



### General Information

Item Number	*278UE9 OT180F-M1A0DL1 1250MA MAX
Type	Constant Current
Output Power	180W (Max.)
Programming Tool	*274A17 (51645)
Software	<a href="#">Download</a>
Programmable Features	Output Current Dimming level Configurable thermal protection Constant lumen output End-of-life indicator

### Environmental Specifications

Ambient Operating Temperature	-40°C to 55°C
Max. Case Temperature (Tc)	85°C (50kHrs) <sup>1</sup> 90°C (max)
Max. Storage Temp.	70°C
Max. Relative Humidity (%)	95% non-condensing
Transient Protection	ANSI C62.41 Cat B 6.0kV, 4kV EFT
IP Rating	IP66
UL Environmental Rating	UL Class P, Dry & Damp Type HL
UL File number	E333135
EMI Compliance	FCC 47 Part 15 Class A
Sound Rating	Class A

<sup>1</sup> Warranty applicable at 85°C



### Electrical Specifications

#### Input

Input Voltage (VAC)	120-277V (+/- 10%)	
Frequency Range (Hz)	50 – 60 Hz (+/-10%)	
	<b>120V</b>	<b>277V</b>
Input Current (A)	1.68	0.72
THD @ Full load	<20%	<20%
Power Factor @ Full load	>0.9	>0.9
Efficiency @ Full load	91%	>93%
Inrush Current (Apk)	44A, 373µs	105A, 314µs

#### Output

Output Current (mA)	600-1250mA (1mA step)
Output Voltage (VDC)	70-210VDC
Output Ripple Current	< 20% @ 1250mA
Max. Output Power (W)	180W
LED Power-Up Time	<1 sec
Load Regulation	< 3%
Line Regulation	< 3%
Over Voltage Protection	Yes
Over Load Protection	Current fold back @182W, non-latching
Output Short-Circuit Protection	Yes, non-latching

### Dimming

Dimming Control	DALI-2/D4i <sup>1</sup>
Minimum Dimming	10%
Dimming Type	Digital
Voltage Rating	16V
Current (peak)	62mA

CAUTION: Two power supplies if dimming is connected to non-class 2 circuits.

<sup>1</sup> Class 2 or non-Class 2 wiring allowed.

### Auxiliary Output

Output Voltage (VDC)	24V
Power Capability	3.1W

ANSI C137.4 AND D4i compliant

### Power Metering

Power Metering	2%
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Compatible with ANSI C136.52

### LED Thermal Protection (NTC)

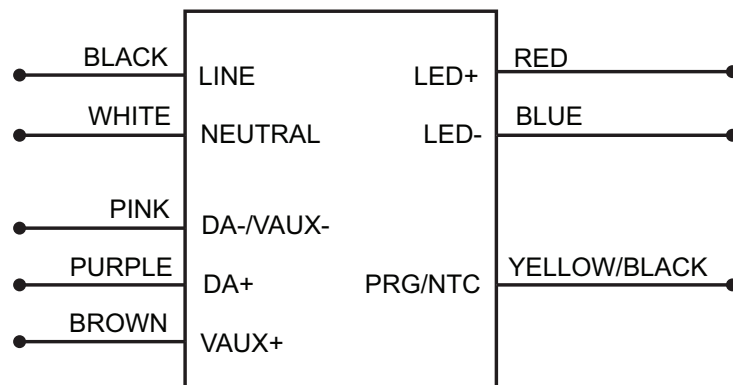
NTC Value Active Range	≤25kΩ
Temperature Derating Start	User defined

External NTC cannot leave the fixture.

