



Electrical Specifications

Input

Input Voltage (VAC)	120V-277V (+/- 10%)	
Frequency Range (Hz)	50 - 60 Hz (+/- 5%)	
	120V	277V
Input Current (A)	0.83	0.36
THD @ Full load	<10%	<15%
Power Factor @ Full load	>0.95	>0.95
Efficiency @ Full load	≥87%	≥89%
Inrush Current (Apk, T@50% of Apk)	33.1, 170µs	79.6, 150µs

Output

Output Current (mA)	700-2300mA (1mA step) 1400mA default
Output Voltage (VDC)	10-56VDC
Output Ripple Current	<20% @ 2300mA
Max. Output Power (W)	85W
LED Power-Up Time	<1sec
Load Regulation	<3%
Line Regulation	<3%
Over Voltage Protection	Yes, non-latching
Over Load Protection	Yes, non-latching
Output Short-Circuit Protection	Yes, non-latching
Over Temperature Protection	Foldback at 105°C

Dimming

Dimming Control	DEXAL (DALI based)
Dimming Range	1-100%
Dimming Type	Digital
Voltage Rating (DEXAL)	12V typ.
Current Rating (DEXAL)	50mA (typ.), 62mA (max)
Dim-to-Off Threshold	0 (digital Level)
Standby Power ²	0.17W(120V); 0.35W(277V)

CAUTION: More than one power supply present.

2 - This does not include the sensor power in DEXAL mode.

3 - The lowest output current is 7mA and the minimum percentage of dimming is dependent on the programmed output current of the driver

LED thermal protection (NTC)

NTC Value Active Range	≤25kΩ
Temperature Derating Start	User defined

External NTC cannot leave the fixture.

The PRG/ NTC control circuit terminals or lead wires are not isolated.

General Information

Item Number	*2743WF (57432)
Type	Constant Current, Class2
Output Power	85W (Max.)
Programming Tool	*274A17 (51645) & *2747CR (51647) / *2743V1 (51648)
Software	Download
Programmable Features	Output Current Dimming: Linear & Log. DEXAL or DALI LED thermal protection Constant lumen output End-of-life indicator

Find (NAED) as cross reference for new item number i.e. *12345

Environmental Specifications

Ambient Operating Temperature	-20°C to 50°C
Max. Case Temperature (Tc)	85°C (50kHrs) ¹
Max. Storage Temp.	70°C
Max. Relative Humidity (%)	85% non-condensing
Transient Protection	NEMA SSL 1 - 2010 Non-Roadway 2.5KV
EFT	IEC61000-4-4, Level 3
UL Rating	Dry & Damp
UL File number	E320395
EMI Compliance	FCC Part 15 Class A
Sound Rating	Class A

¹ - Warranty applicable at 85°C



DEXAL Interface

The default setting of the digital dimming interface is set to DEXAL that delivers power to sensors and the following data:

- Input Power Consumption : 3% accuracy above 50% loading
- Operating Time : Updated rate 1 min
- Max. Case Temperature : $\pm 5^{\circ}\text{C}$ accuracy
- Current Case Temperature : $\pm 5^{\circ}\text{C}$ accuracy

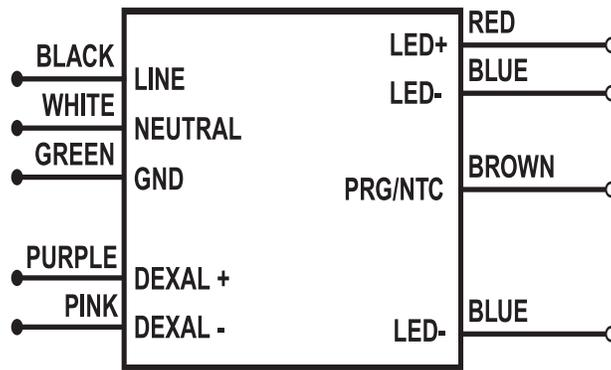
When using DALI 1.0 systems, choose the DALI option in the programming software, shown in the image below. This will turn off the power delivery on the DEXAL interface. The interface is non-polarized in this mode.

