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> Osram 57351 Optotronic 40W 120/277V AC 50/60Hz Constant Current Dimmable Compact LED Driver User Manual

OSRAM OPTOTRONIC OTi40W/120-277/1A4 DIM-1

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Model: OPTOTRONIC OTi40W/120-277/1A4 DIM-1

Brand: OSRAM

1. PRODUCT OVERVIEW

The OSRAM OPTOTRONIC OTi40W/120-277/1A4 DIM-1 is a 40W constant current, 0-10V dimmable LED driver designed for various lighting applications. This compact and programmable driver offers universal input voltage compatibility (120-277VAC) and precise control over LED output.



Image 1.1: Front view of the OSRAM OPTOTRONIC LED Driver, showing product label with specifications and wiring diagram.

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

Image 1.2: Visual representation of key features: 40W power, dimmable functionality, suitability for dry/damp locations, and UL Class 2 rating.

2. SAFETY INFORMATION

WARNING: Risk of electric shock. Installation and servicing should be performed by qualified personnel only. Disconnect power before installation or servicing.

- Ensure the input voltage (120-277VAC) matches the power supply.
- Protect against line voltage on 0-10V dimming wires.
- This device is UL Class 2 output for safe operation.

- Conforms to UL SREC for NTC based thermal protection.
- Do not exceed the maximum output power of 40W.

3. SETUP AND INSTALLATION

This section provides general guidelines for installing the OSRAM OPTOTRONIC LED Driver. Always refer to local electrical codes and consult a qualified electrician for installation.

3.1 Physical Installation

The driver features a compact design, allowing for flexible integration into various luminaires. It is available with mounting feet (F-style) or PEM studs (J-style) to simplify installation.



Image 3.1: Dimensions of the compact LED driver (5.0" L x 2.4" W x 1.2" H).

3.2 Electrical Connections

Connect the driver according to the wiring diagram provided on the product label and in the technical specifications. Ensure all connections are secure and insulated.

Support true 1% dimming across the entire driver programmable output current range.

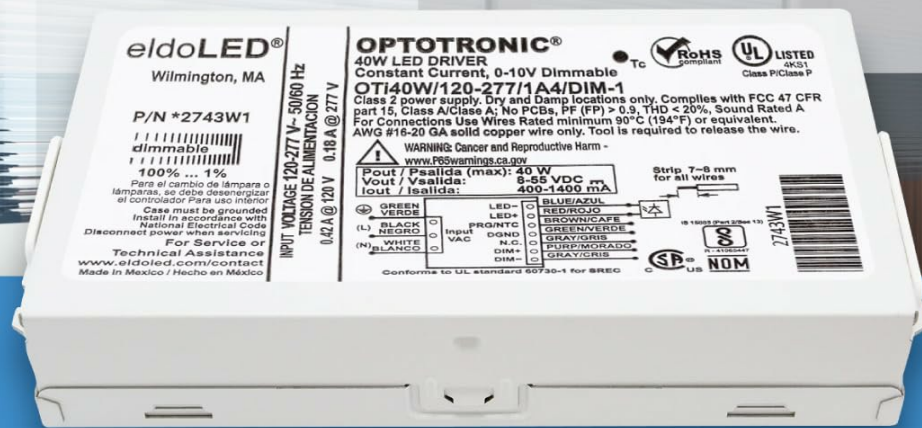


Image 3.2: Close-up view of the driver's terminal block for electrical connections.

Wiring Guidelines:

- **Input:** Connect to 120-277VAC power supply.
- **Output:** Connect to the LED load.
- **Dimming:** Connect 0-10V dimming control wires.

For connections, use wires rated minimum 90°C (194°F) or equivalent. Refer to the product label for specific wire gauge requirements.

4. OPERATING INSTRUCTIONS

The OPTOTRONIC LED Driver is designed for constant current operation and offers advanced programmable features to optimize LED performance.

