

General Information

Type	Constant Current, Class 2
Output Power	190W (Max.)
Programming Tool	*274A17 (51645)
Software	OT Programmer
Programmable Features	Output Current Soft start, Dim-to-Off Dimming Level Configurable Thermal Protection Constant Lumen Output End-of-life Indicator Vaux (12/20/24V) AstroDIM

Environmental Specifications

Ambient Operating Temperature	-40°C to 55°C
Max. Case Temperature (Tc)	85°C Max* (50khrs) 90°C Max (UL)
Max. Storage Temp.	70°C
Max. Relative Humidity (%)	95% non-condensing
Transient Protection	ANSI C82.77-5-2015, 6.0kV, 4kV EFT
IP Rating	IP66
UL File number	E333135
UL Rating	UL Class P, Dry & Damp, Type HL
EMI Compliance	FCC Part 15 Class A
Sound Rating	Class A

* 5-year warranty applicable at 85°C

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
NTC must be connected if LED Thermal Protection feature is used

Auxiliary Output (For AUX models only)

Output Voltage (VDC)	12/20/24V (configurable)
Output Power (W)	2.4W Max.
Voltage Regulation	+/-10%

Products

Item Number	Description	AUX Output
*2779JS	OTI 190W 277-480 2750C 2DIM P6 DIM-1	No
*2779JT	OTI 190W 277-480 2750C 2DIM P6 AUX DIM-1	Yes

Electrical Specifications

Input	Output		
	277V	347V	480V
Input Voltage	277-480VAC (+/- 10%)		
Frequency Range	50-60Hz (+/- 5%)		
Input Current (A)	0.776	0.618	0.480
THD @ Full load	6.28%	7.96%	11.53%
Power Factor @ Full load	>0.9	>0.9	>0.9
Efficiency @ Full load	≥89%	≥89%	≥90%
Inrush Current (Apk) ¹	50.1A @ 298μs	64A @ 300μs	89.3A @ 300μs

1 – Complies to NEMA 410 inrush current requirements

Output

Output Current (mA)	700-2750mA per channel (Default 2700mA)
Output Voltage (VDC)	15-54VDC
Output Ripple Current	<20%
Max. Output Power (W)	190W (max) - 95W per channel
LED Power-Up Time	<1 sec
Load Regulation	<5%
Line Regulation	<5 %
Over Voltage Protection	Yes, non-latching
Over Load Protection	Power foldback @ 97W per channel
Output Short-Circuit Protection	Yes, non-latching
Over Temperature Protection	Foldback to 60% at 100°C, Auto Recovery
Reverse Polarity	Yes, non-latching

Dimming

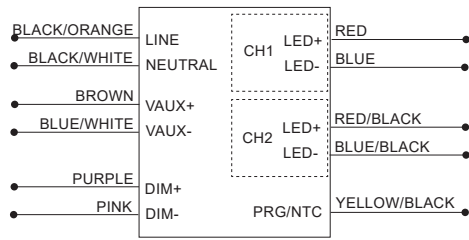
Dimming Control	0-10V (Isolated) AstroDIM
Minimum Dimming	1%
Dimming Type	Analogue
Source/Sink Current	0.6mA
Dim-to-Off OFF/ON Threshold	0.91V/1.01V
Dim-to-Off Standby Power	<1.6W

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

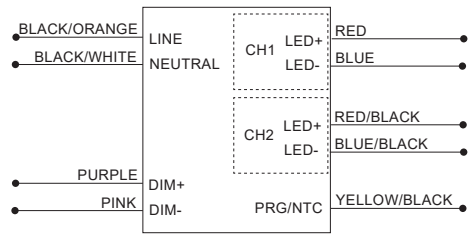


Wiring Diagram

Wiring diagram for AUX output models



Wiring diagram for non-AUX output models



Notes:

