



Electrical Specifications

General Information

Item Number	*2743Y6 (58287)
Type	Constant Current, Class2
Output Power	50W (per channel and combined)
Programming Tool	*274A17 (51645)
Software	Download

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

Environmental Specifications

Ambient Operating Temperature	-30°C to 40°C
Case Temperature (Tc)	80°C (max)*
Max. Storage Temp.	70°C
Max. Relative Humidity (%)	95% non-condensing
Transient Protection	NEMA SSL-1 2.5kV
UL Rating	Dry & Damp
UL File number	E320395
EMI Compliance	FCC Part 15 Class A
Sound Rating	Class A

* - 5-year warranty at Tc = 75°C



Input

Input Voltage (VAC)	120V-277V (+/- 10%)	
Frequency Range (Hz)	50 - 60 Hz (+/- 10%)	
	120V	277V
Input Current (A)	0.55	0.25
THD @ Full load	<20%	<20%
Power Factor @ Full load	>0.9	>0.9
Efficiency @ Full load	≥84%	≥85%
Inrush Current (Apk)	60 @ 131μs	100 @ 138μs

Output

Output Current (mA)	400 - 1400 mA (Default: 400 mA/channel)
Output Voltage (VDC)	20-48VDC
Output Ripple Current	<25%
Max. Output Power (W)	50W (per channel and combined)
LED Power-Up Time	< 750ms
Load Regulation	<5%
Line Regulation	<5%
Over Voltage Protection	Yes, non-latching
Over Load Protection	Power fold back @ 52W
Output Short-Circuit Protection	Yes, non-latching
Over Temperature Protection	Yes, Foldback at 105°C, Auto Recovery

Dimming

Dimming Control	DALI
Dimming Range	1-100%
Dimming Type	Analog, Log and Linear

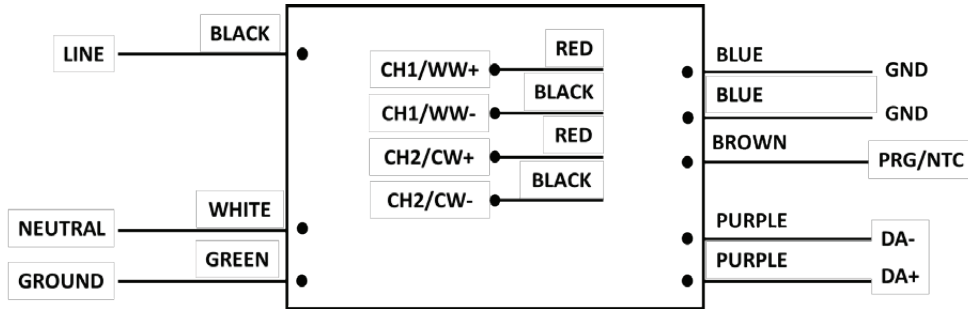
CAUTION: Two power supplies if dimming is connected to non-class 2 circuits.

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

Wiring Diagram



Note: Maximum suggested remote mounting distance is 16 feet.

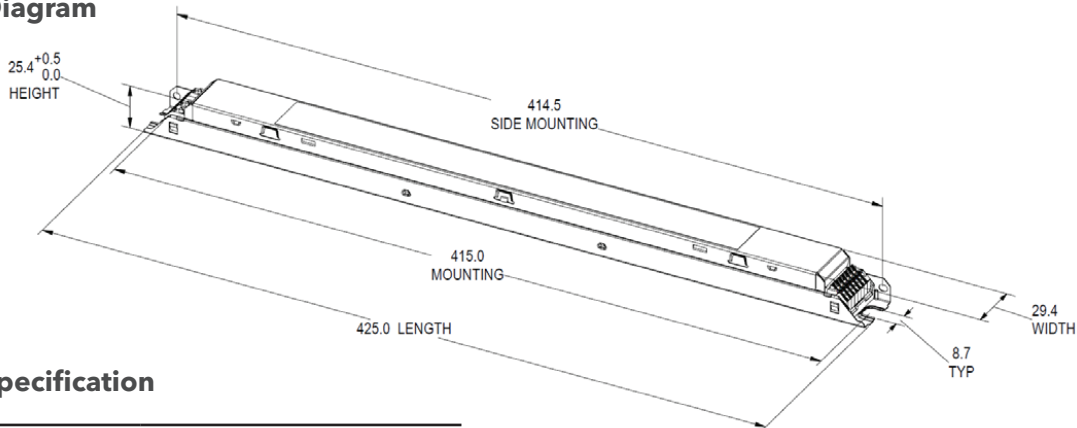
Ordering Guide

Item Number	Original Item Number	Ordering Description
*2743Y6	58287	OTi50W/120-277/1A4/2CH TW L

