

## OPTOTRONIC Linear Programmable LED Drivers

57452 / OTi 50/120-277/1A4 DIM-1 L G2



The OPTOTRONIC programmable dimmable family consists of highly efficient linear constant current LED power supplies. One click programming through the OPTOTRONIC programmer allows OEMs to configure the output current with 1mA resolution. Also fully customizable by customers are the end of life indicator, LED thermal protection and the constant lumen maintenance features. The OPTOTRONIC programmer does not require the power supply to be powered up or connected to AC line voltage while programming. The power supplies are available with built-in 0-10V dimming protocol with models available in 1% to 10%. The auxiliary output has the capability to power various sensors and is optimized for the OSRAM Connected Lighting Module (CLM).

### Product family features

- OEM Programmable with 1mA resolution to perfectly match LED load and maximize performance
- Integrated OEM programmable features include: - Constant lumen maintenance - End of life indication - LED thermal protection
- Programming doesn't require powering up or connecting the power supply to AC line voltage
- Specification grade dimming down to 1% or 10% on 0-10V dimmers
- Available optional auxiliary output to power 12 V, 20 V, and 24 V low power applications
- Slim form factors
- Input voltage: - Universal 120-277 V<sub>AC</sub> 50/60Hz - 347 V<sub>AC</sub> 50/60 Hz
- UL Class 2 output for safe operation

### Areas of application

- Indirect/direct
- Linear
- Recessed troffer

# Product datasheet

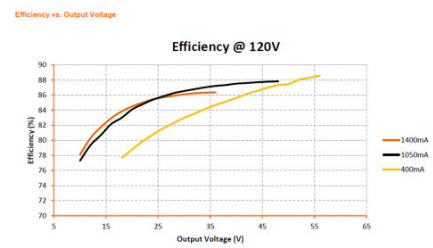
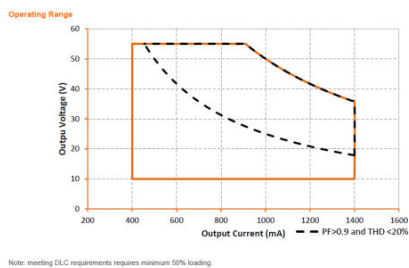
## Technical data

### General product information

|                       |   |
|-----------------------|---|
| Product Name          | OTi501202771A4DIM1LG2 10/CS 1/SKU   |
| Ordering Abbreviation | OTi 50/120-277/1A4 DIM-1 L G2   |
| Brand Name            | OSRAM   |
| General Description   | OTi50 LIN UNV 0-10V G2 NO AUX   |
| Programmable Features | Output current, Dimming level, Dim-to-off, Soft Start, LED thermal protection, Auxiliary output voltage, Constant lumen output, End-of-life indicator |
| Programming Tool      | 51645 & 51647/51648   |
| Product Number        | 57452   |

### Electrical data

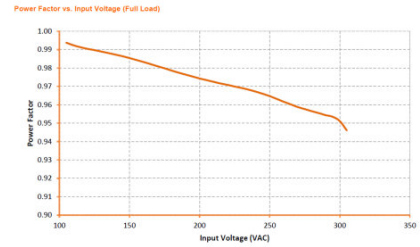
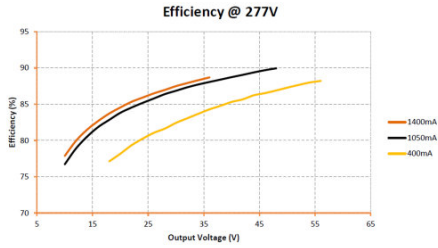
|                           |               |
|---------------------------|---------------|
| Nominal Total Max Wattage | 5000 W        |
| Nominal Voltage           | 12000-27700 V |



### Operating Window

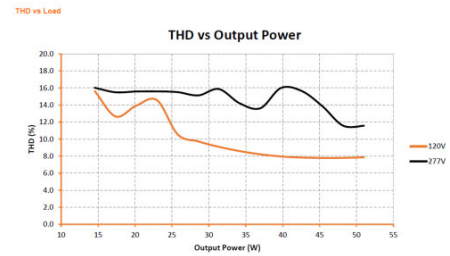
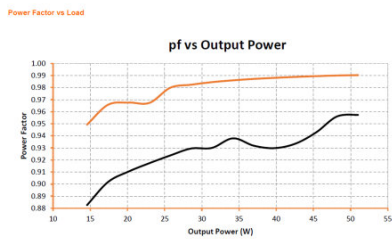
### Typical Efficiency v Load 120 V 60 Hz