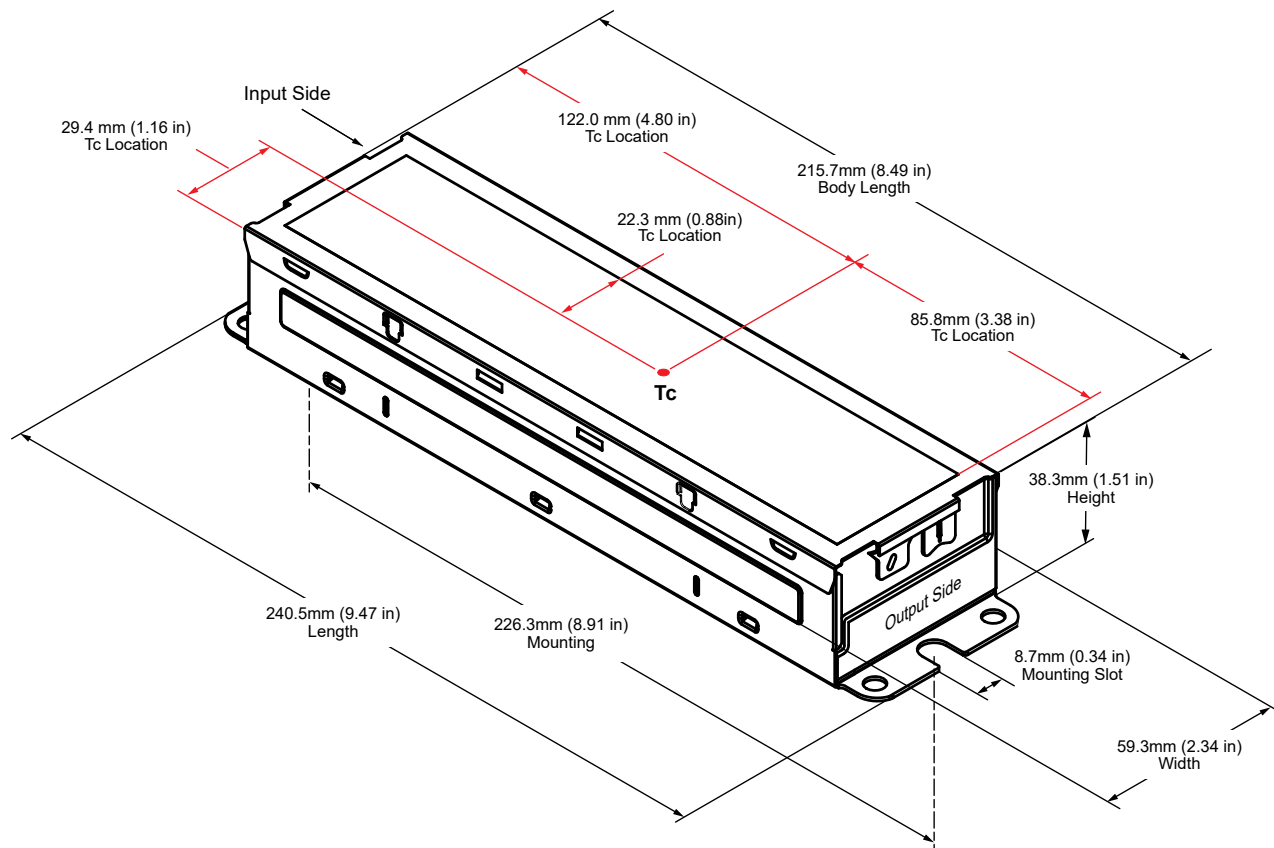
The PRG/ NTC control circuit terminals or lead wires are not isolated.

The external NTC needs to be isolated or separated by live parts.