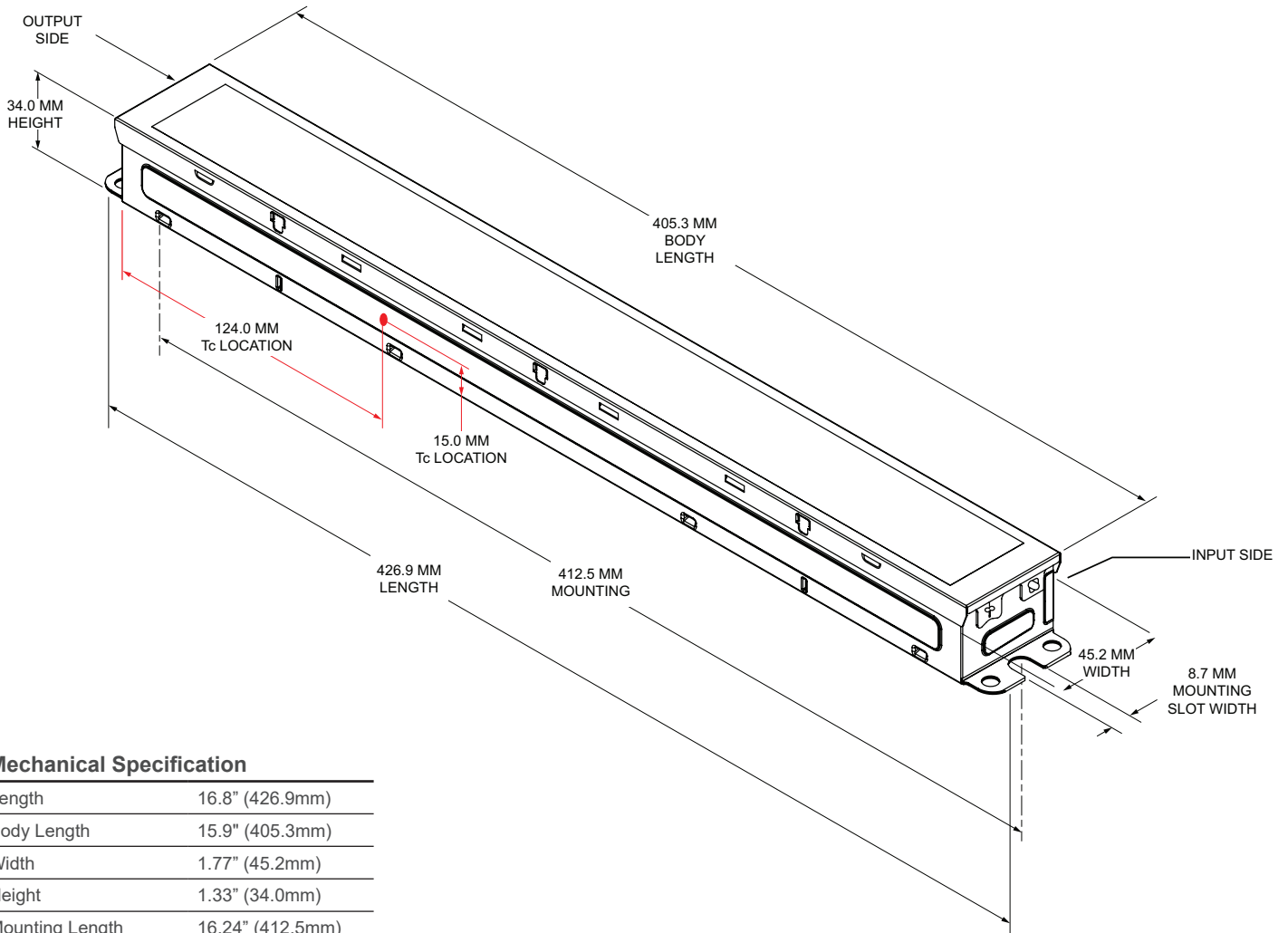
Maximum suggested remote mounting distance is 16 feet.

The Dimming input is isolated and will allow Class 2 or non-Class 2 wiring across Purple and Pink wires.

Key Application Notes

Dim-to-off and Soft Start are programmable (enable/disable) features. The default mode for both features is disabled for out-of-the-box products. If these features are required, they must be enabled in the programming software.

