OPTOTRONIC Programmable Compact LED Drivers

57351 / OTi40W/120-277/1A4 DIM-1



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 0-10 V 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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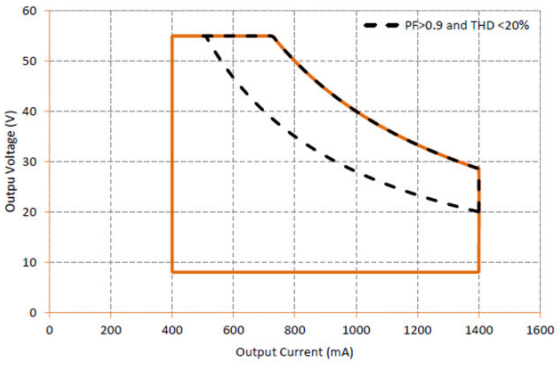
Technical data

General product information

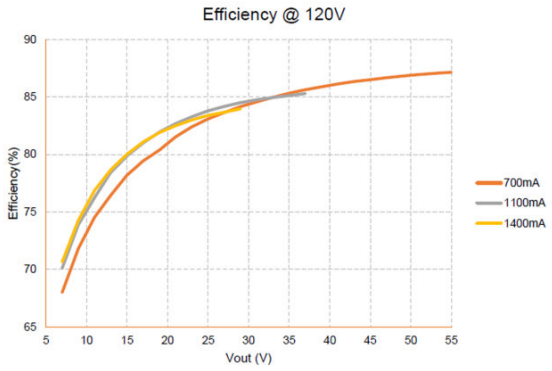
Product Name	OTI40W1202771A4DIM1 20/CS 1/SKU
Ordering Abbreviation	OTi40W/120-277/1A4 DIM-1
Brand Name	OSRAM
General Description	OTi40W1202771A4DIM1 20/CS 1/SKU
Programmable Features	Output Current/Soft start/Dim-to-Off/Dimming Level/LED thermal protection/Constant lumen output/End-of-life indicator/Vaux (12/20/24V)
Programming Tool	51645
Type	Constant Current
Product Number	57351

