# OPTOTRONIC Programmable Compact LED Drivers

57352 / OTi40W/120-277/1A4 DIM-1/J




The OPTOTRONIC programmable dimmable family consists of highly efficient, constant current 25W, 40W and 55W LED power supplies. They are programmable between the range of 150 to 1250 mA for the 25W, 400 to 1400mA for the 40W, and 700 to 2000mA for the 55W with a 1mA resolution. The OPTOTRONIC programmer does not require the power supply to be powered or connected to AC line voltage while programming. The power supplies are available in dimming to 1% with built in 0–10V dimming enabling direct integration and operation with standard dimmers, sensors, as well as energy and light management systems. In case of LED module thermal overload, the family's integrated LED thermal protection function allows the power supply to reduce the output current. This function is fully customizable by the customer. The family comes in a standard industry housing with dual entry connectors to simplify installation.Dedicated auxiliary DC output helps integration of fixture integrated sensors like the OSRAM Connected Lighting Module (CLM) DIM thus eliminating need of secondary DC supply.




## Product family features

- Universal input voltage - 120–277VAC 50/60Hz
- UL Class 2 output for safe operation
- Protection against line voltage on 0-10V dimming wires
- AUX Output models available
- Custom programmable with 1mA resolution to perfectly match LED load and maximize performance
- Programming does not require powering up or connecting the power supply to AC line voltage
- Wide output current and voltage range
- Available in dimming to 1% with 0–10 V dimmers
- Integrated OEM programmable features include: constant lumen maintenance, end-of-life indication, LED thermal protection, Vaux (12V/20V/24V), soft start, and dim-to-off
- Familiar standard industry housing – 5.0" x 2.4" x 1.2" (L x W x H)
- Available with mounting feet (F-style) or PEM studs (J-style) to simplify installation
- Conforms UL SREC for NTC based thermal protection


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## Areas of application

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


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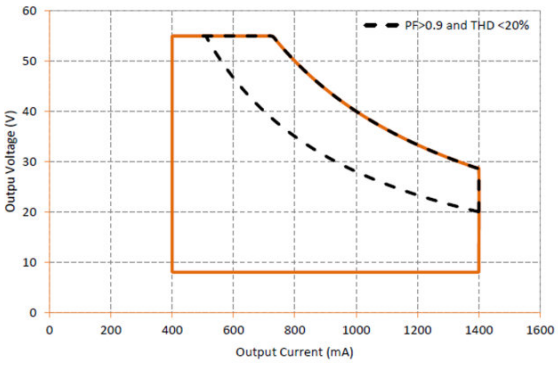
Technical data

## General product information

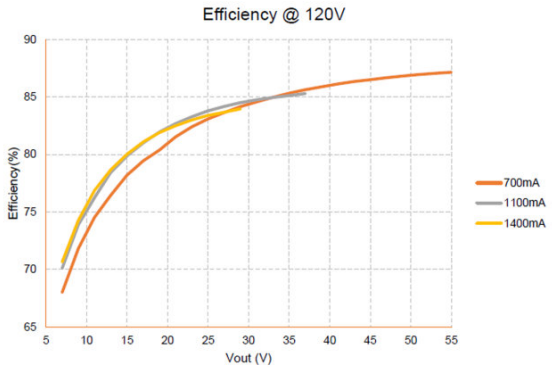
| | |
|---|---|
| **Product Name** | OTI40W1202771A4DIM1J 20/CS 1/SKU |
| **Ordering Abbreviation** | OTi40W/120-277/1A4 DIM-1/J |
| **Brand Name** | OSRAM |
| **General Description** | OTi40W1202771A4DIM1J 20/CS 1/SKU |
| **Programmable Features** | Output Current/Soft start/Dim-to-Off/Dimming Level/LED thermal protection/Constant lumen output/End-of-life indicator/Vaux (12/20/24V) |
| **Programming Tool** | 51645 |
| **Type** | Constant Current |
| **Product Number** | 57352 |

## Electrical data

| | |
|---|---|
| **Nominal Total Max Wattage** | 40 W |
| **Nominal Voltage** | 120-277 V |