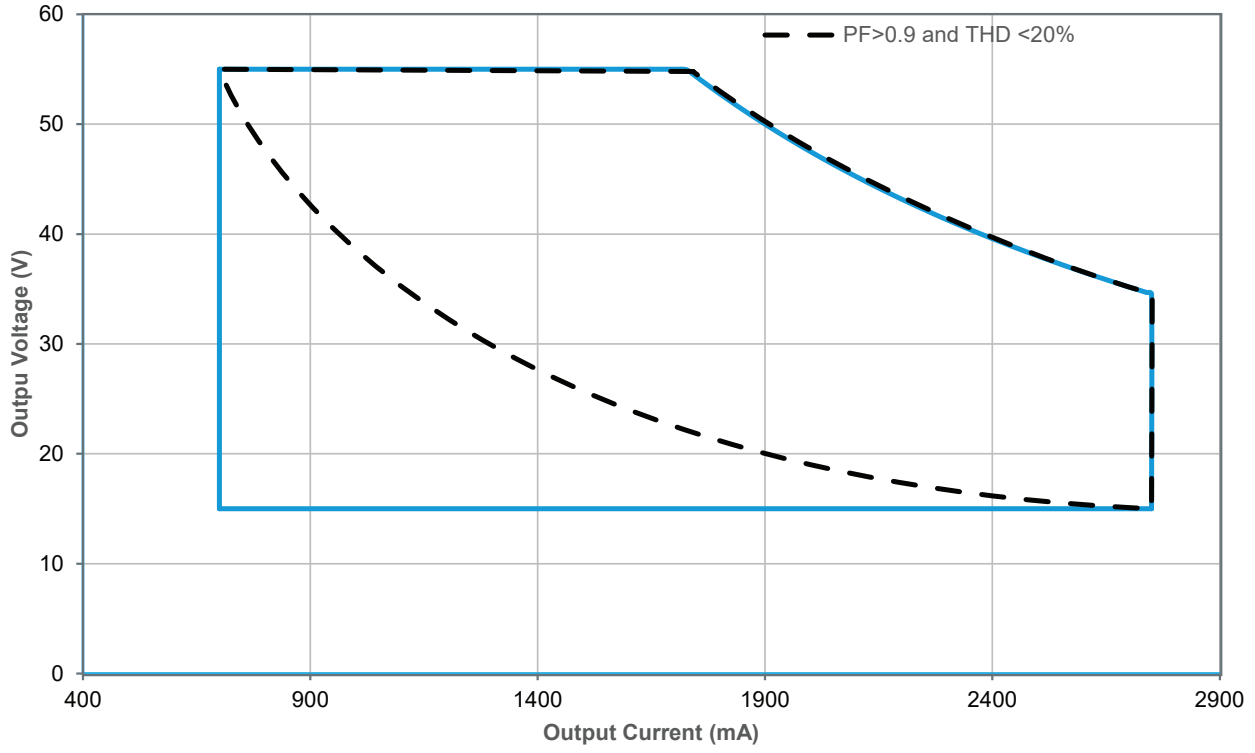
Mechanical Diagram



Mechanical Specification

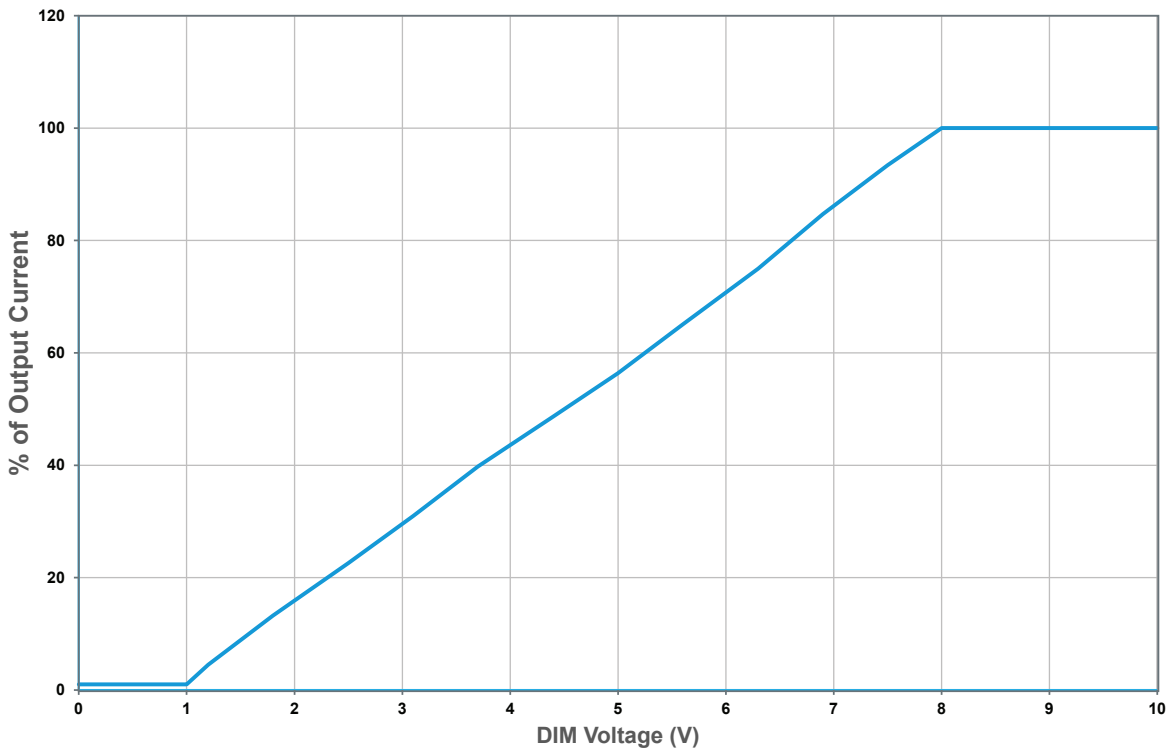
Length	16.8" (426.9mm)
Body Length	15.9" (405.3mm)
Width	1.77" (45.2mm)
Height	1.33" (34.0mm)
Mounting Length	16.24" (412.5mm)
Mounting Slot Width	0.34" (8.7mm)