Electrical data

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

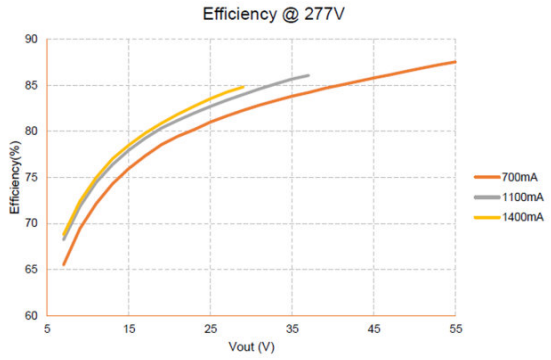


OTi40 Compact Driver Operating Range

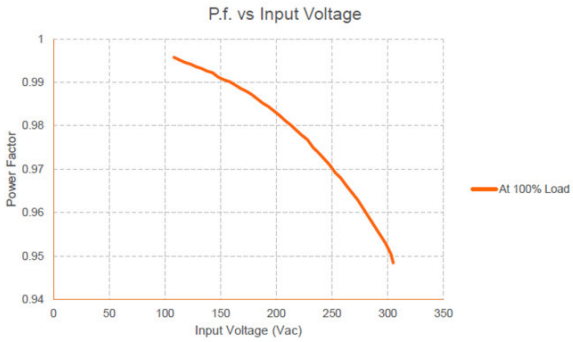


OTi40 Compact Driver Efficiency 120V

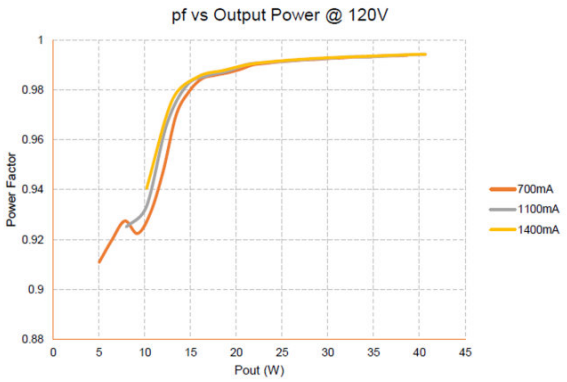
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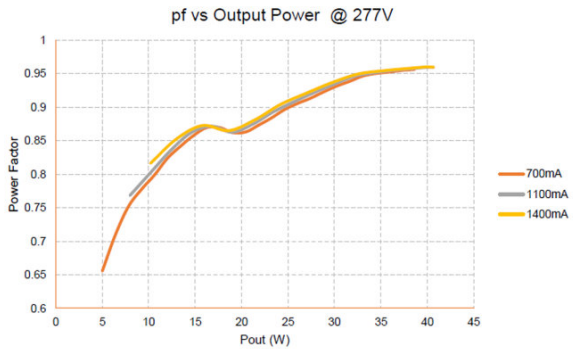
OTi40 Compact Driver Efficiency 277V



OTi40 Compact Driver PF Input

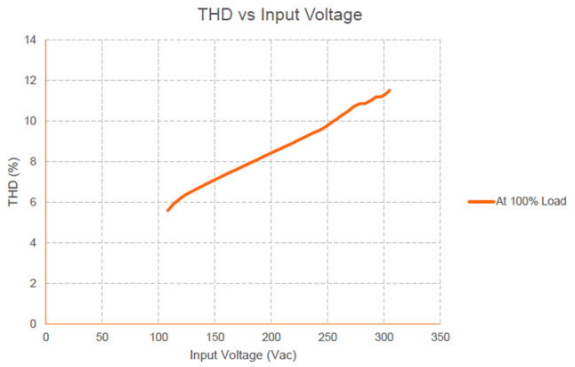


OTi40 Compact Driver PF vs Output 120V

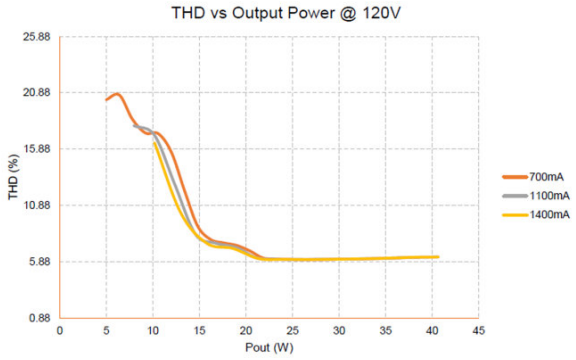


OTi40 Compact Driver PF vs Output 277V

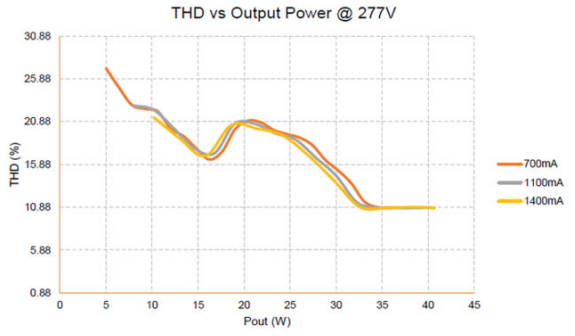
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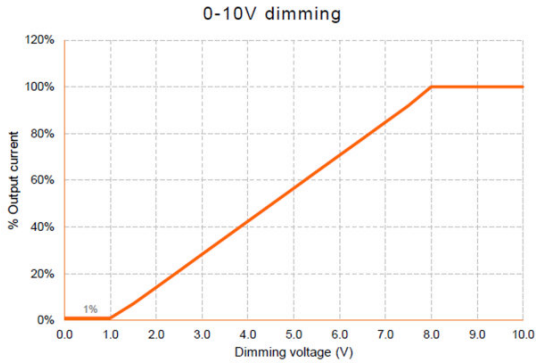
OTi40 Compact Driver THD vs input