The screenshot shows the OSRAM programming software interface. The top menu bar includes 'File', 'Tools', 'Diagnostics', and 'Help'. The main window displays the following settings:

- Select LED Driver Model:** OTi 50 Linear 1400mA DEXAL
- NAED/EAN:** 78034
- OSRAM** logo
- Output Current:** Minimum Current: 600 mA, Maximum Current: 1400 mA. Select Output Current: [Dropdown]. Custom Set Current: 1050 mA.
- Configurable Thermal Protection:** Configurable Thermal Protection, Fixture Thermal Protection. Temperature Derating Start: 6.3 k Ω , Temperature Derating End: 5 k Ω , Minimum Output Level: 50%. [View Derating Curve](#)
- Dimming:** Dimming. DALI Enable DEXAL. Linear, Logarithmic. Minimum Dimming Level: 1%. [View Dimming Curve](#)
- Constant Lumen Module:** Constant Lumen Module. Operating time: -- hours
- End-Of-Life Indicator:** End-Of-Life Indicator
- Enable Luminaire Info:** Enable Luminaire Info. [Luminaire Info](#)
- Buttons:** Load Profile (with barcode), Program, Read

The status bar at the bottom shows: ● Programming tool not detected. ● LED driver not detected. ● Cloud Services | [Update Available](#) | Version 2.20.1.0

Wiring Diagram



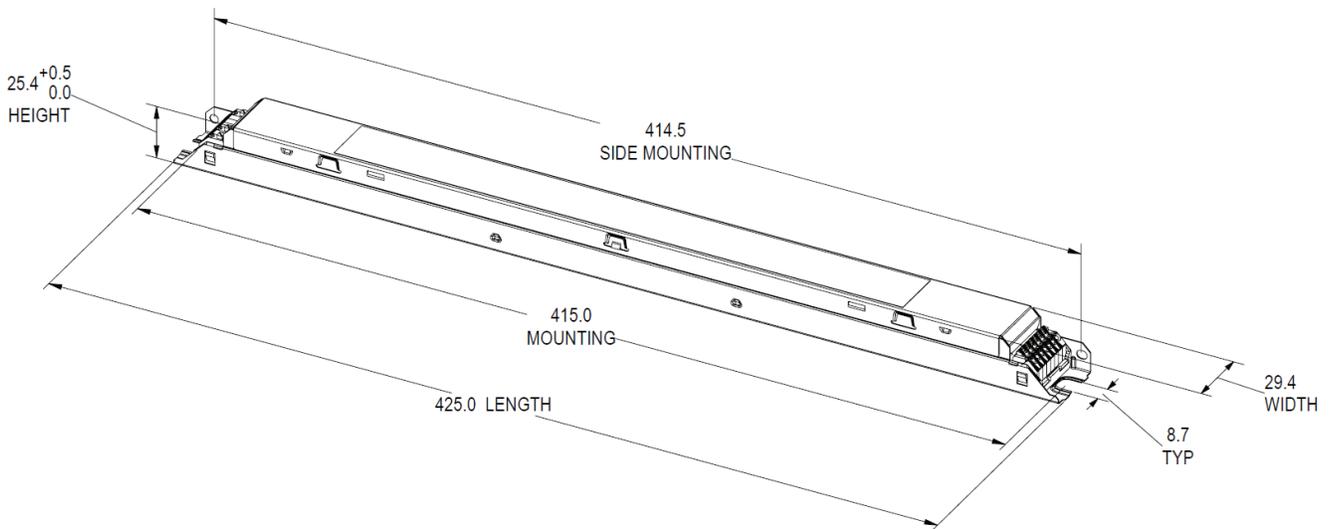
Note: - Maximum suggested remote mounting distance is 16 feet.

- Use solid copper wire only: 16-20 AWG. Strip all wires as such:



- For wiring the output ports for the LED load, Vaux and DIM wire, 16 to 22 AWG is acceptable for use. For more detailed information and requirements, consult the light engine information and or information pertaining to the light engine connectors