Operating Range



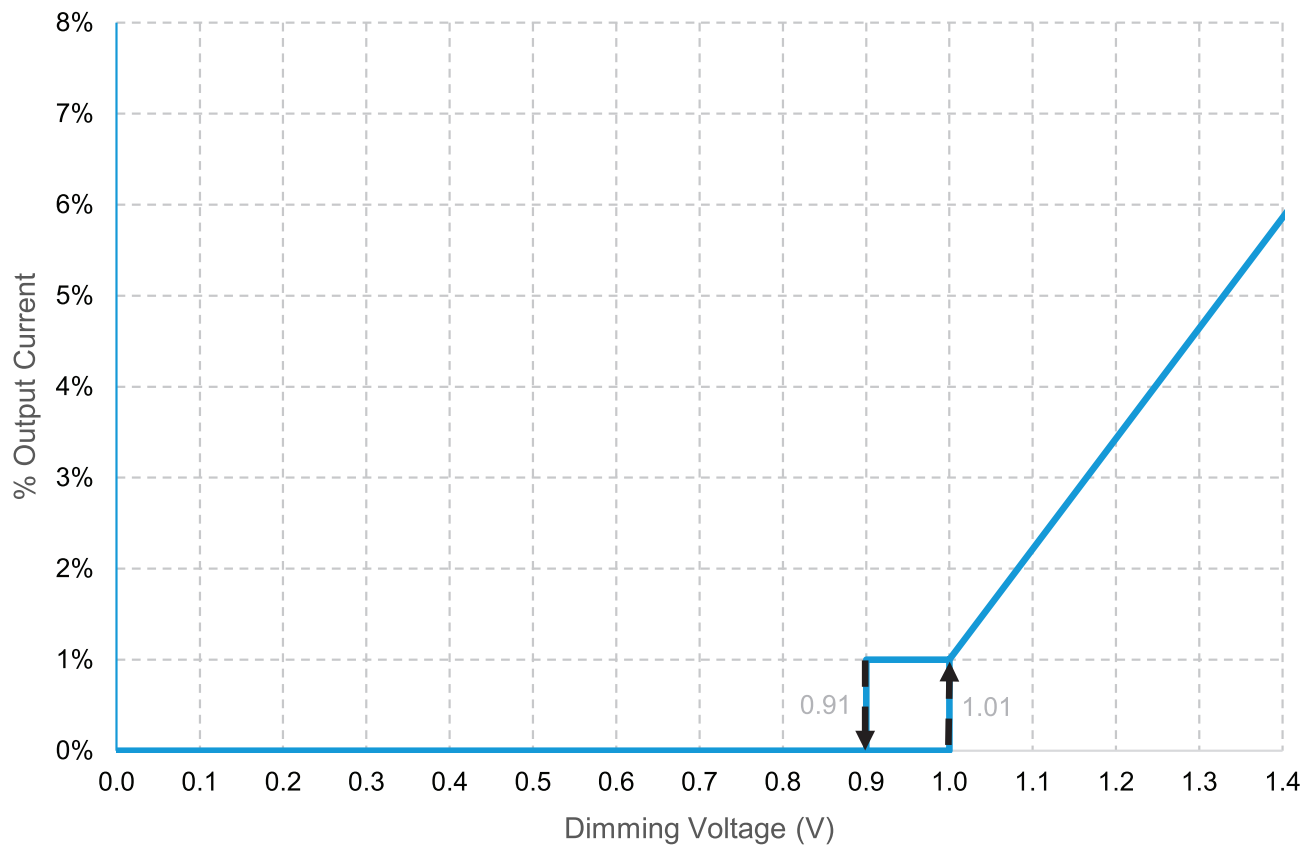
Dimming Curves

Dimming Curve



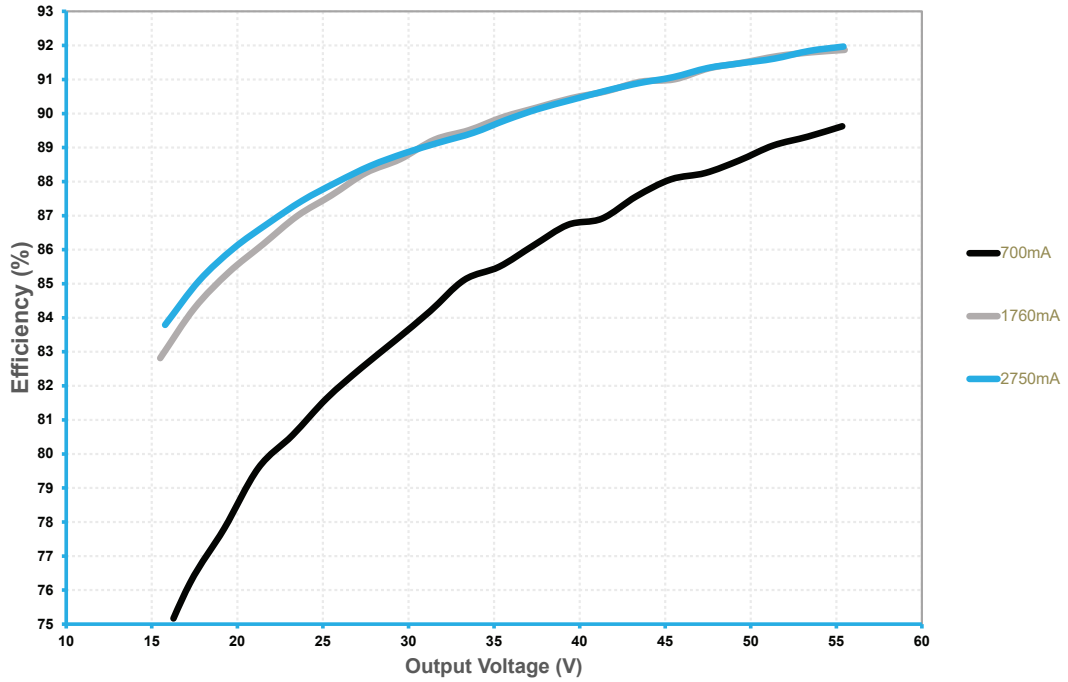
