



Electrical Specifications

Input

Input Voltage (VAC)	347V (+/- 10%)
Frequency Range (Hz)	50 – 60 Hz (+/- 10%)
Input Current (A)	0.20
THD @ Full load	<10%
Power Factor @ Full load	>0.9
Efficiency @ Full load	≥88%
Inrush Current (Apk, T@10% of Apk)	6.25, 25.8μs

Output

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

General Information

Item Number	*2743YU (79670) and *2743YX (79676)
Type	Constant Current, Class2
Output Power	50W (Max.)
Programming Tool	*274A17 (51645) & *2747CR/*2743V1 (51647/ 51648)
Software	Download
Programmable Features	Output current Dimming level Dim-to-off, Soft Start LED thermal protection Auxiliary output voltage Constant lumen output End-of-life indicator

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

Environmental Specifications

Ambient Operating Temperature	-30°C to 50°C
Case Temperature (Tc)	75°C (50kHrs) ¹ 90°C (20kHrs)
Max. Storage Temp.	70°C
Max. Relative Humidity (%)	85% non-condensing
Transient Protection	NEMA SSL 1 - 2010 Non-Roadway 2.5KV
UL Rating	Dry & Damp
UL File number	E333135
EMI Compliance	FCC Part 15 Class A
Sound Rating	Class A

1 - Warranty applicable only at 75°C

Dimming

Dimming Control	0 – 10V (Isolated)
Dimming Range	10-100%, 1-100%
Dimming Type	Analog , PWM ¹ (≥1kHz)
Dimming Input Isolation	2.5kV
Source/Sink Current	0.2mA max
Dim-to-Off Threshold	0.8V
Stand-by Power	1.5W

CAUTION: More than one power supply present.

1 - The output is in PWM mode under 350mA. The lowest output current is 4mA for 1% dimmable driver models.

Auxiliary Output (Model: *2743YU (79670) only)

Output Voltage (VDC)	12/20/24V ¹ (configurable)
Max Output Power	1W
Voltage Regulation	±10%

1 - Default Vaux is 12V

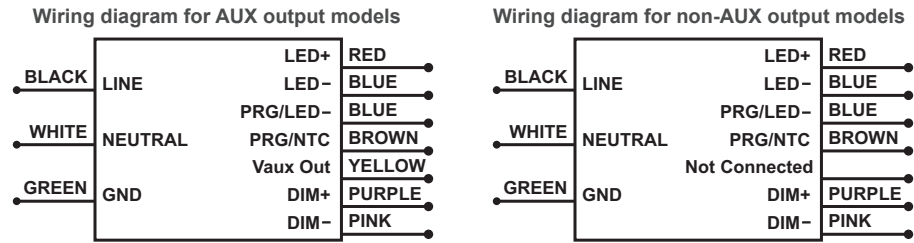
LED thermal protection (NTC)

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



Wiring Diagram



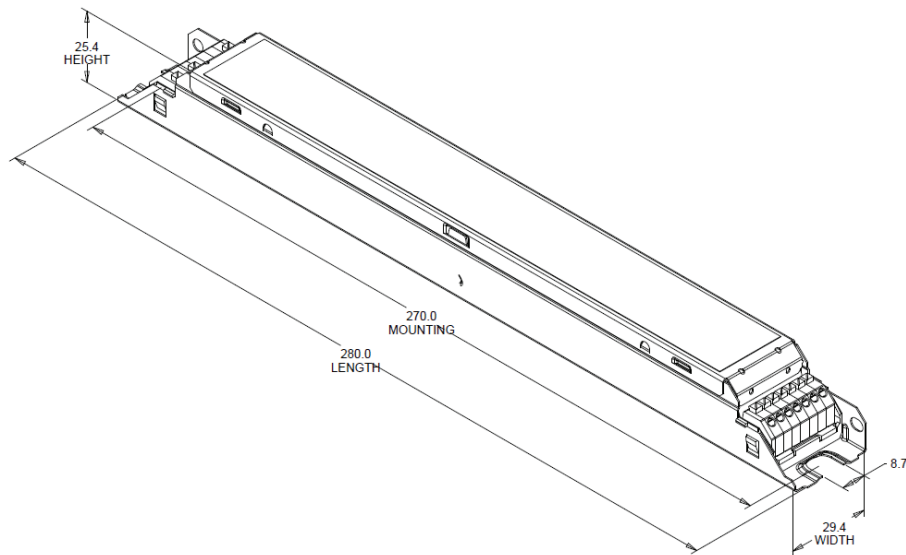
Note: The Vaux Out (YELLOW) and LED- (BLUE) will provide the DC Auxiliary output. Yellow is “+ve” polarity and blue is “-ve” polarity.