## Wiring Diagram



## Mechanical Diagram



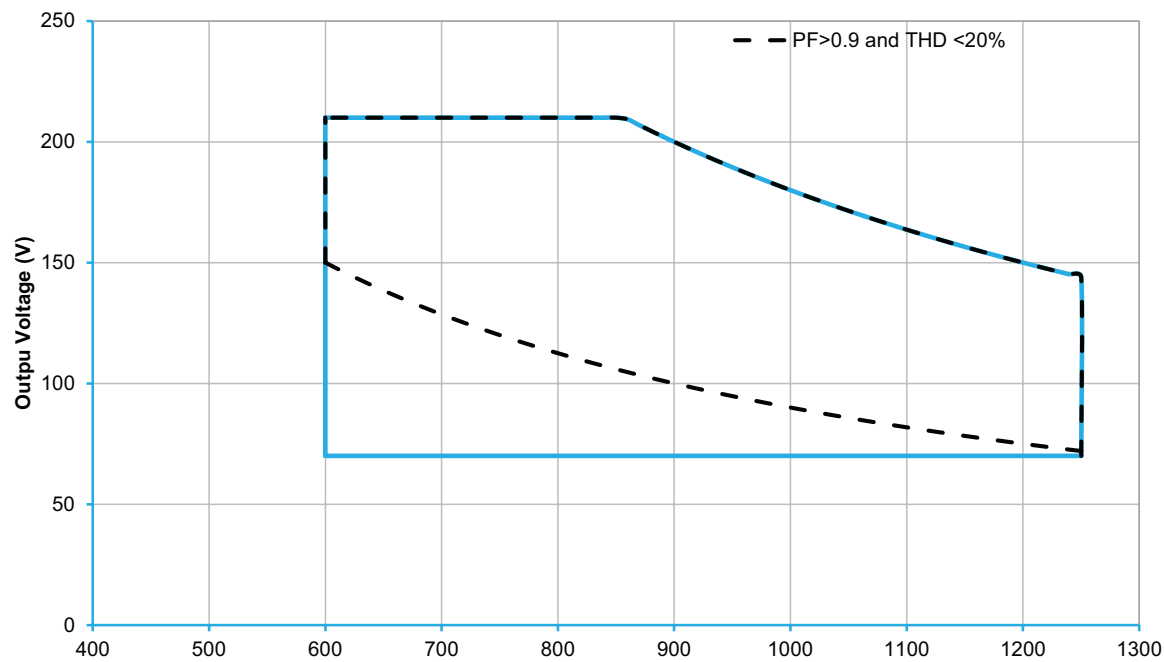
## Mechanical Specifications

Length	240.5mm (9.41 in)
Body Length	215.7mm (8.49 in)
Width	59.3mm (2.34 in)
Height	38.3mm (1.51 in)
Mounting Length	226.3mm (8.91 in)
Mounting Slot Width	8.7mm (0.34 in)

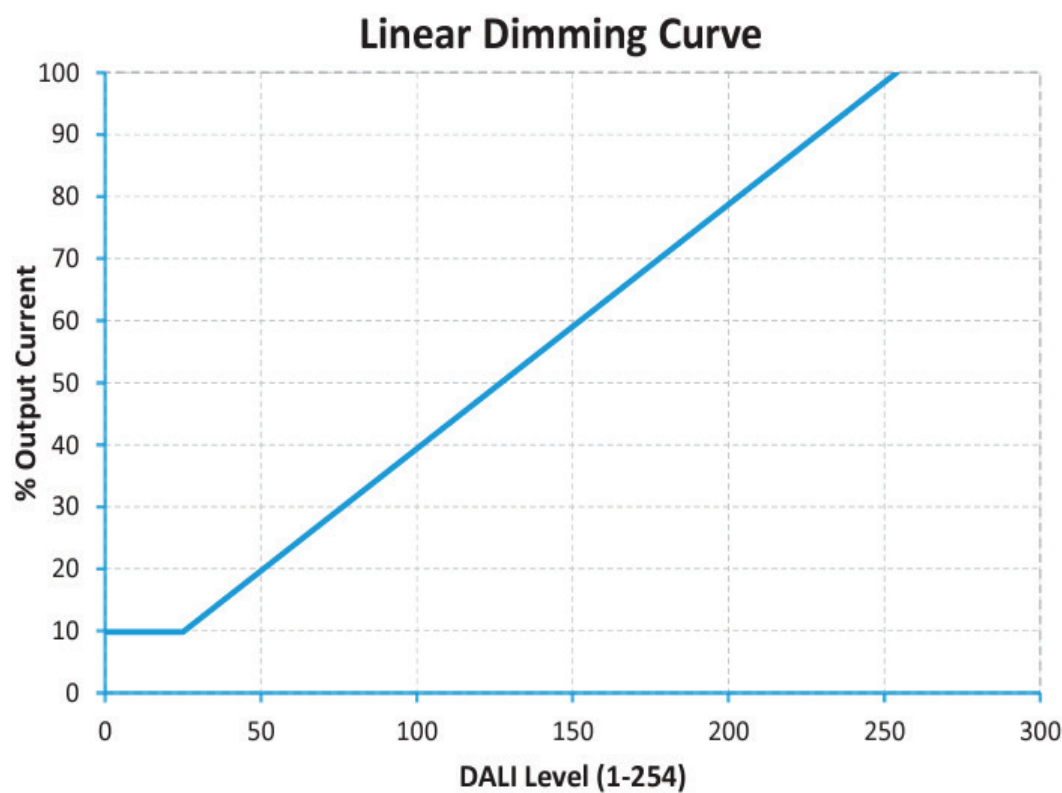
## Tc Point Location

From Input Edge of Product	122.0mm (4.80 in)
From Output Edge of Product	85.8mm (3.38 in)
From Edge of product (A)	29.4mm (1.164 in)
From Edge of Label (B)	22.3mm (0.88 in)