Dimming Curves Continued

Dim to Off Hysteresis

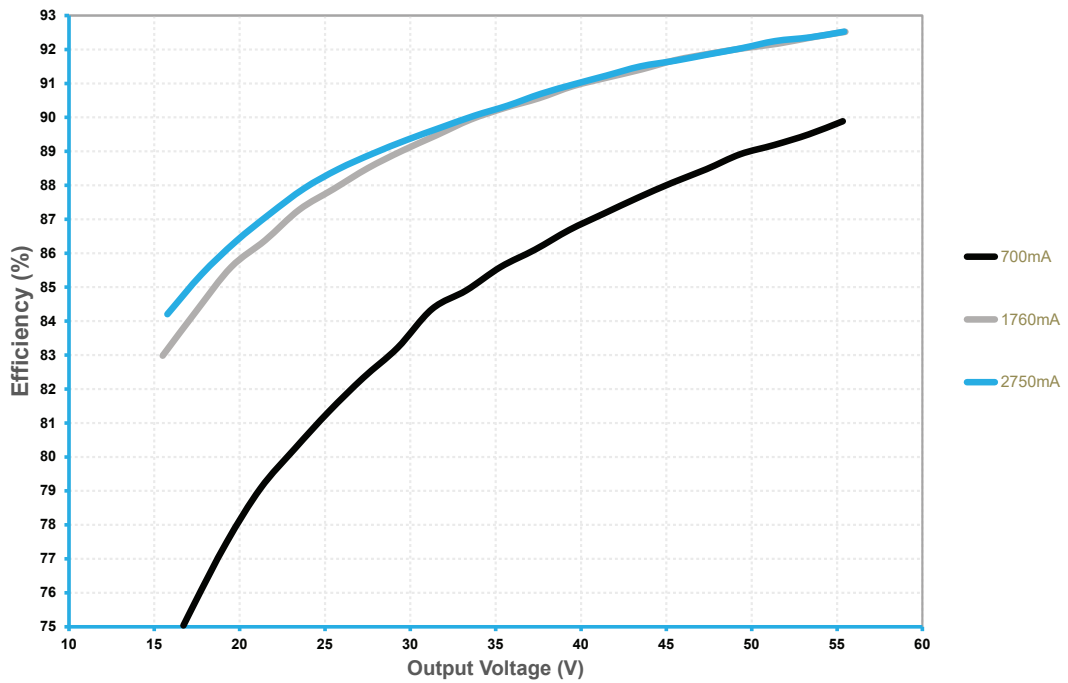


Efficiency vs. Output Voltage

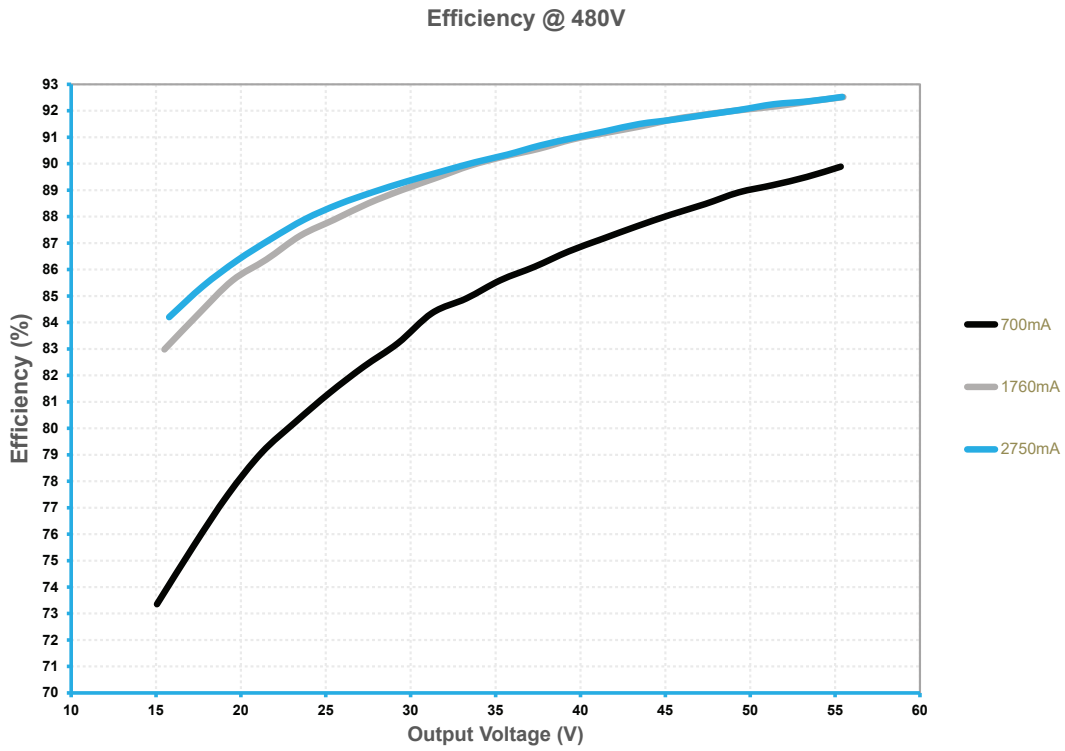