Note: Maximum suggested remote mounting distance is 16 feet.

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.
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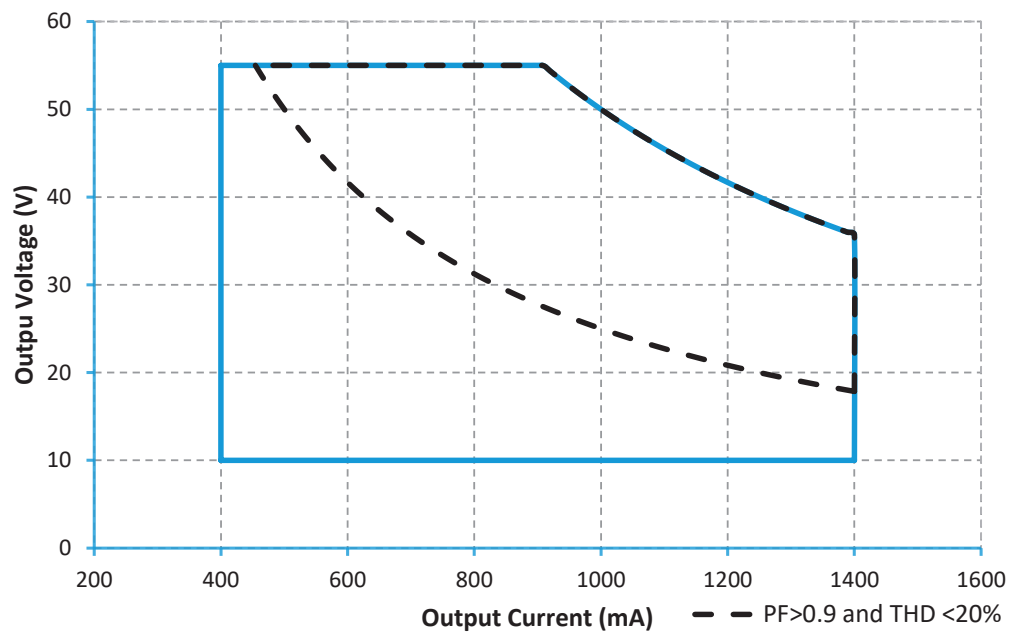
Mechanical Diagram



Mechanical Specification

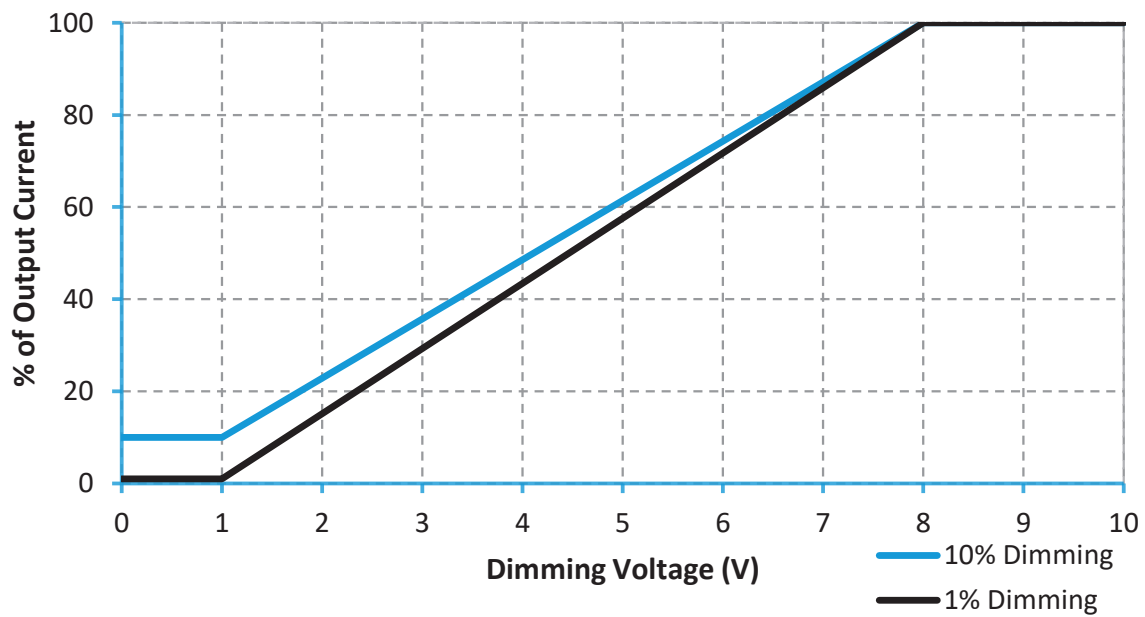
Length	11.02" (280mm)
Width	1.15" (29.4mm)
Height	1.0" (25.4mm)
Mounting Length	10.63" (270mm)