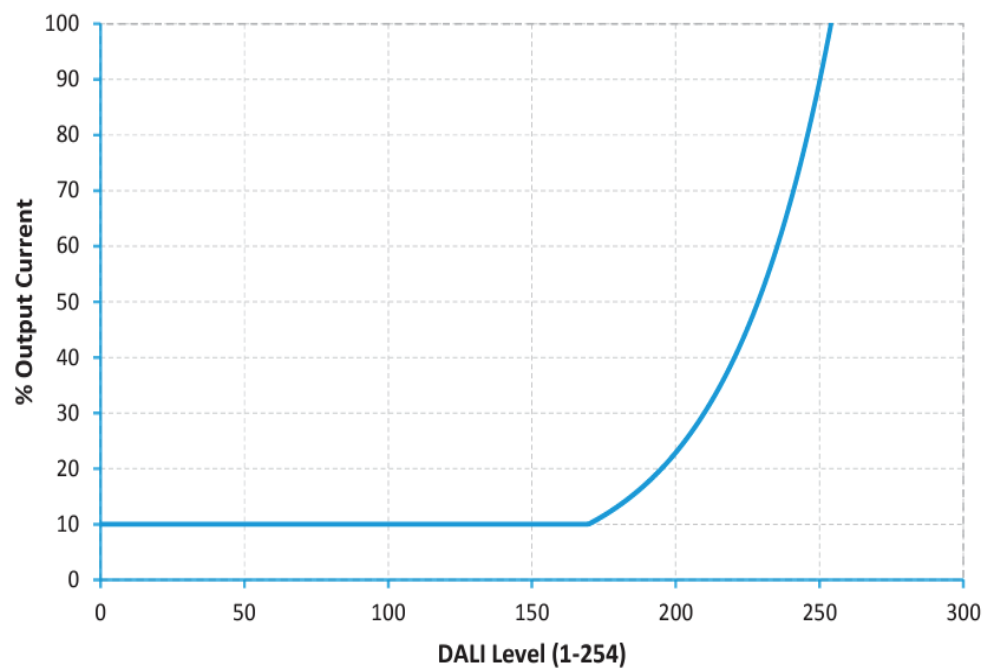
Operating Range