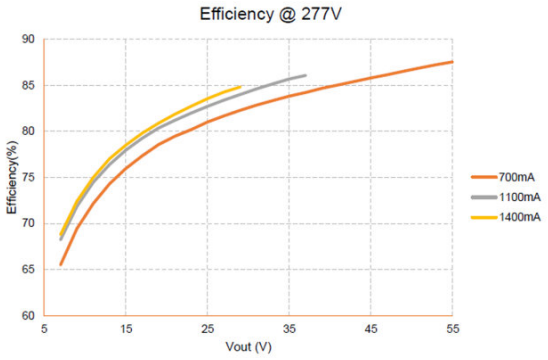



Operating Window

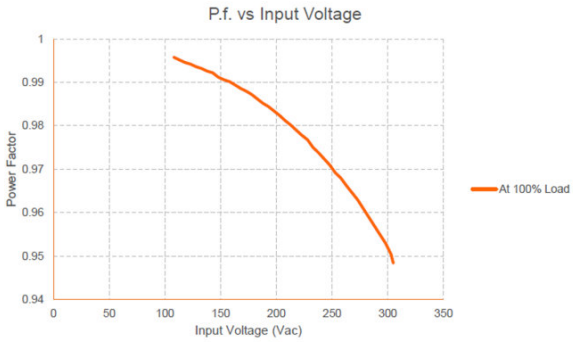



Typical Efficiency v Load 120 V 60 Hz

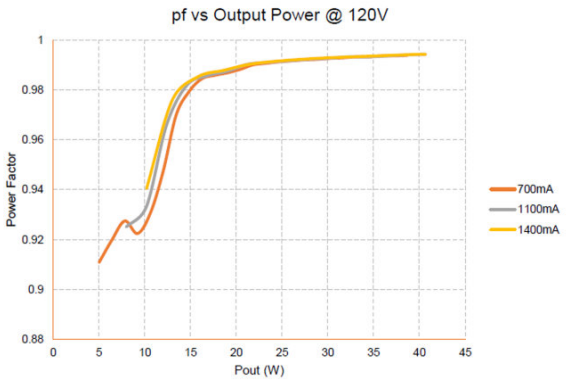

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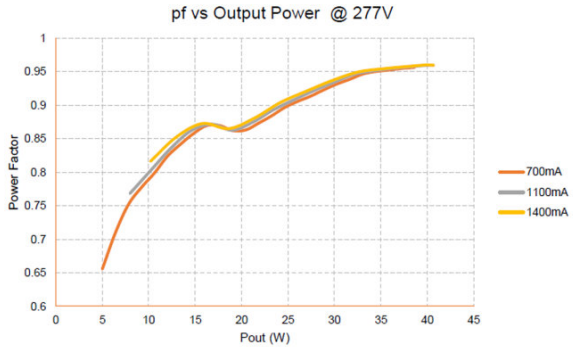