Operating Range

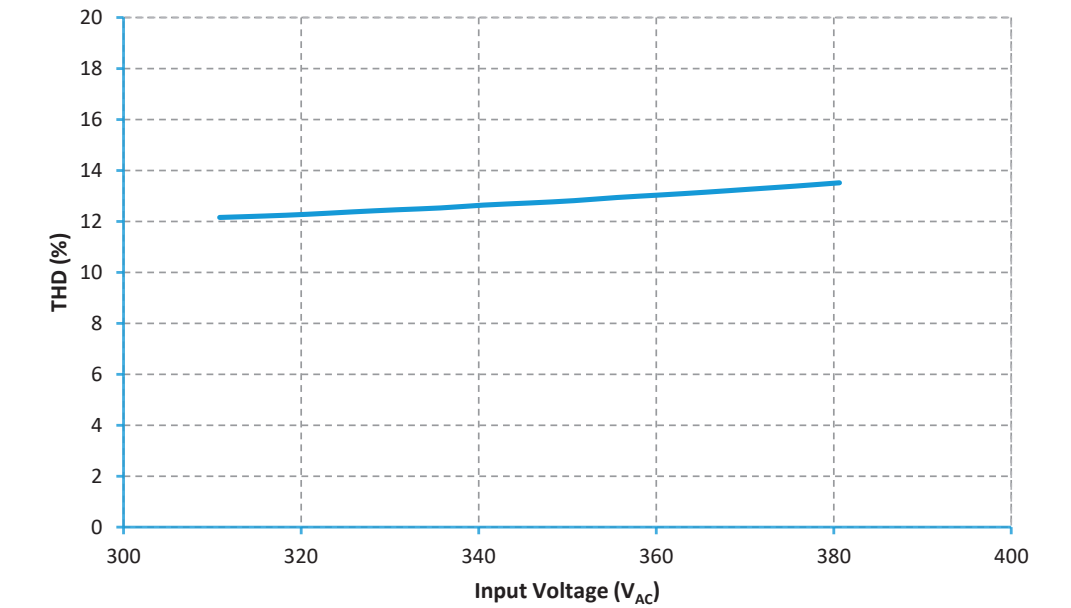


Note: Meeting DLC requirements requires minimum 50% loading.