Key Application Notes

- The default dimming mode is DALI (DEXAL power off).
 - When using the driver with ENCELIUM LMS, the driver must remain in default mode DALI.
 - To power up the Tunable White Wallstation (*2743UY (58289)) from the driver as part of the stand-alone system, select DEXAL mode in OT Programmer.
- DEXAL port is polarity sensitive

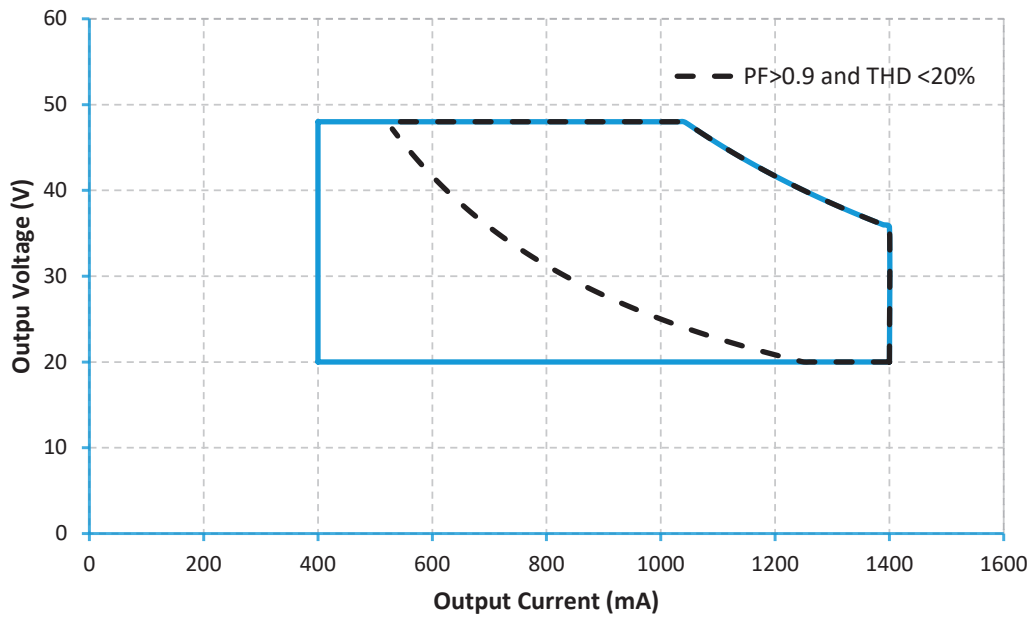
Mechanical Diagram



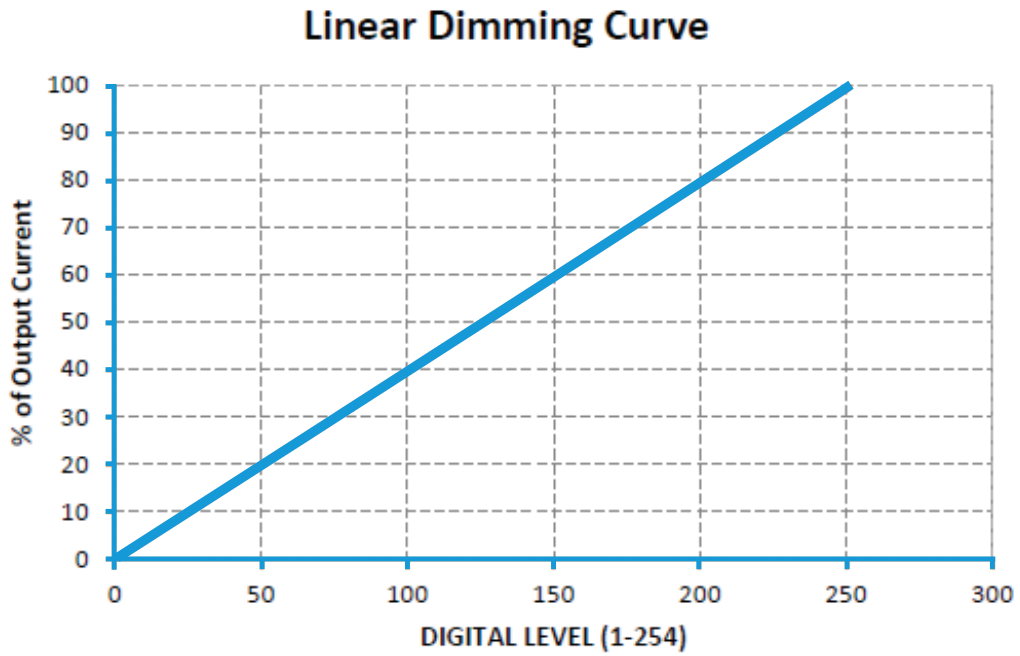
Mechanical Specification

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

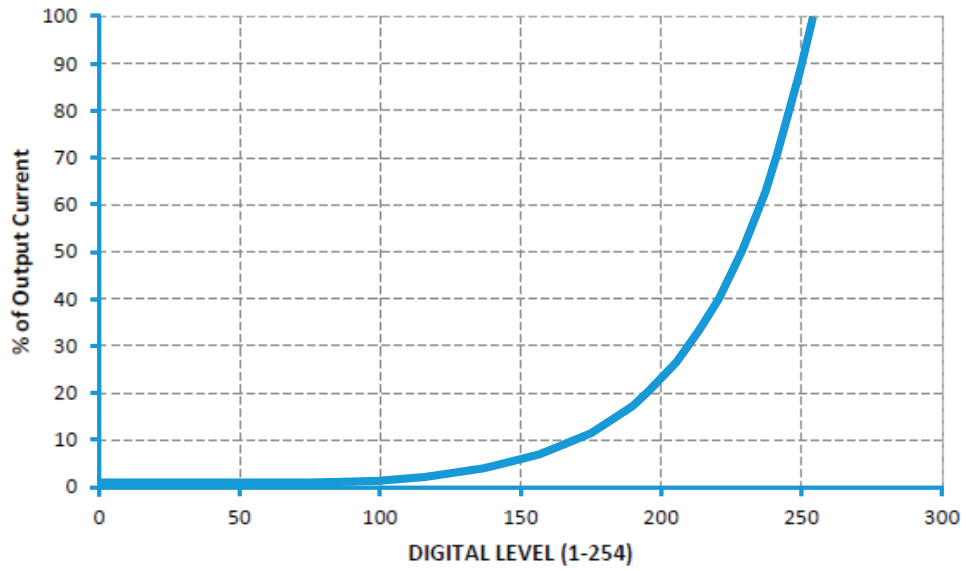