OTi40 Compact Driver THD vs Output 120V

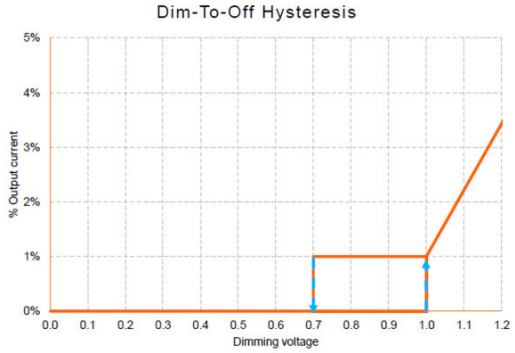


OTi40 Compact THD vs Output 277V

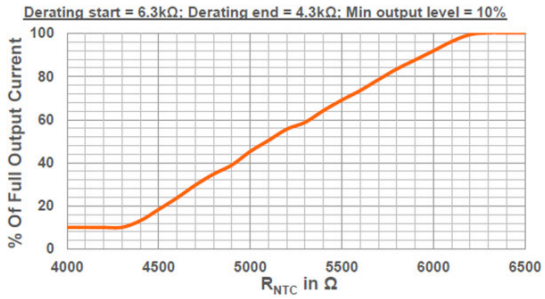


OTi40 Compact Driver 0-10 Dimming

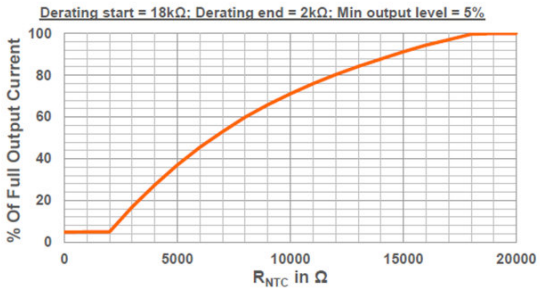
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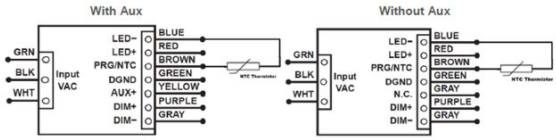
OTi40 Compact Driver Dim to off



OTi40 Compact Driver LED Thermal Protection NTC Output Current Chart1



OTi40 Compact Driver LED Thermal Protection NTC Output Current Chart2



OTi40 Compact Driver LED NTC Wiring Diagram

Electrical specifications - Auxiliary output (for AUX models only)

Output Current (mA) Aux Only	40

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Output Voltage (VDC) Aux Only	12/20/24V (configurable)
Voltage Regulation	+/- 10%

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

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Output Ripple Current	<20% @ 1400mA
Output Short-Circuit Protection	Yes, non-latching
Output Voltage (VDC)	8-55VDC
Over Load Protection	Yes, non-latching
Over Temperature Protection	Foldback to 50% at 100ºC
Over Voltage Protection	Yes, non-latching

1) 54W LED + 1W Aux on AUX models.

Environmental specifications

Ambient Operating Temperature	-30ºC to 50ºC
Case Temperature (Tc)	90ºC Max - 80ºC (50kHrs) 1)
EMI Compliance	FCC Part 15 Class A
IP Rating	IP20
Max. Case Temperature (Tc)	90ºC Max - 80ºC (50kHrs) 1)
Max. Relative Humidity (%)	85% non-condensing
Max. Storage Temp.	75ºC
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 75ºC

Packaging Information

Item number	EAN/UPC	Packaging	Quantity	Outside dimensions l x w x h	Gross weight
57351	4052899532762	Folding box (SKU)	1	4.3 in x 2.4 in x 1.2 in	0.5 lb
57351	4052899533776	Tray	10		
57351	4052899532779	Shipping box (Case)	20	12.5 in x 10.2 in x 2.6 in	10.1 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	OT PROGRAMMER	51645	4052899209640

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