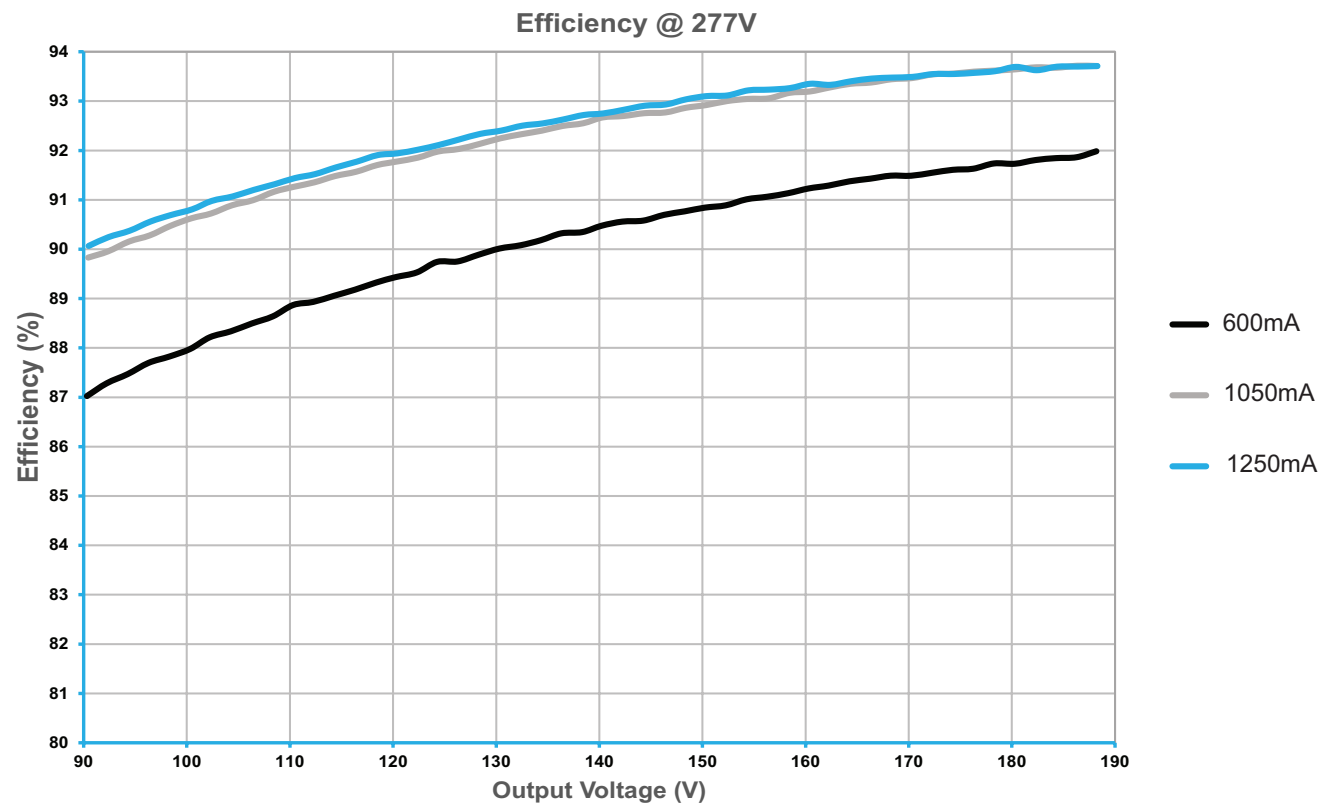
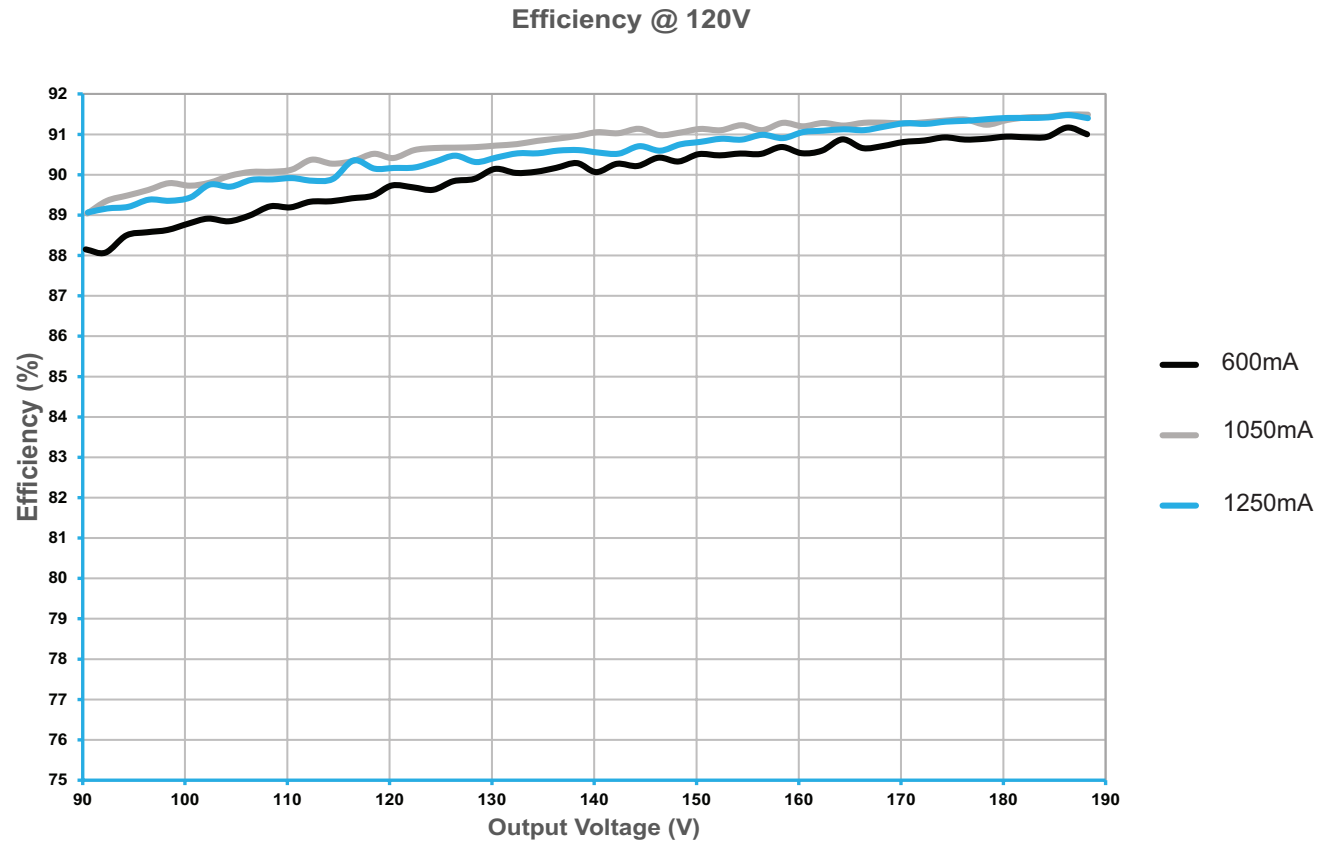
Dimming Curve