Operating Curve



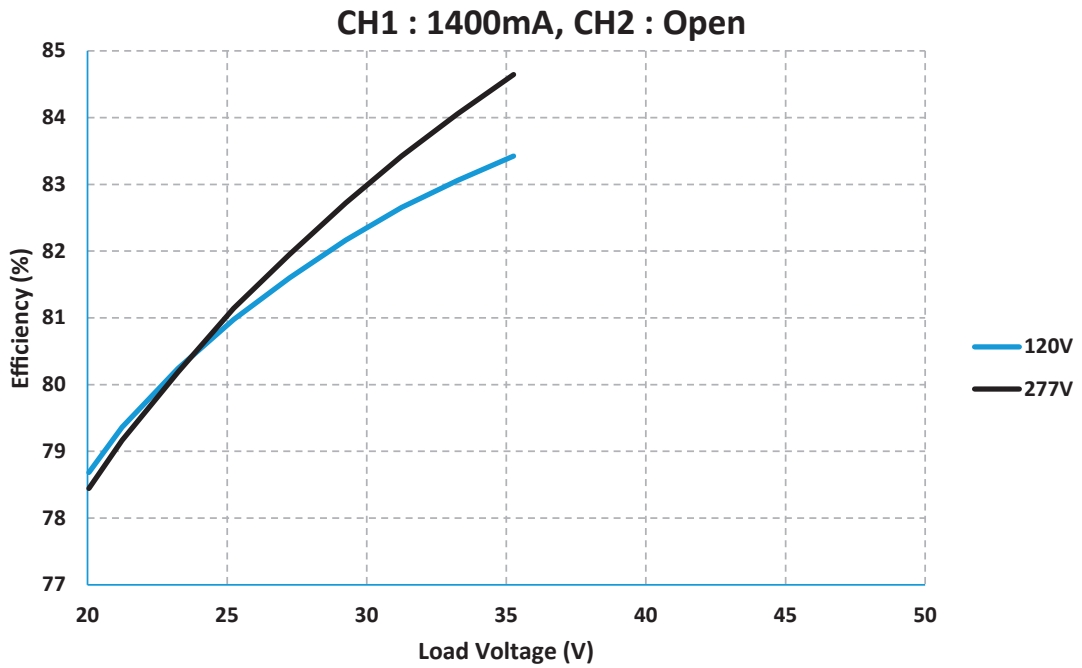
Dimming Curve

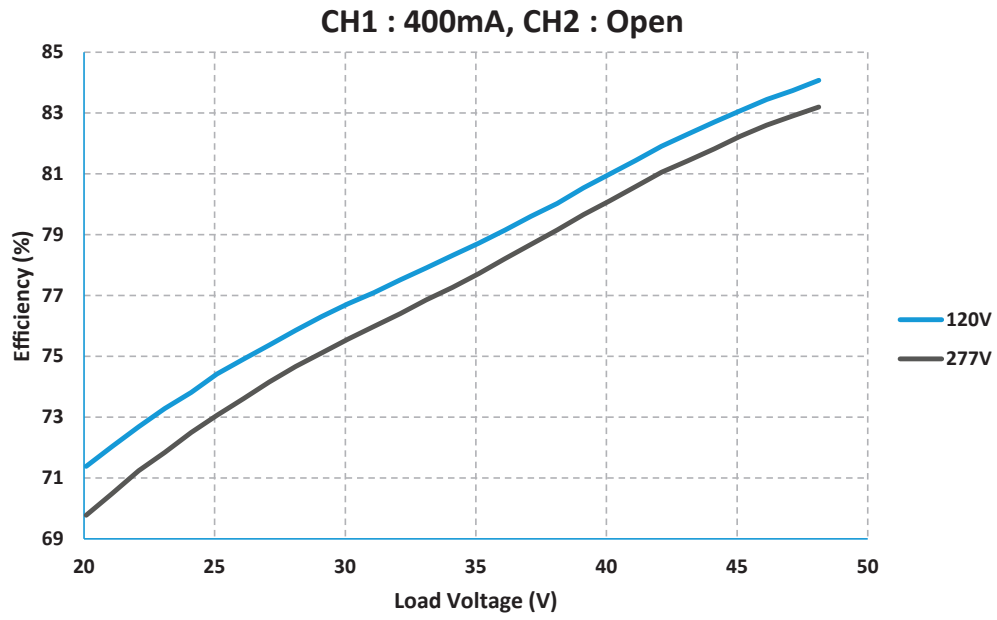


Logarithmic Dimming Curve

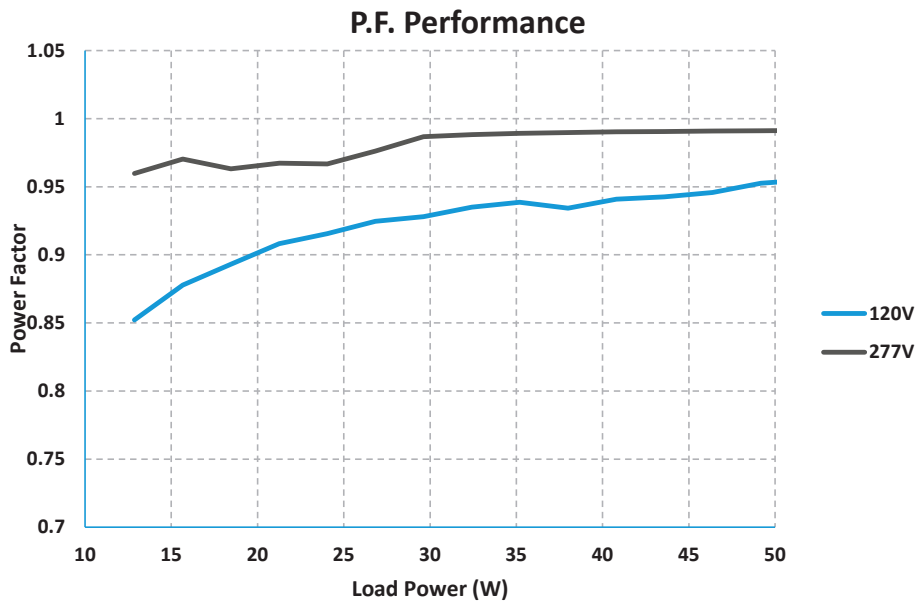


Efficiency vs. Output Voltage

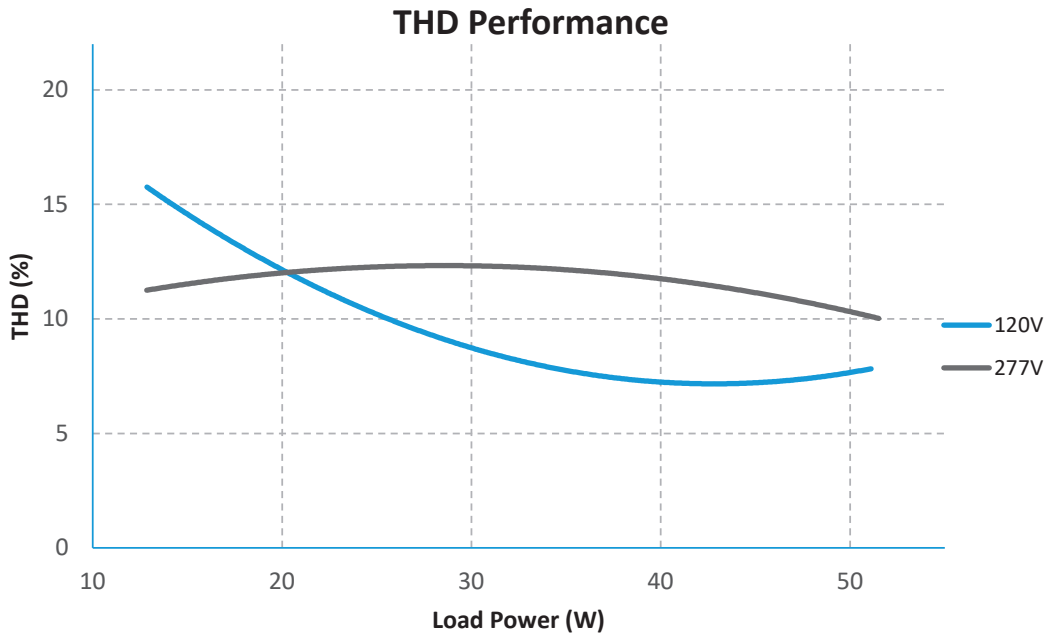




Power Factor Performance



THD Performance



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.

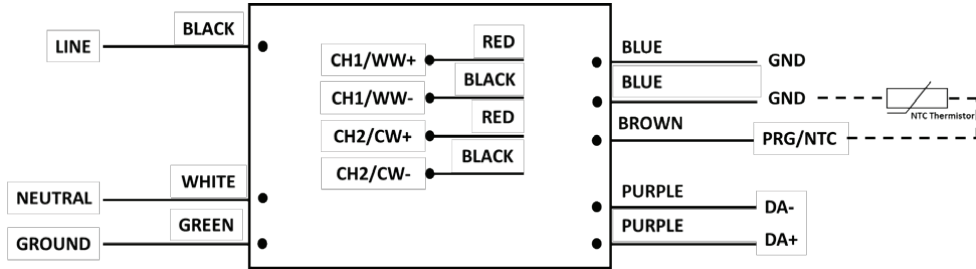
Constant Lumen Maintenance

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 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.