Efficiency @ 277V



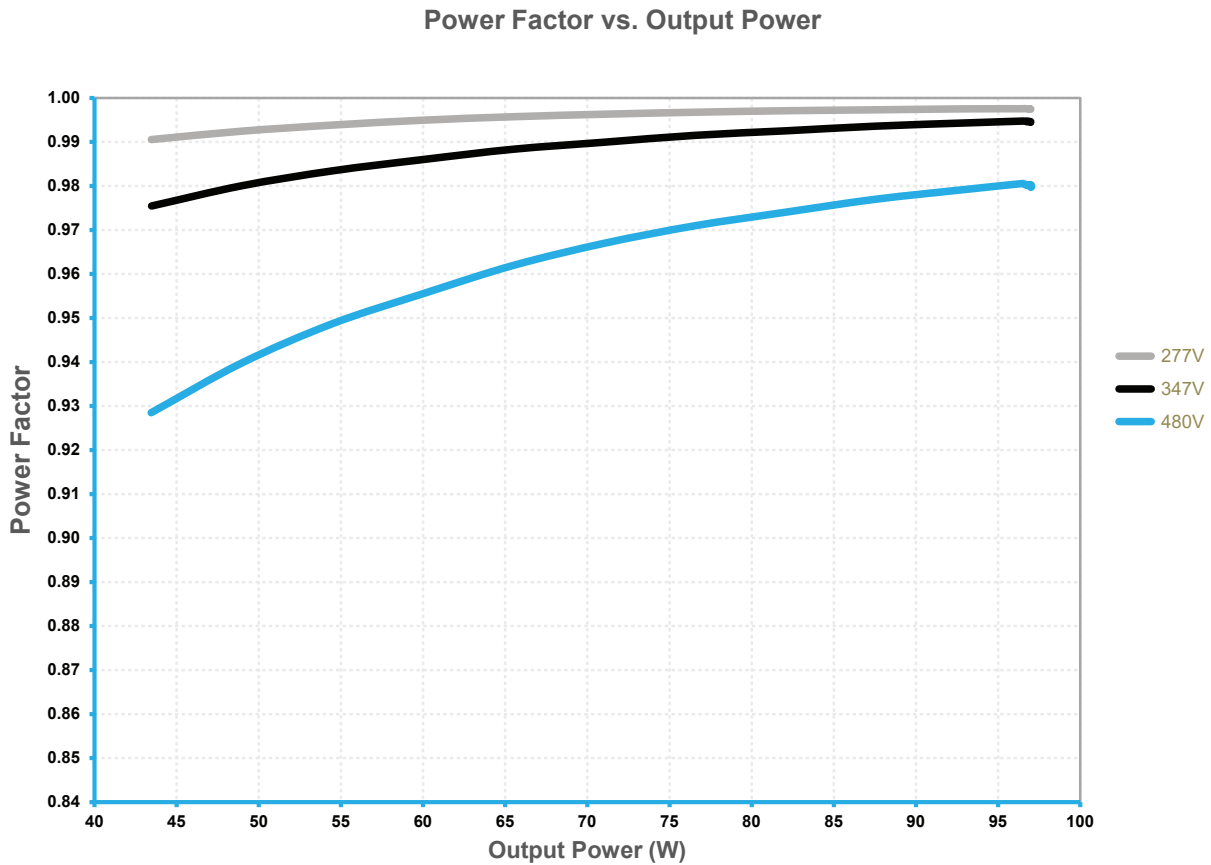
Efficiency @ 347V



Efficiency vs. Output Voltage (Continued)