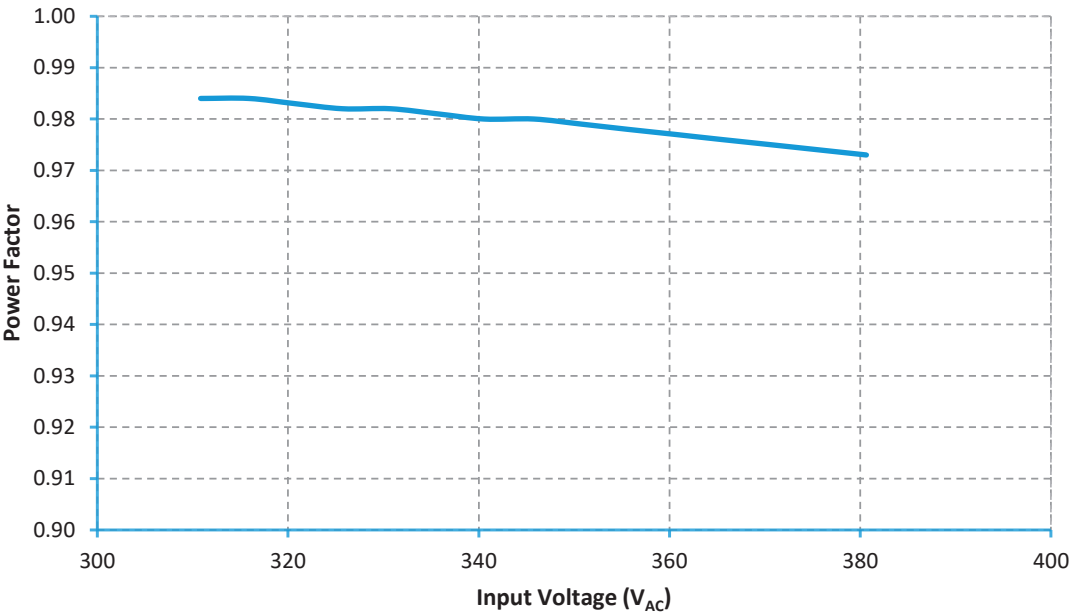
Dimming Curve



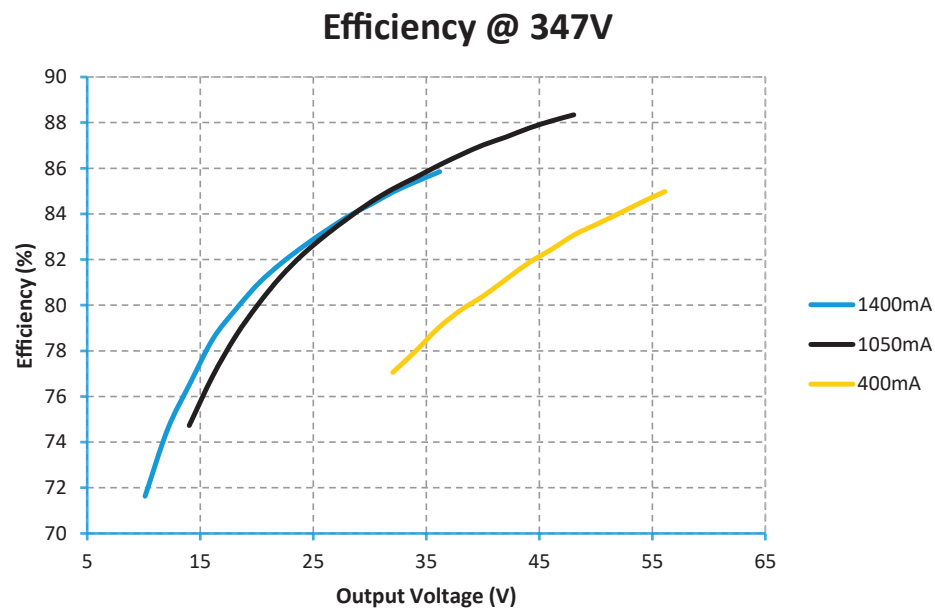
THD vs. Input Voltage (Full Load)