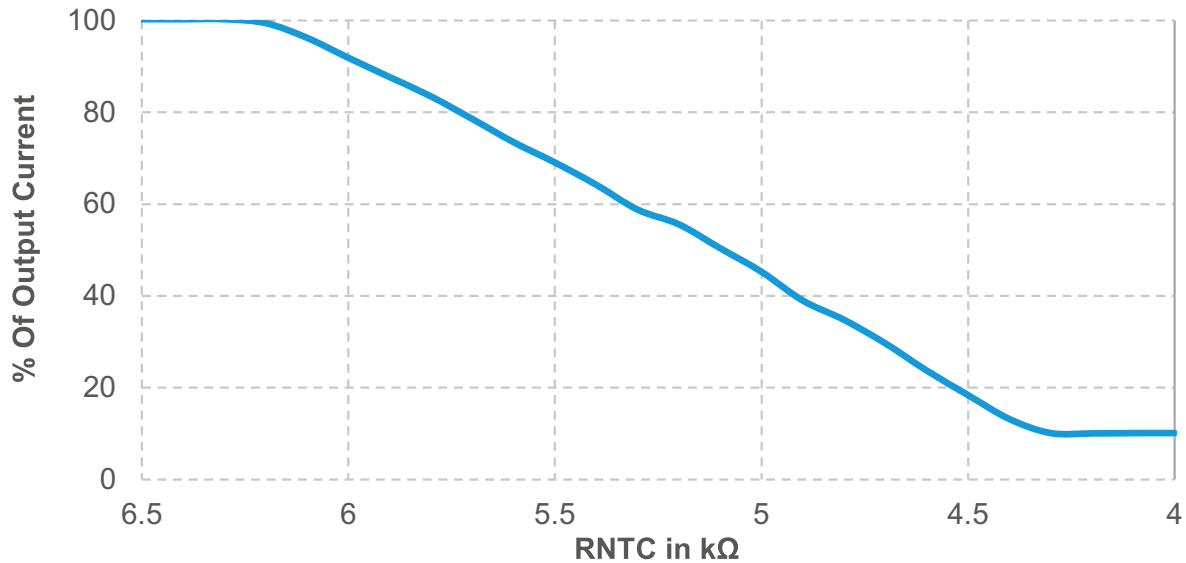
LED Thermal Protection (NTC) Characteristic

The LED thermal protection feature of the OTi50W 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.

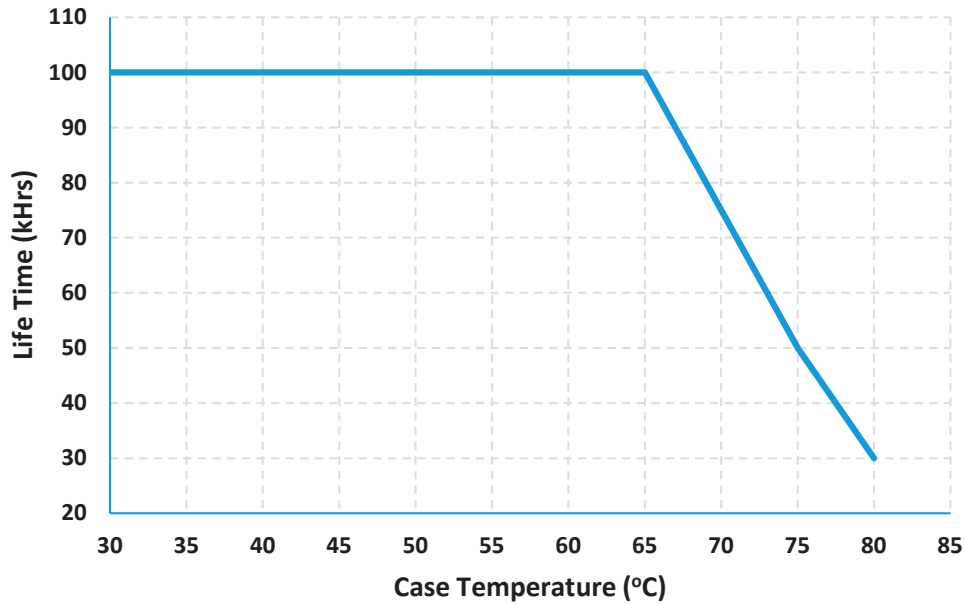


In the end application, care must be taken to place the NTC thermistor close to the hottest spot on the LED module. If LED thermal protection is not required the NTC port on the LED power supply connector can be left open. Vishay, EPCOS, Murata, Panasonic are some of the manufacturers of NTC thermistor. 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](#) (ECS304).

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



Lifetime vs TCase



Inrush Characteristics

Vin (V)	Ipeak (A)	T(@ 50% of Ipeak)
120	60.0	131 μ s
277	100.0	138 μ s

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.