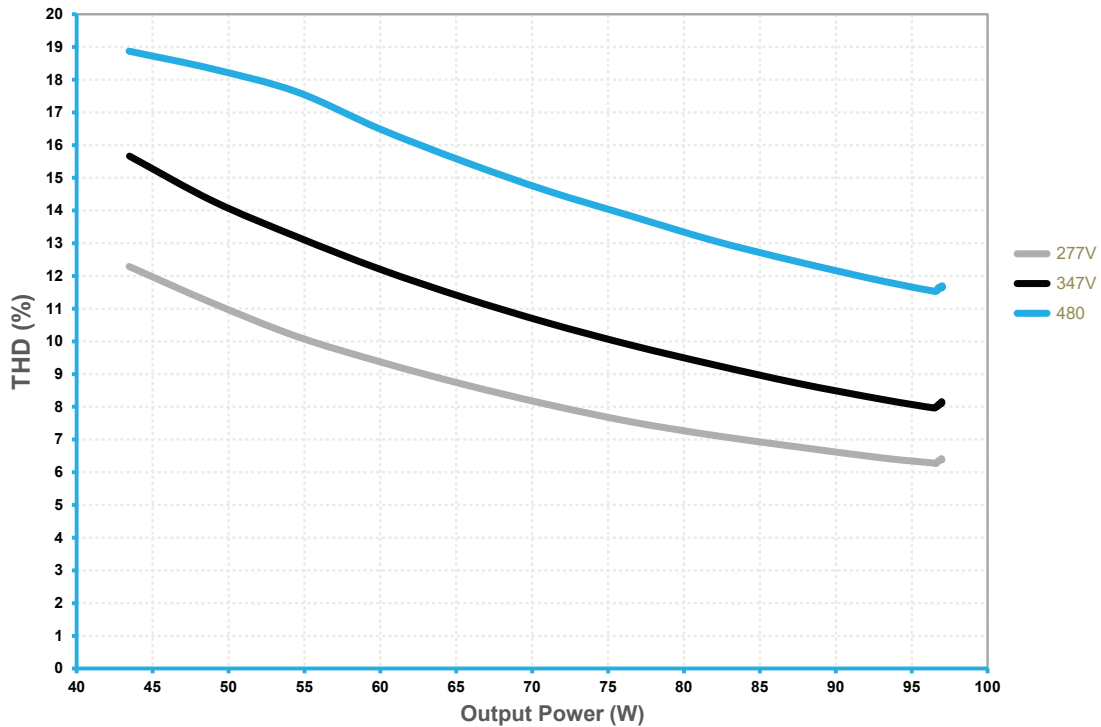


Power Factor Performance



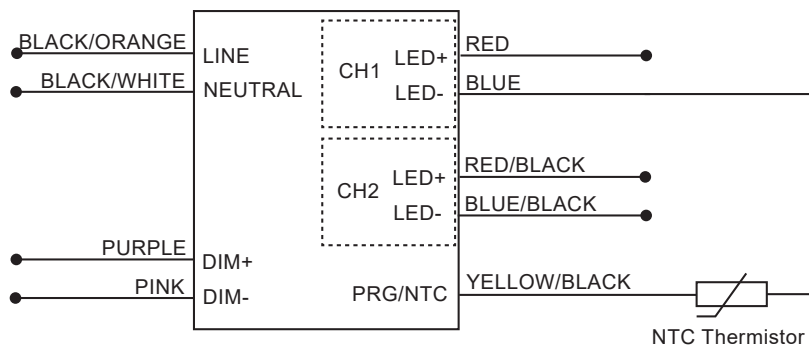
THD Performance

THD vs Output Power



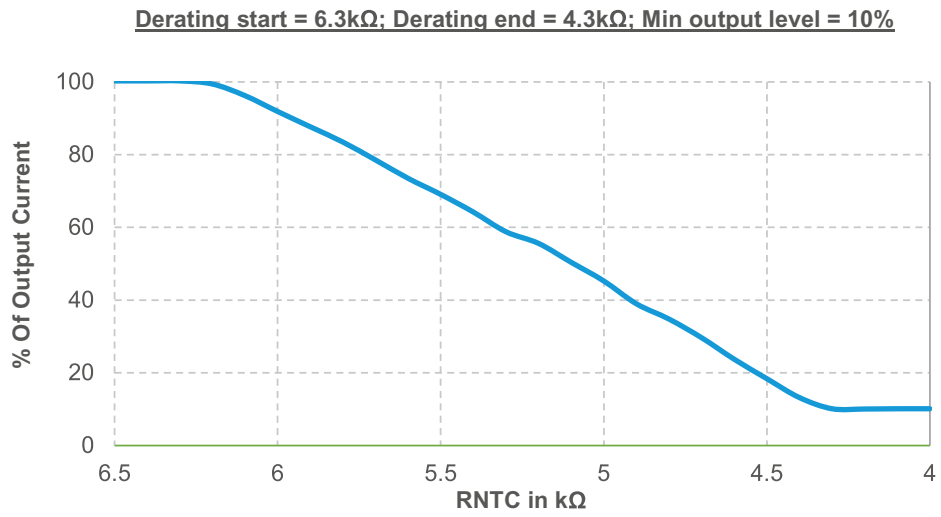
LED Thermal Protection (NTC) Characteristic

The LED thermal protection feature of the OTi190W 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 must be connected to the LED power supply as shown in the wiring diagram below.