4.1 Dimming Control

The driver supports 0-10V dimming, allowing for a dimming range of 1-100%. This enables precise light level adjustment for various applications.



Applications

- Architectural
- Downlights
- In-grade fixtures
- Recessed troffer
- Wall washing

Image 4.1: The driver's capability to support true 1% dimming.

4.2 Programmable Features

The driver can be customized with 1mA resolution to perfectly match the LED load and maximize performance. Programming does not require powering up or connecting the power supply to AC line voltage. Key programmable features include:

- **Output Current:** Adjustable from 400-1400mA (default 700mA).
- **Dimming Level:** Set minimum and maximum dimming levels.
- **Dim-to-off:** Configurable behavior when dimming to zero.
- **Soft Start:** Controls the ramp-up time of the LED output.
- **LED Thermal Protection:** Protects LEDs from overheating.

- **Vaux (12/20/24V):** Auxiliary output voltage options.
- **Constant Lumen Output:** Maintains consistent light output over the LED's lifespan.
- **End-of-Life Indicator:** Provides notification when the driver is nearing its end of life.

5. MAINTENANCE

The OSRAM OPTOTRONIC LED Driver is designed for long-term, reliable operation with minimal maintenance required.

- **Environmental Conditions:** The driver is rated for Dry and Damp locations. Ensure it is installed in an environment consistent with its UL rating.
- **Cleaning:** Keep the driver free from dust and debris to ensure proper heat dissipation. Use a dry, soft cloth for cleaning. Do not use liquid cleaners.
- **Inspection:** Periodically inspect wiring connections for any signs of wear or damage. Ensure all connections remain secure.

No user-serviceable parts are inside the driver. Do not attempt to open or repair the unit.

6. TROUBLESHOOTING

If you experience issues with your LED driver, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
LEDs do not light up	No power to driver; Incorrect wiring; Faulty LED load; Driver failure	Check power supply and circuit breaker. Verify all wiring connections (input, output, dimming). Test LED load. If all else fails, driver may need replacement.
LEDs flicker or dim erratically	Loose connections; Incompatible dimmer; Overheating	Check all wiring connections. Ensure the 0-10V dimmer is compatible and functioning correctly. Verify adequate ventilation around the driver.
Dimming not working	Incorrect dimming wire connection; Faulty dimmer; Driver not configured for dimming	Verify 0-10V dimming wire connections. Test dimmer. Ensure driver programming supports dimming.

If the problem persists after attempting these solutions, please contact technical support.

7. SPECIFICATIONS

Detailed technical specifications for the OSRAM OPTOTRONIC OTi40W/120-277/1A4 DIM-1 LED Driver:

Feature	Specification
Model Number	OPTOTRONIC OTi40W/120-277/1A4 DIM-1
Input Voltage	120-277VAC (+/- 10%)
Frequency Range	50-60 Hz (+/- 5%)
Max. Output Power	40W

Feature	Specification
Dimming Control	0-10V (Isolated)
Dimming Range	1-100%
Output Voltage (VDC)	8-55VDC
Output Current (mA)	400-1400mA (1mA Step), Default 700mA
Product Dimensions (L x W x H)	5.0" x 2.4" x 1.2" (127mm x 61mm x 30.5mm)
Product Weight	7.8 oz (221g)
UL Environmental Rating	Dry and Damp
Mounting Type	F-style or J-style



Image 7.1: Technical drawing illustrating the precise dimensions of the LED driver.

8. WARRANTY AND SUPPORT

8.1 Warranty Information

For specific warranty terms and conditions, please refer to the official OSRAM product documentation or contact OSRAM directly. Warranty details may vary based on region and purchase date.

8.2 Technical Support

If you require technical assistance or have questions regarding the installation, operation, or troubleshooting of your OSRAM OPTOTRONIC LED Driver, please contact:

OSRAM Technical Assistance: 1-877-636-5267

You can also visit the official OSRAM store on Amazon for more product information and resources: [OSRAM Amazon Store](#)