Typical Efficiency v Load 277 V 60 Hz




Typical Power Factor v Load

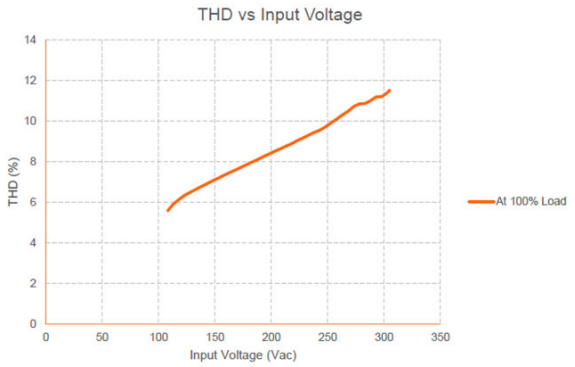



Typical Power Factor v Load

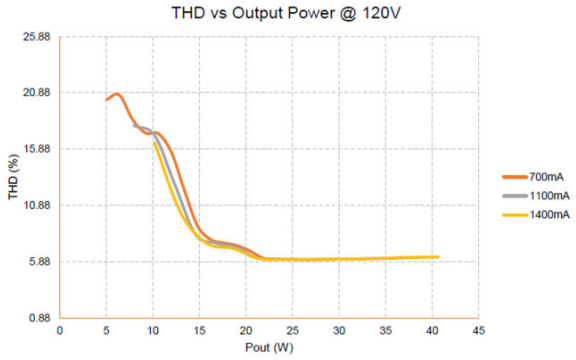



Typical Power Factor v Load

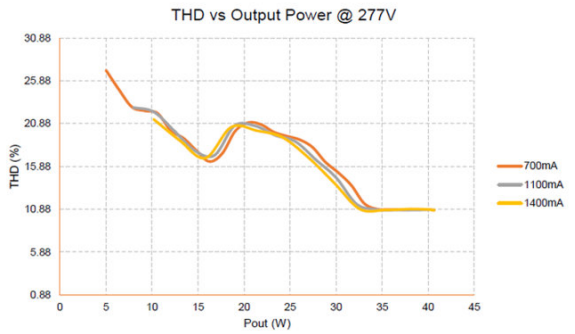

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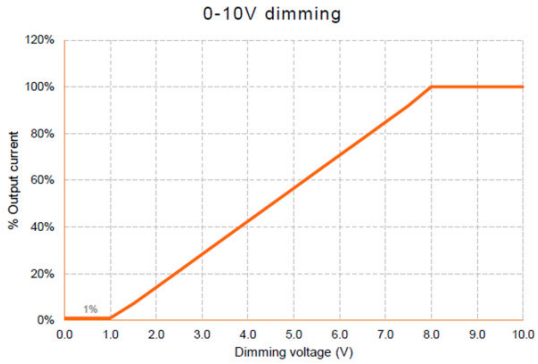

Typical THD v Load




Typical THD v Load

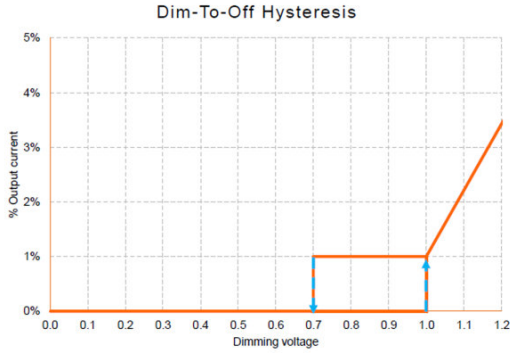



Typical THD v Load

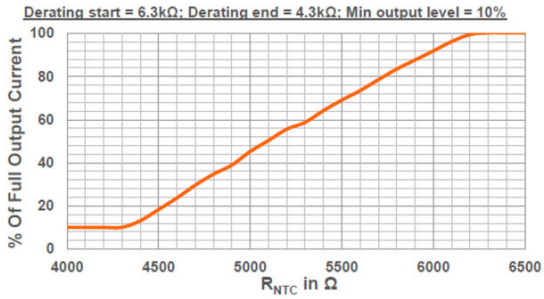



0-10 V Control Input

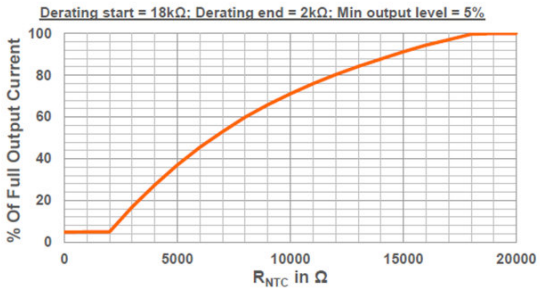

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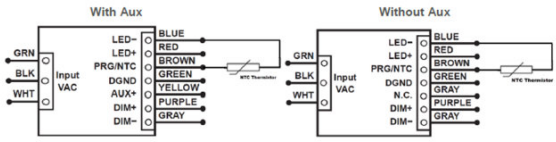

0-10 V Control Input




LED Thermal Protection perc. of Out Curr




LED Thermal Protection perc. of Out Curr




LED Thermal Protection - Wiring Diagram

## Electrical specifications - Auxiliary output (for AUX models only)

| | |
|---|---|
| **Output Current (mA) Aux Only** | 40 |
| **Output Voltage (VDC) Aux Only** | 12/20/24V (configurable) |
| **Voltage Regulation** | +/- 10% |