# Product datasheet



Typical Efficiency v Load 277 V 60 Hz

Typical Power Factor v Load



Typical Power Factor v Load

Typical THD v Load

## Electrical specifications - Dimming

|                                      |                                  |
|--------------------------------------|----------------------------------|
| <b>Dimming Control</b>               | 0 – 10V (Isolated) <sup>1)</sup> |
| <b>Dimming Input Isolation [CRM]</b> | 2.5kV                            |
| <b>Dimming Range</b>                 | 1-100%                           |

## Product datasheet

|                            |           |
|----------------------------|-----------|
| <b>Dimming Type</b>        | Analog    |
| <b>Dim-to-Off OFF/ON</b>   | 0.7V/1V   |
| <b>Source/Sink Current</b> | 0.2mA max |

<sup>1)</sup> CAUTION: More than one power supply present

### Electrical specifications - Input

|  |                      |
|--|----------------------|
| <b>Efficiency @ Full load 120V</b>             | ≥88%                 |
| <b>Efficiency @ Full load 277V</b>             | ≥89%                 |
| <b>Frequency Range (Hz)</b>                    | 50 – 60 Hz (+/- 10%) |
| <b>Input Current (A) 120V</b>                  | 0.52                 |
| <b>Input Current (A) 277V</b>                  | 0.23                 |
| <b>Input Voltage (VAC)</b>                     | 120V-277V (+/- 10%)  |
| <b>Inrush Current (Apk, T@50% of Apk) 120V</b> | 1.33, 57μs           |
| <b>Inrush Current (Apk, T@50% of Apk) 277V</b> | 2.66, 46μs           |
| <b>Power Factor @ Full load 120V</b>           | >0.9                 |
| <b>Power Factor @ Full load 277V</b>           | >0.9                 |
| <b>THD @ Full load 120V</b>                    | <10%                 |
| <b>THD @ Full load 277V</b>                    | <20%                 |

### Electrical specifications - LED thermal protection (NTC)

|                                   |                     |
|-----------------------------------|---------------------|
| <b>NTC Value Active Range</b>     | ≤25kΩ <sup>1)</sup> |
| <b>Temperature Derating start</b> | User defined        |

<sup>1)</sup> External NTC cannot leave the fixture. The PRG/ NTC control circuit terminals or lead wires are not isolated.

### Electrical specifications - Output

|  |                                       |
|--|---------------------------------------|
| <b>LED Power-Up Time</b>               | <1sec                                 |
| <b>Line Regulation</b>                 | <5%                                   |
| <b>Load Regulation</b>                 | <5%                                   |
| <b>Max. Output Power (W)</b>           | 50W                                   |
| <b>Output Current (mA)</b>             | 400-1400mA (1mA step), Default 1050mA |
| <b>Output Ripple Current</b>           | <20% @ 1400mA                         |
| <b>Output Short-Circuit Protection</b> | Yes, non-latching                     |
| <b>Output Voltage (VDC)</b>            | 10-55VDC                              |
| <b>Over Load Protection</b>            | Yes, non-latching                     |
| <b>Over Temperature Protection</b>     | Foldback at 110°C                     |
| <b>Over Voltage Protection</b>         | Yes, non-latching                     |

### Environmental specifications

|                                      |               |
|--------------------------------------|---------------|
| <b>Ambient Operating Temperature</b> | -30°C to 50°C |
|--------------------------------------|---------------|

## Product datasheet

|                                   |  |
|-----------------------------------|--|
| <b>Case Temperature (Tc)</b>      | 85°C Max, 75°C – 5 Year Warranty <sup>1)</sup> |
| <b>EMI Compliance</b>             | FCC Part 15 Class A                            |
| <b>Max. Relative Humidity (%)</b> | 85% non-condensing                             |
| <b>Max. Storage Temp.</b>         | 70°C   |
| <b>Sound Rating</b>               | Class A  |
| <b>Transient Protection</b>       | NEMA SSL 1 - 2010, Non-Roadway 2.5KV           |
| <b>UL Environmental Rating</b>    | Dry & Damp                                     |
| <b>UL File number</b>             | E320395  |

<sup>1)</sup> Warranty applicable only at 75°C

### Packaging Information

| Item number | EAN/UPC       | Packaging           | Quantity | Outside dimensions l x w x h | Gross weight |
|-------------|---------------|---------------------|----------|------------------------------|--------------|
| 57452       | 4062172018760 | Unpacked (SKU)      | 1        |                              |              |
| 57452       | 4062172018777 | Shipping box (Case) | 10       | 12.2 in x 6.4 in x 2.4 in    | 5.5 lb       |

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

### Disclaimer

- For information on specific product warranties, visit [www.osram.us/warranty](http://www.osram.us/warranty). Specifications are subject to change without notice. OSRAM, OPTOTRONIC, PrevaLED and DEXAL are registered trademarks of OSRAM GmbH. SensiLUM is a trademark of OSRAM SYLVANIA Inc. All other trademarks are those of their respective owners.