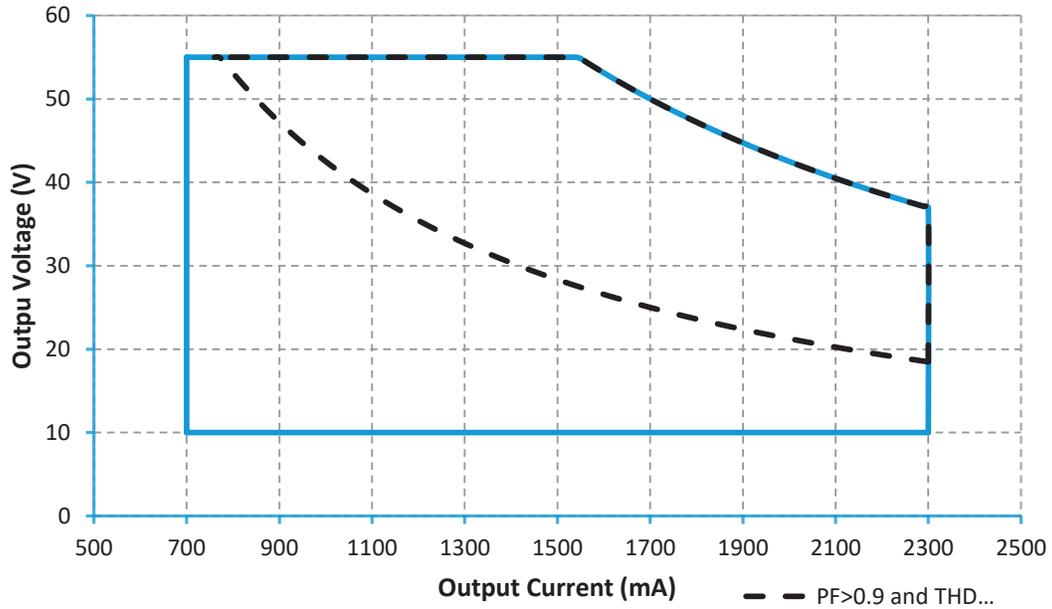
Mechanical Diagram



Mechanical Specification

Length	16.73" (425mm)
Width	1.15" (29.4mm)
Height	1.0" (25.4mm)
Mounting Length	16.34" (415mm)

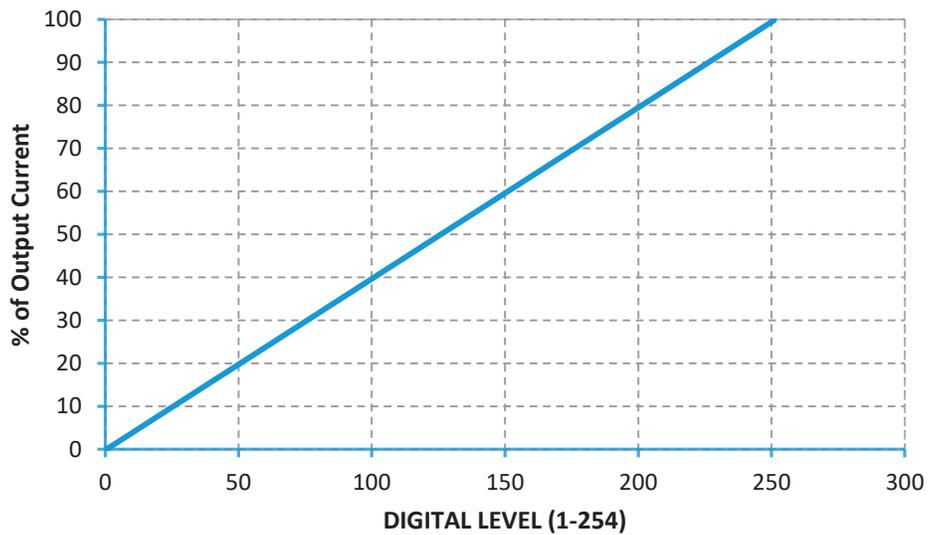
Operating Range



Note: Meeting DLC requirements requires minimum 50% loading.

