedicated dimming terminals. Refer to the specific wiring diagram provided with the product for detailed connections.
5. **Verification:** After all connections are made, double-check all wiring for correctness and security before restoring power.

4. Operating Instructions

The OSRAM OPTOTRONIC LED Driver operates as a constant current source, providing stable power to your LED luminaires. Its dimmable feature allows for adjustable light output.

- **Power On:** Once correctly installed and wired, apply power to the driver. The connected LED luminaires should illuminate.
- **Dimming:** Utilize a compatible 0-10V dimming control system to adjust the light output. The driver supports true 1% dimming and dim-to-off functionality, allowing for precise control over light levels.
- **Programmability:** This driver is programmable, allowing OEMs to configure the output current with 1mA resolution using an OPTOTRONIC programmer. This feature enables customization for specific LED loads.

Figure 4: The OSRAM OPTOTRONIC LED driver shown in an architectural lighting environment, emphasizing its dimming features including synchronization of ON/OFF timing and dimming controls, true 1% dimming, dim-to-off functionality, and dimming interface protection. Part Number P/N 2743X3 is visible.

5. Maintenance

The OSRAM OPTOTRONIC LED Driver is designed for long-term, reliable operation with minimal maintenance. Regular inspection can help ensure optimal performance.

- **Cleaning:** Periodically inspect the driver for dust or debris accumulation. If necessary, gently clean the exterior with a dry, soft cloth. Do not use liquid cleaners or solvents.
- **Inspection:** Annually inspect wiring connections for tightness and signs of wear or damage. Ensure the driver is free from physical damage.
- **Environment:** Ensure the operating environment remains within the specified temperature and humidity ranges. The driver is rated for dry and damp locations.

6. Troubleshooting

If you encounter issues with your LED driver, consider the following troubleshooting steps:

- **No Light Output:**
  - Verify that the AC input power is supplied to the driver.
  - Check all wiring connections for proper contact and polarity.
  - Ensure the LED load is correctly connected and not faulty.
- **Flickering or Unstable Light:**
  - Confirm the input voltage is stable and within the specified range (120-277VAC).
  - Check dimming control wiring for loose connections or interference.
  - Ensure the LED load is compatible with a constant current dimmable driver.
- **Dimming Malfunction:**
  - Verify the 0-10V dimming control is functioning correctly and connected properly.
  - Ensure the dimming control is compatible with 0-10V dimming protocols.
- **Overheating:**
  - Ensure the driver is installed with adequate ventilation and not in an enclosed space that traps heat.
  - Verify the ambient temperature is within the driver's operating limits.

If problems persist after performing these checks, contact technical support.

7. Specifications

Specification	Value
Product Dimensions	11 x 1.14 x 1 inches
Weight	8.6 ounces
Item Model Number	OPTOTRONIC OTi 50/120-277/1A4 DIM-1 L G2
Manufacturer	OSRAM
Light Type	LED
Special Feature	Dimmable

Specification	Value
Wattage	50 watts
Input Voltage	120-277VAC
Frequency	50/60 Hz
Output Voltage	10-55VDC
Output Current	400-1400mA
UL Classification	Class 2 output, Class P
Location Rating	Dry and Damp Locations

8. Applications

The OSRAM OPTOTRONIC LED Driver is versatile and suitable for a range of lighting applications, including:

- Indirect/direct lighting installations
- Linear lighting fixtures
- Recessed troffer lighting systems

Figure 5: The OSRAM OPTOTRONIC LED driver displayed with a list of common applications: indirect/direct lighting, linear lighting, and recessed troffer installations.

9. Warranty and Support

For specific warranty information regarding the OSRAM OPTOTRONIC LED Driver, please refer to the documentation provided at the time of purchase or contact the manufacturer directly. Warranty terms may vary based on region and distributor.
For technical assistance, product information, or support, please contact OSRAM or eldoLED customer service. Relevant product information and documentation may be available on the following websites:

- osram.us/ds
- eldoled.com
- quicktronic.com

AcuityBrands.

November 10, 2021

RE: LED Driver, LED Modules, and Ballast Branding Announcement—Effective November 16, 2021

Dear Valued Customer,

Thank you for your continued business with us and support as we fully integrate the Digital Systems, North America product line we recently acquired from ams OSRAM into the Acuity Brands portfolio.

We're excited to announce that our OPTOTRONIC® LED driver and PrevaLED® LED module product families will transition to become part of the eldoLED™ brand. To align with the transition, OPTOTRONIC and PrevaLED product labels, spec sheets, and datasheets will incorporate the eldoLED logo **as of November 16, 2021.** The QUICKTRONIC® ballast products will remain as a stand-alone brand within the Components portfolio of Acuity Brands Lighting.

Product information is available on www.osram.us/ds until December 31, 2021. **After December 31, 2021,** you can find product information and documentation on www.eldoLED.com (for OPTOTRONIC and PrevaLED products) or www.quicktronic.com.

Integrating the OPTOTRONIC and PrevaLED products with the existing eldoLED products under the eldoLED brand provides customers with a comprehensive LED driver portfolio, offering one single brand name from the preferred driver manufacturer of choice to the marketplace. Our more robust product line reinforces the eldoLED promise of equipping the lighting industry with lighting solutions that are smarter, sleeker, and more efficient. QUICKTRONIC electronic ballasts will go to market as a stand-alone brand, continuing over 30 years of reliability.

We're here for you. Feel free to reach out to your account representative with any questions regarding this announcement.

Best Regards

Gilles Abrahamse
Vice President, GM Digital Lighting Components
Acuity Brands Lighting

Naveen Tumula
Vice President of Product Management, Strategy R&D
Acuity Brands Lighting

Figure 6: An official letter from Acuity Brands dated November 10, 2021, announcing the transition of OPTOTRONIC LED driver product families to the eldoLED brand, effective November 16, 2021. It also mentions product information availability on osram.us/ds, eldoled.com, and quicktronic.com.

Figure 7: A close-up of the product box label for the OPTOTRONIC 50W Constant Current Dimmable LED Driver. It shows 'MADE IN MEXICO', P/N 2743X3, RoHS compliant, MFG Date 21476, and a barcode with number 01452214761.