Product datasheet

OPTOTRONIC Linear Programmable LED Drivers

57452 / OTi50/120-277/1A4 DIM-1L 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_{AC} 50/60Hz - 347 V_{AC} 50/60 Hz
- UL Class 2 output for safe operation

Areas of application

- Indirect/direct
- Linear
- Recessed troffer

© 2020, OSRAM GmbH. All rights reserved.

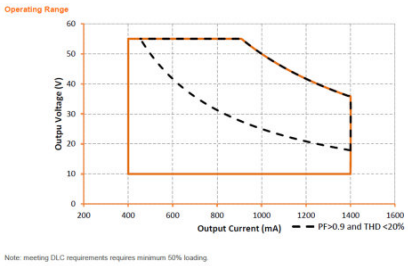
Technical data

General product information

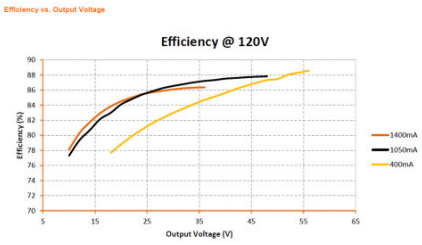
Product Name	OTi501202771A4DIM1LG2 10/CS 1/SKU
Ordering Abbreviation	OTi50/120-277/1A4 DIM-1L G2
Brand Name	OSRAM
General Description	OTi50 LIN UNV 0-10V G2 NO AUX
Programmable Features	Output current, Dimming level, Dim-to-off, Soft Start, LED thermal protection, Auxiliary output voltage, Constant lumen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

Electrical data

Nominal Total Max Wattage	50 W
Nominal Voltage	120-277 V

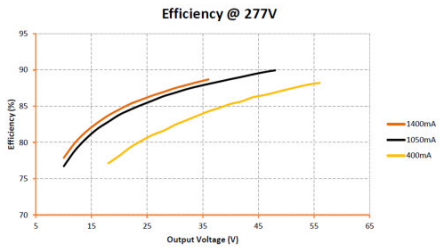


Operating Window

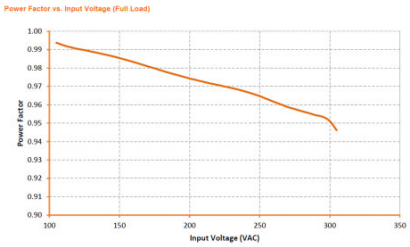


Typical Efficiency v Load 120 V 60 Hz

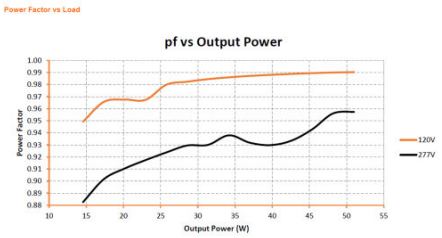
© 2020, OSRAM GmbH. All rights reserved.



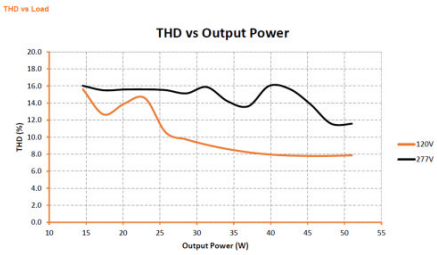
Typical Efficiency v Load 277 V 60 Hz



Typical Power Factor v Load



Typical Power Factor v Load



Typical THD v Load

Electrical specifications - Dimming

Dimming Control	0 – 10V (Isolated) [1)]
Dimming Input Isolation [CRM]	2.5kV
Dimming Range	1-100%

© 2020, OSRAM GmbH. All rights reserved.

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

[1] CAUTION: More than one power supply present

Electrical specifications - Input

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

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

Environmental specifications

Ambient Operating Temperature	-30°C to 50°C

© 2020, OSRAM GmbH. All rights reserved.

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

[1)] Warranty applicable only at 75ºC

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. 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.

© 2020, OSRAM GmbH. All rights reserved.