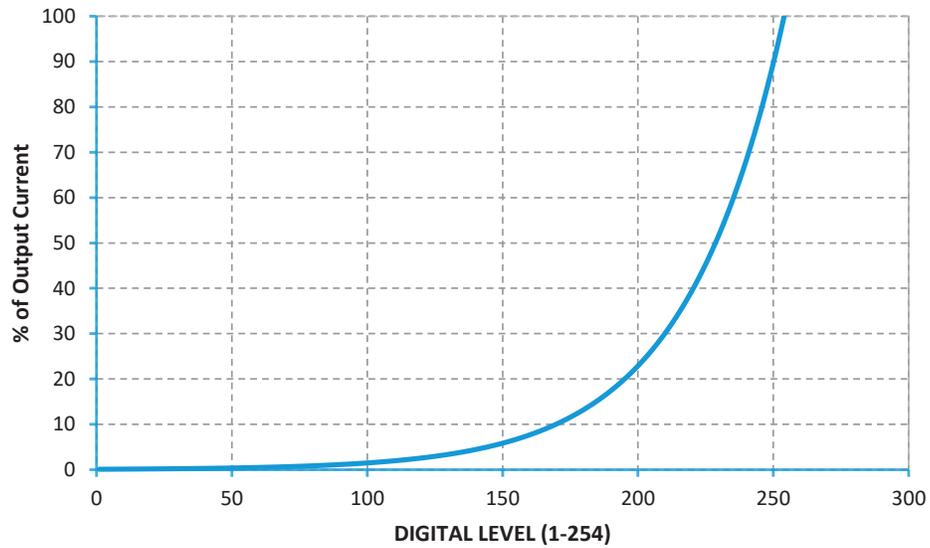
Dimming Curves

Linear Dimming Curve



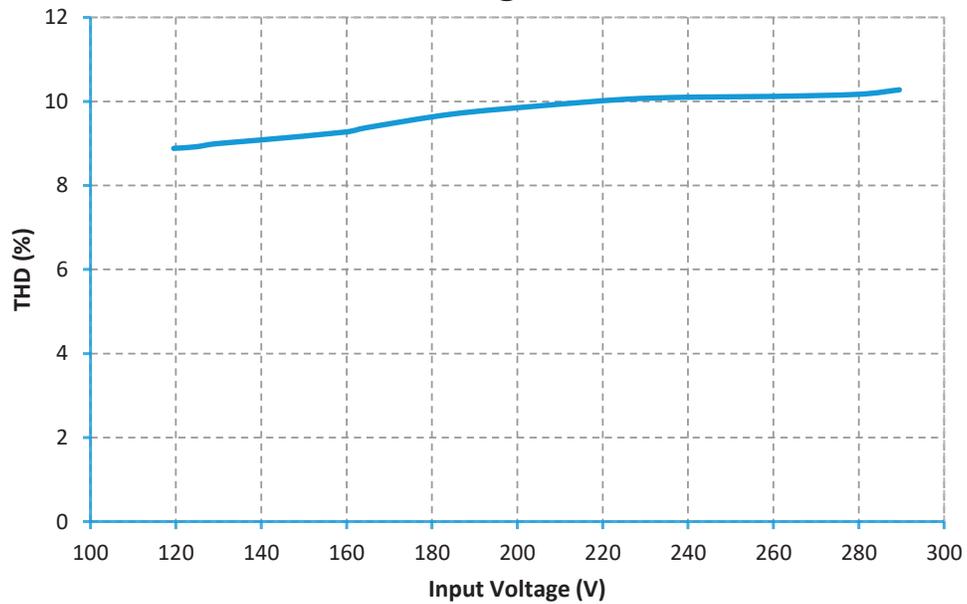
Dimming Curves

Logarithmic Dimming Curve

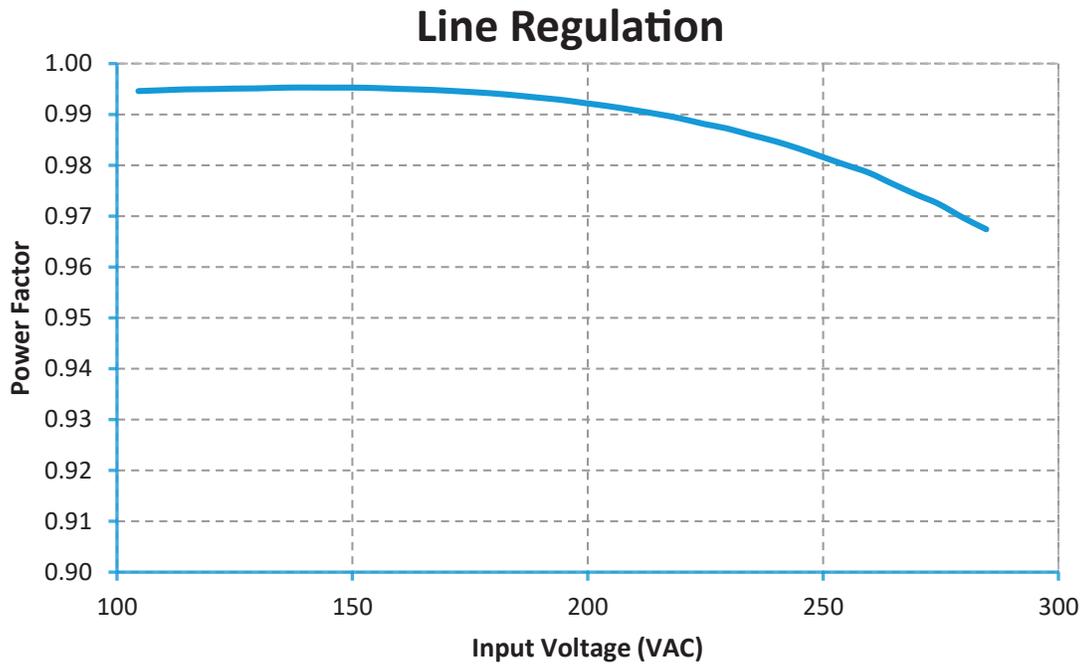