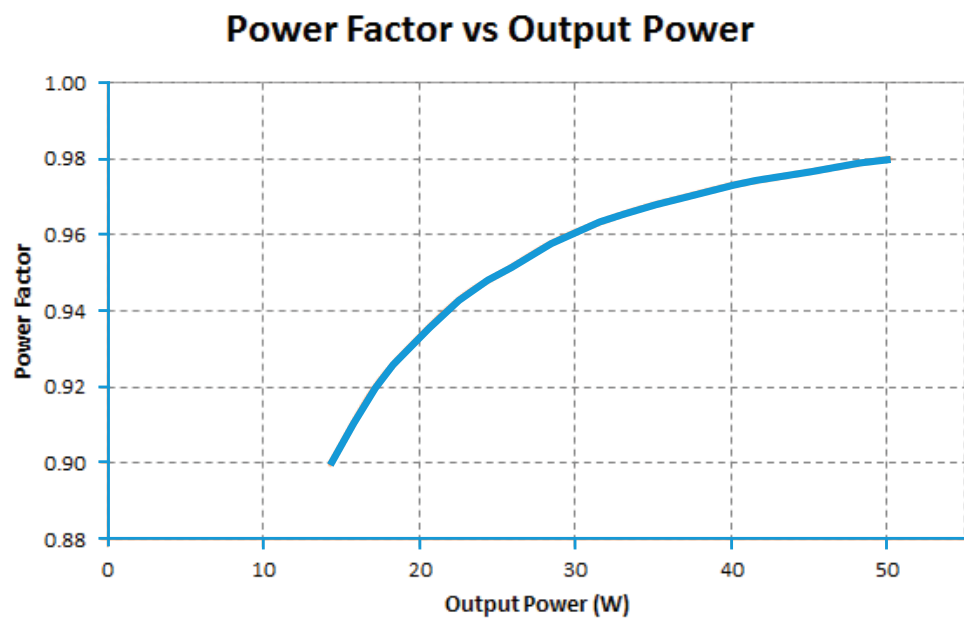
Power Factor vs. Input Voltage (Full Load)