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## Electrical specifications - Dimming

| | |
|---|---|
| **Dimming Control** | 0 – 10V (Isolated) [1] |
| **Dimming Input Isolation [CRM]** | 2.5KV |
| **Dimming Range** | 1-100% [2] |
| **Dimming Type** | Current Reduction |
| **Dim-to-Off OFF/ON** | 0.7V/1V |
| **Source/Sink Current** | 0.2mA |

[1] CAUTION: More than one power supply present

[2] Driver can be dimmed to TRUE 1% level (1.5mA) of the programmed output current of the driver. Programmable with 1mA resolution with +/- 3% accuracy.

## Electrical specifications - Input

| | |
|---|---|
| **Efficiency @ Full load 120V** | ≥87% |
| **Efficiency @ Full load 277V** | ≥87% |
| **Frequency Range (Hz)** | 50 – 60 Hz (+/- 5%) |
| **Input Current (A) 120V** | 0.41 |
| **Input Current (A) 277V** | 0.18 |
| **Input Voltage (VAC)** | 120V-277V (+/- 10%) |
| **Inrush Current (Apk, T@50% of Apk) 120V** | 6.7, 150s [1] |
| **Inrush Current (Apk, T@50% of Apk) 277V** | 15.6, 90s [1] |
| **Power Factor @ Full load 120V** | >0.9 |
| **Power Factor @ Full load 277V** | >0.9 |
| **THD @ Full load 120V** | <20% |
| **THD @ Full load 277V** | <20% |

[1] Complies with NEMA 410 inrush current.

## Electrical specifications - LED thermal protection (NTC)

| | |
|---|---|
| **NTC Value Active Range** | ≤25kΩ [1] |
| **Temperature Derating start** | User defined |

[1] External NTC cannot leave the fixture. The PRG/ NTC control circuit terminals or lead wires are not isolated.

## Electrical specifications - Output

| | |
|---|---|
| **LED Power-Up Time** | < 0.5sec CA T-24 Compliant |
| **Line Regulation** | < 5% |
| **Load Regulation** | <3% |
| **Max. Output Power (W)** | 40W [1] |
| **Output Current (mA)** | 400-1400mA (1mA step) - 700mA default |
| **Output Ripple Current** | <20% @ 1400mA |
| **Output Short-Circuit Protection** | Yes, non-latching |


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| | |
|---|---|
| **Output Voltage (VDC)** | 8-55VDC |
| **Over Load Protection** | Yes, non-latching |
| **Over Temperature Protection** | Foldback to 50% at 100°C |
| **Over Voltage Protection** | Yes, non-latching |

[1] 54W LED + 1W Aux on AUX models.

### Environmental specifications

| | |
|---|---|
| **Ambient Operating Temperature** | -30°C to 50°C |
| **Case Temperature (Tc)** | 90°C Max - 80°C (50kHrs) [1] |
| **EMI Compliance** | FCC Part 15 Class A |
| **IP Rating** | IP20 |
| **Max. Case Temperature (Tc)** | 90°C Max - 80°C (50kHrs) [1] |
| **Max. Relative Humidity (%)** | 85% non-condensing |
| **Max. Storage Temp.** | 75°C |
| **Sound Rating** | Class A |
| **Transient Protection** | NEMA SSL 1 - 2010 / Non-Roadway 2.5KV |
| **UL Environmental Rating** | Dry & Damp |
| **UL File number** | E320395 |

[1] 5 year warranty applicable at 75°C

## Packaging Information

| Item number | EAN/UPC | Packaging | Quantity | Outside dimensions l x w x h | Gross weight |
|---|---|---|---|---|---|
| 57352 | 4052899532786 | Folding box (SKU) | 1 | | |
| 57352 | 4052899533783 | Tray | 10 | | |
| 57352 | 4052899532793 | Shipping box (Case) | 20 | 12.5 in x 9.6 in x 5.9 in | 10.9 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.

## Accessories Mandatory

| Product name | Accessory name | Item number | EAN/UPC |
|---|---|---|---|
| OTi40W/120-277/1A4 DIM-1/J | OT PROGRAMMER | 51645 | 4052899209640 |


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