THD vs Input Voltage (Full Load)

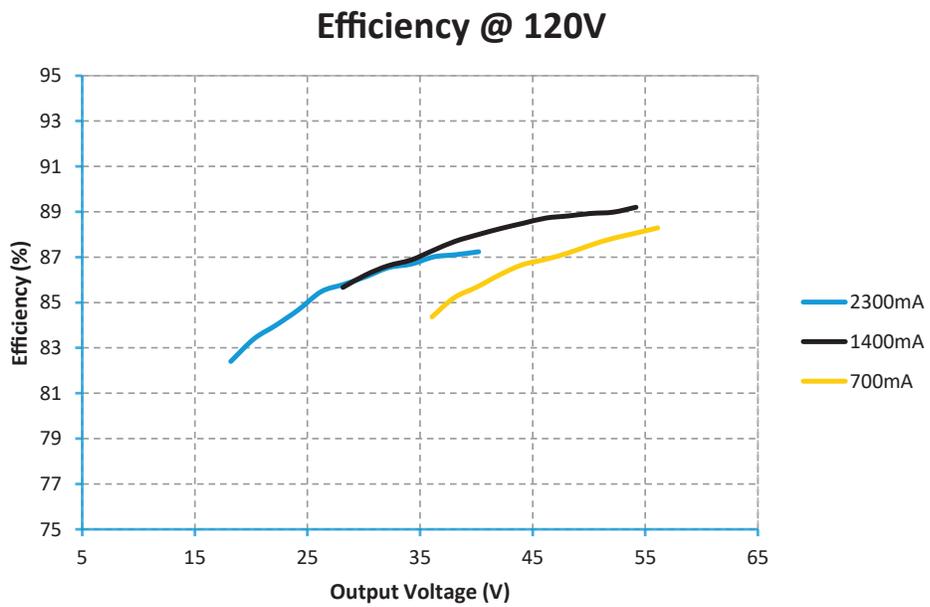
Line Regulation



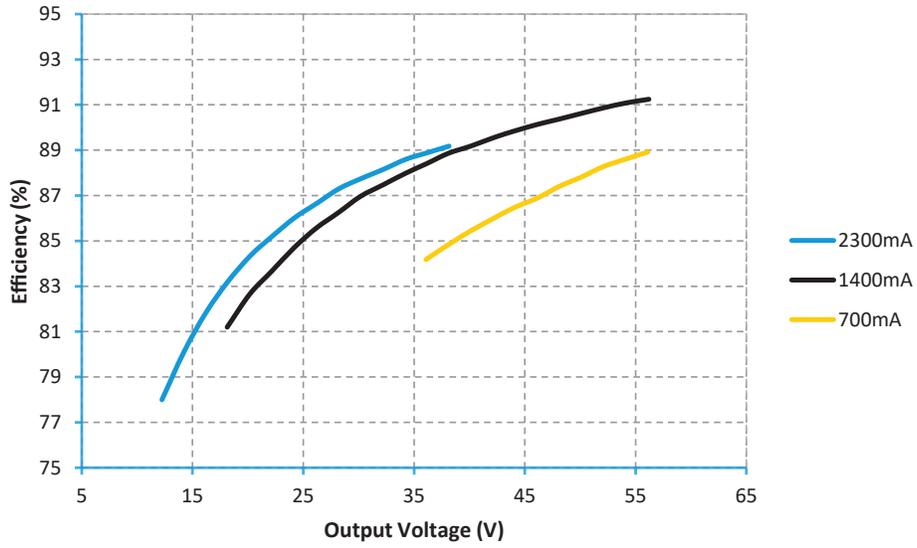
Power Factor vs Input Voltage (Full Load)