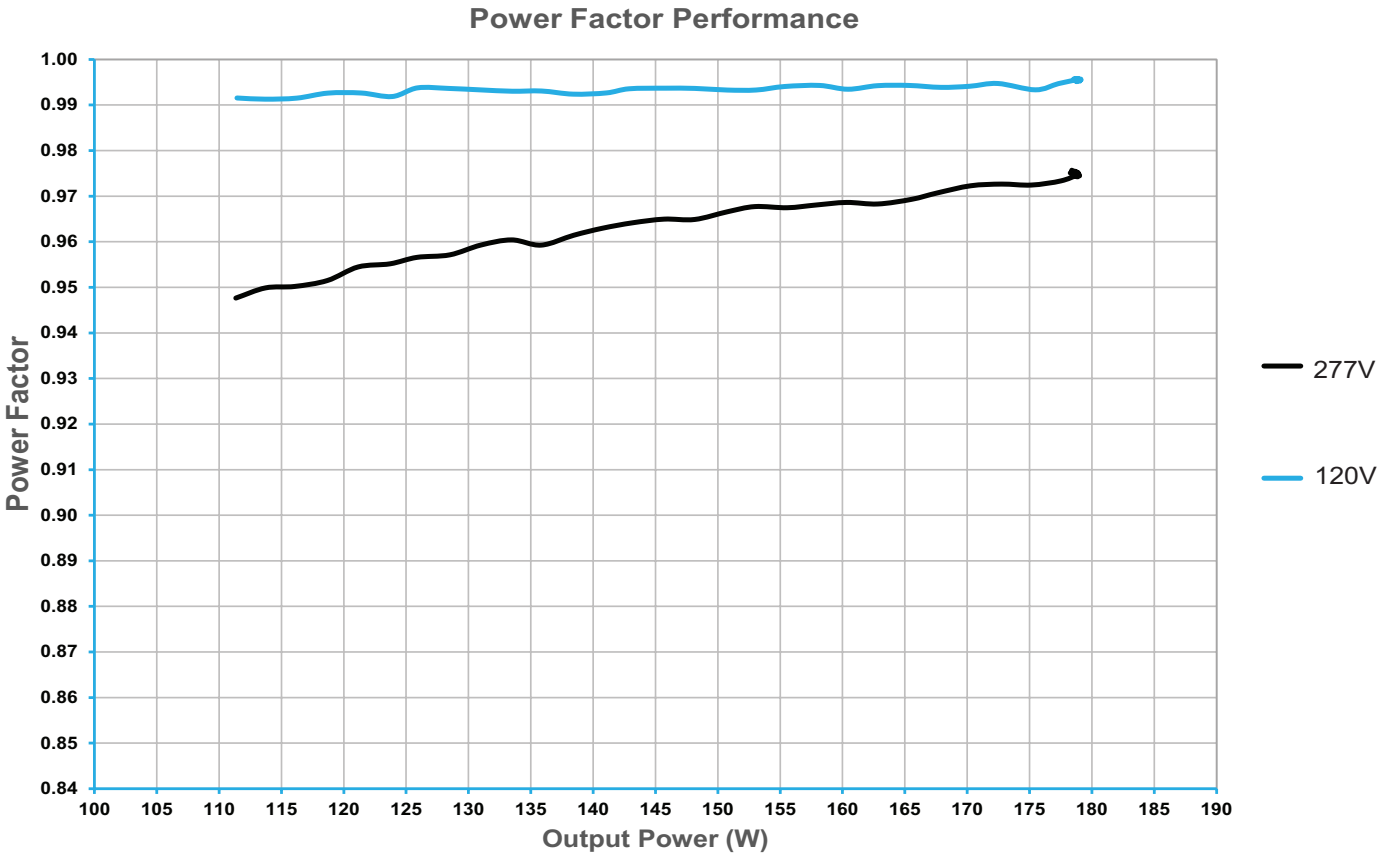
### Logarithmic Dimming Curve



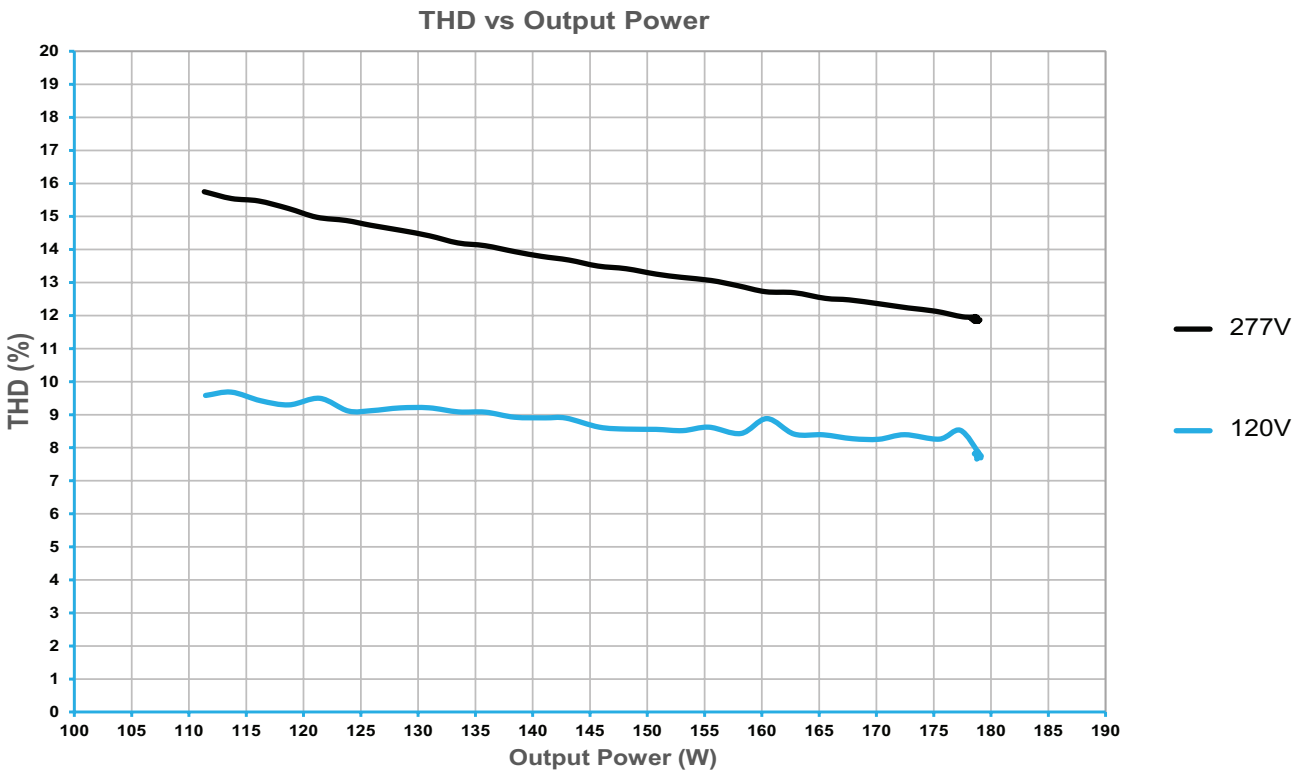
Efficiency vs. Output Voltage



Power Factor Performance

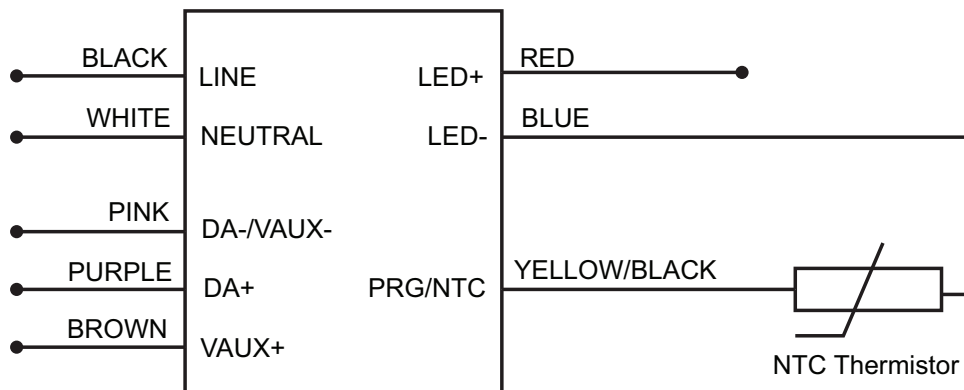


THD Performance



## LED Thermal Protection (NTC) Characteristic

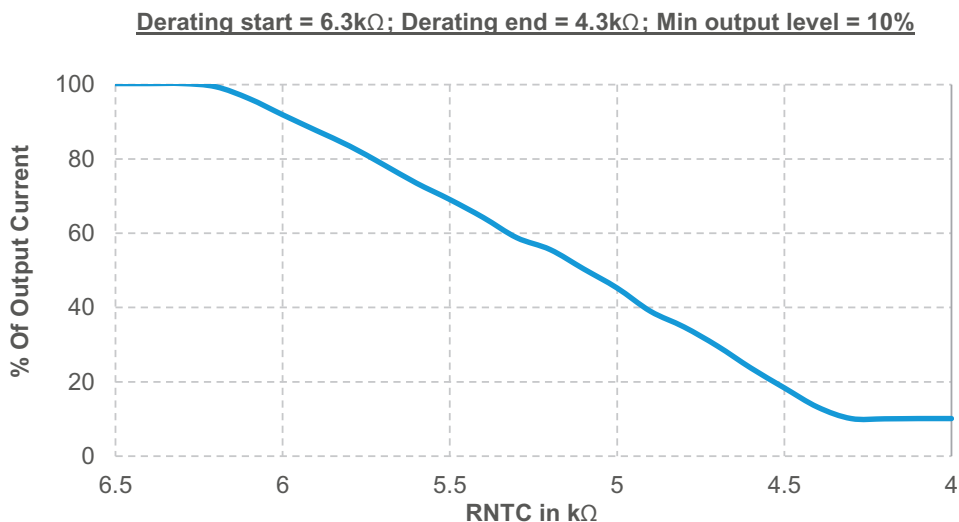
The LED thermal protection feature of the OT180W D4i helps reduce the temperature of the LED module by reducing the output current in case of abnormal temperature