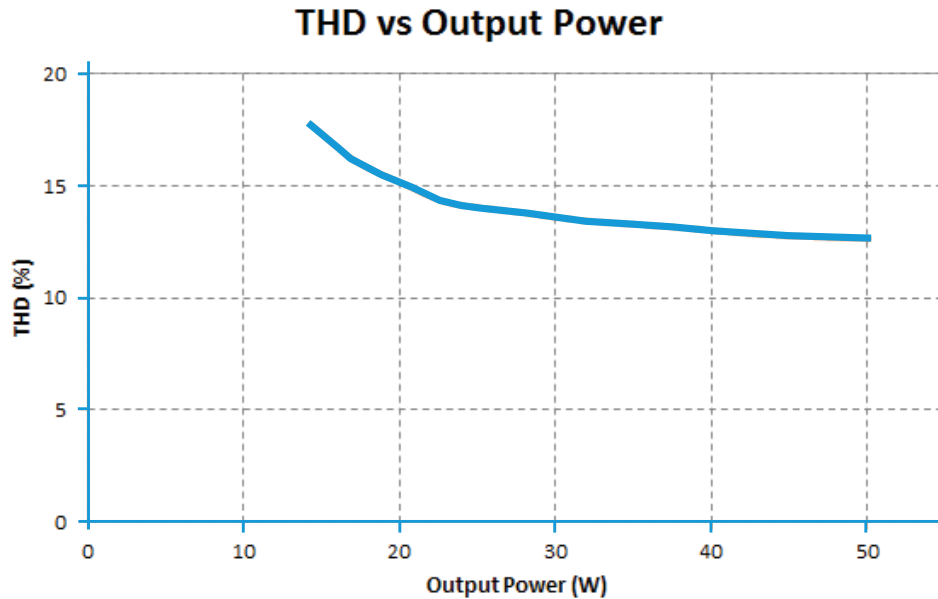
Efficiency vs. Output Voltage



Power Factor vs Load

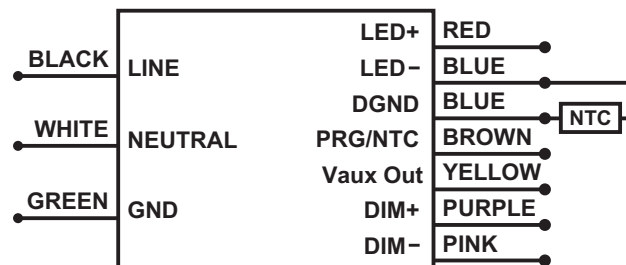


THD vs Load



LED Thermal Protection (NTC) Characteristic

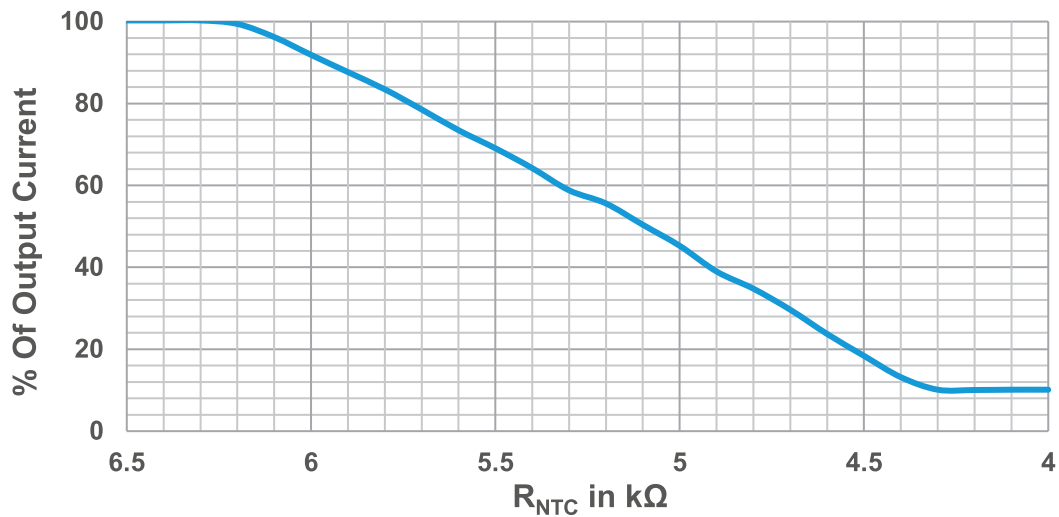
The LED thermal protection feature of the OTi 50W helps reduce the temperature of the LED module by reducing the output current in case of abnormal temperature conditions. To use this feature, a third party NTC thermistor should be connected to the LED power supply as shown in the wiring diagram below.



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 (15k Ω @ 25°C)**. Murata part number for reference only - **NCP03XH223J05RL (22k Ω @ 25°C)**

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

Derating start = 6.3k Ω ; Derating end = 4.3k Ω ; Min output level = 10%



To learn more about this feature, please refer to the technical application guide for [LED Thermal Protection](#) (ECS304).

Constant lumen Maintenance

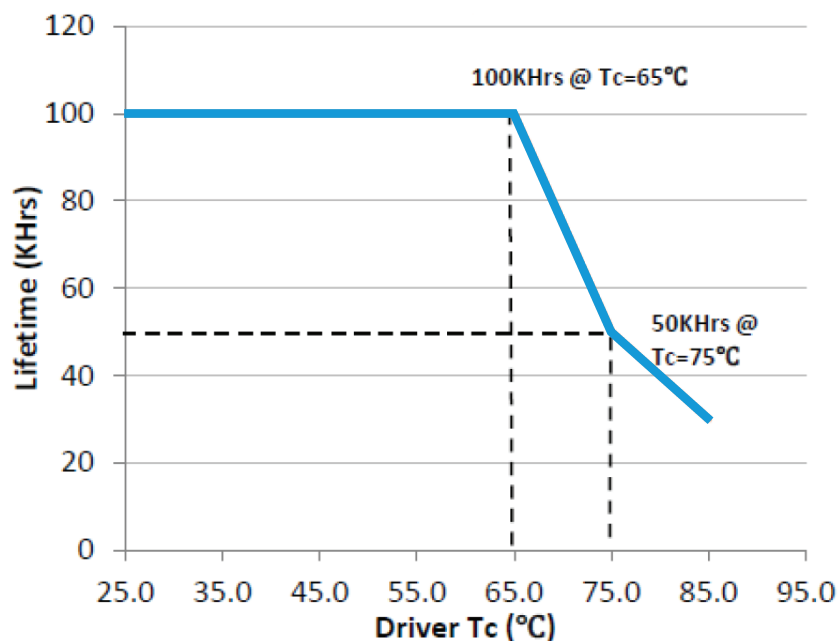
The Constant Lumen Maintenance feature of the OTi 50W helps to maintain the required lumen output of the fixture at a constant level throughout its lifetime. In general, LED's lumen output will depreciate over time and in order to maintain sufficient light level towards the end of lifetime, the LEDs 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: A detailed step-by-step instructions are outlined in the Help section of the OT Programmer software

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.

Lifetime Curve



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

eldoLED
One Lithonia Way
Conyers, GA 30012
United States

+1 877 353 6533

nasupport@eldoLED.com
www.eldoLED.com

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