Efficiency vs Output Voltage

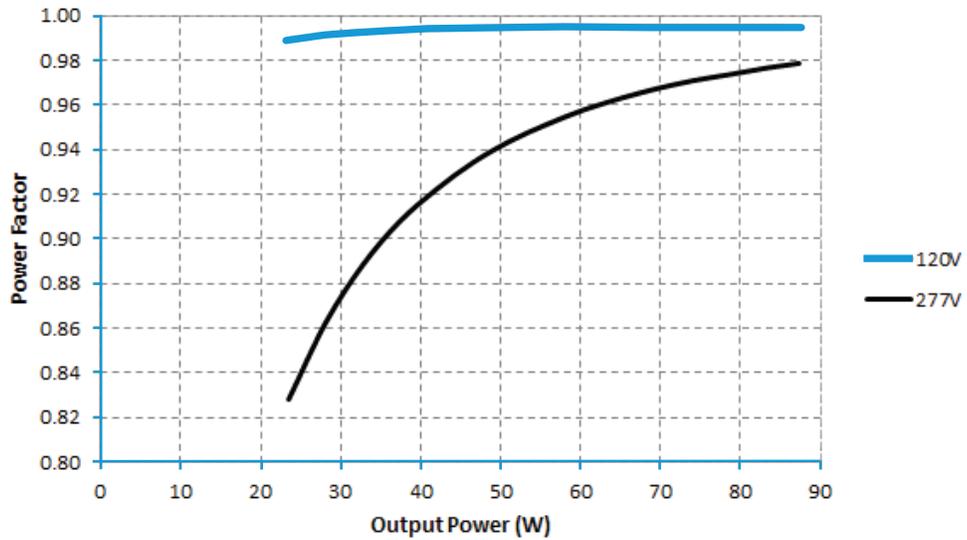


Efficiency @ 277V

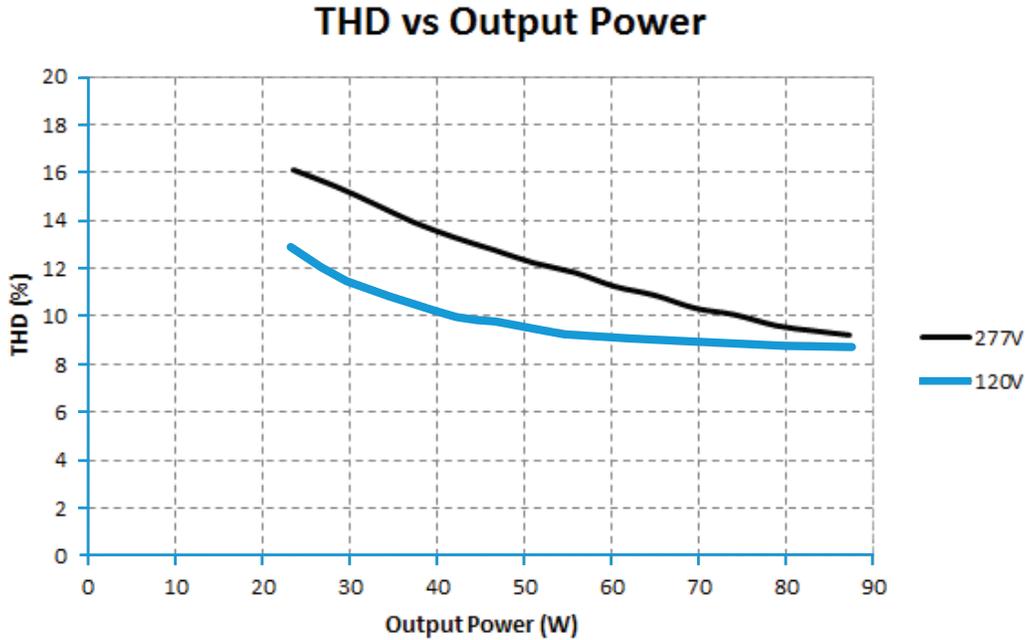


Power Factor vs Load

Power Factor vs Output Power

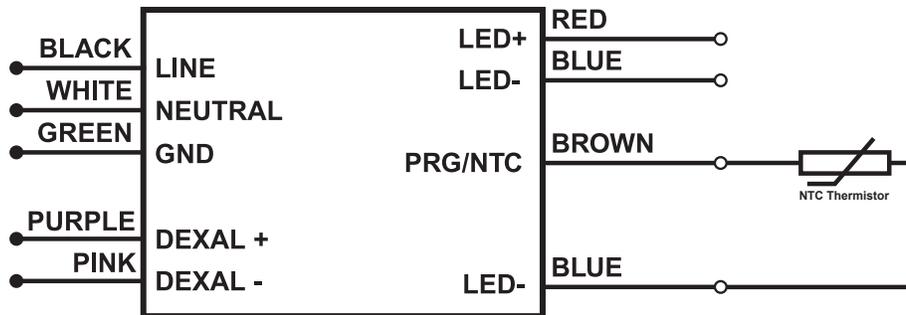


THD vs Load



LED Thermal Protection (NTC) Characteristic

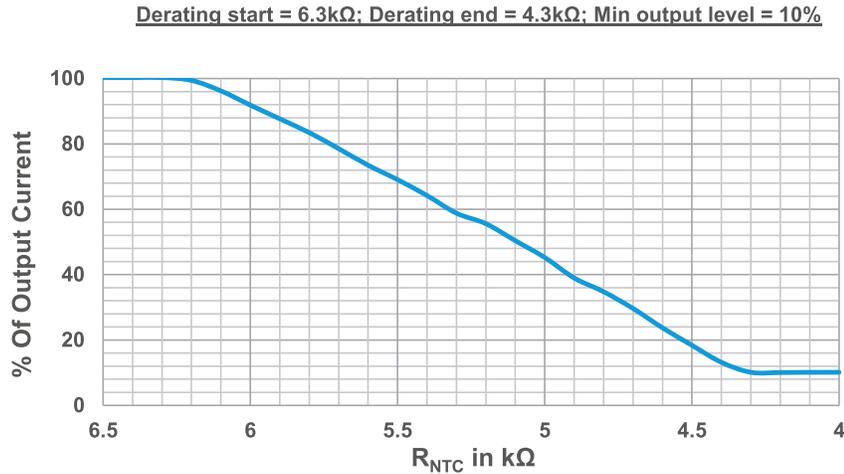
The LED thermal protection feature of the OTi 85W helps reduce the temperature of the LED module by reducing the output current in case of abnormal temperature conditions. To use this feature a third party NTC thermistor should be connected to the LED power supply as shown in the wiring diagram below.



In the end application, care must be taken to place the NTC thermistor close to the hottest spot on the LED module. If LED thermal protection is not required the NTC port on the LED power supply connector can be left open.

Vishay, EPCOS, Murata, Panasonic are some of the manufacturers of NTC thermistor. EPCOS part number for reference only **B57164K153J (15kΩ @ 25°C)**. Murata part number for reference only - **NCP03XH223J05RL (22kΩ @ 25°C)**.

Note: Graphs for reference. The derating limits can be programmed using the OT Programmer.



Constant lumen Maintenance

The Constant Lumen Maintenance feature of the OTi 85W helps to maintain the required lumen output of the fixture at a constant level throughout its lifetime. In general LED's lumen output will depreciate over time and in order to maintain sufficient light level towards the end