conditions. To use this feature a third party NTC thermistor should be connected to the LED power supply as shown in the wiring diagram below.



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).

To learn more about this feature, please refer to the Technical Guide for [LED Thermal Protection](#).

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



## End-of-Life Indicator

The End-of-Life indicator feature 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.

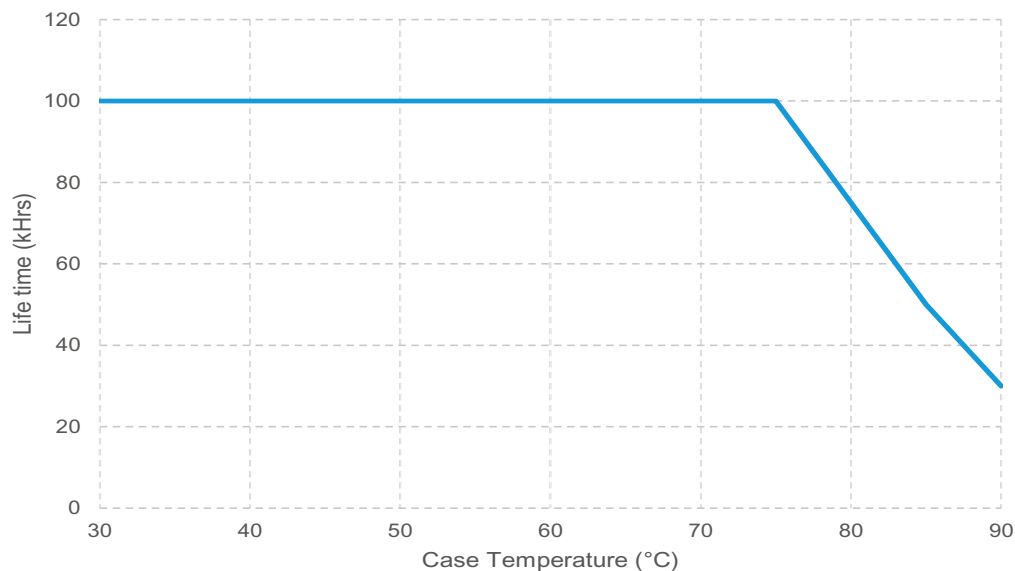
### Constant Lumen Maintenance

The Constant Lumen Maintenance feature of the OT180W D4i helps 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.

**NOTE:** Step-by-step instructions are outlined in the OT Programmer User Manual embedded in the software.

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### Lifetime vs Case Temperature



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### Warranty

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