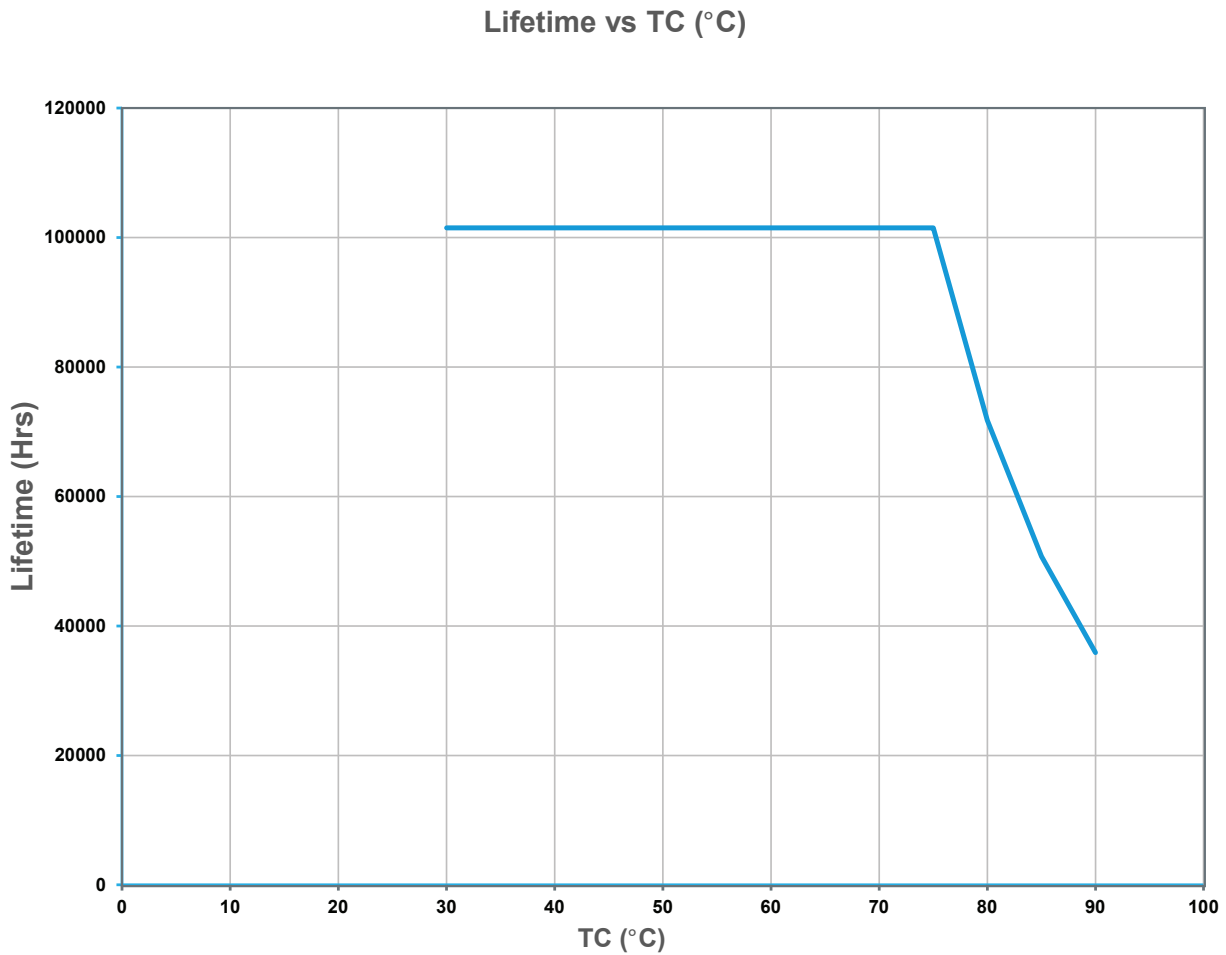


In the end application, care must be taken to place the NTC thermistor close to the hottest spot on the LED module. If LED thermal protection is not required the NTC port on the LED power supply connector can be left open. Vishay, EPCOS, Murata, Panasonic are some of the manufacturers of NTC thermistor.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



Lifetime vs TCase



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 OTi190W 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.

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

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

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