of lifetime, the LED's are driven at high current initially and will result in more energy consumption. The constant lumen maintenance will give the flexibility to drive the LEDs at optimal driving current throughout its lifetime. This helps in energy savings, constant light output and enhanced reliability of the system.

End-of-Life Indicator

The End-of-Life indicator helps the end user to receive a signal from the fixture indicating that it has reached its programmed life-time. After the LED driver reaches the programmed life-time, whenever it is turned ON, it stays at 'Dim' level (10%) for 10 minutes and reaches its appropriate level.

Dimmer/Sensor Compatibility

Manufacturer	Part Number
Digital Lumens, Inc.	45678
Lutron Electronics	Vive integral fixture control (DFCSJ-OEM-OCC/RF)
Enlighted Inc.	FS-D22 (Two-wire Fixture Mount Sensor) 2-Wire Micro Sensor (SU-5E)
Magnum Energy Systems	Mx-OPUS-MLD/MLDHB
Casambi	CBU-DCS
Nedap Light Controls	Luxon IOT Node

Note: The absence of a dimmer from this chart does not necessarily imply incompatibility. Please reference the dimmer manufacturer's instructions for installation.

Warranty

eldoLED OPTOTRONIC® Products are covered by a 5-year limited warranty.
Complete warranty terms can be found at: www.eldoled.com/legal/terms-and-conditions

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Specifications subject to change without notice. Actual performance may differ as a result of end-user environment and application.