Features

- Inventronics patented metal case (Patent NO.: 201530552645.1)
- High Efficiency (Up to 92.5%)
- Full Power at Wide Output Current Range (Constant Power)
- Adjustable Output Current (AOC) with Potentiometer (ST models)
  Adjustable Output Current (AOC) with Programmability (DT models)
- Isolated 0-10V/10V PWM Dimmable (Only DT models)
- Input Surge Protection: 4kV line-line, 4kV line-earth
- All-Around Protection: OVP, SCP, OTP
- Waterproof (IP65) and UL Dry / Damp / Wet Location
- SELV Output
- TYPE HL, for use in a Class I, Division 2 hazardous (Classified) location
- 5 Years Warranty

Description

The *EUR-320SxxxDT(ST)* series is a 320W, constant-current, AOC LED driver that operates from 90-305 Vac input with excellent power factor. It is designed in round shape and specially created for bay lighting. The high efficiency of these drivers and compact metal case enables them to run cooler, significantly improving reliability and extending product life. To ensure trouble-free operation, protection is provided against input surge, output over voltage, short circuit, and over temperature.

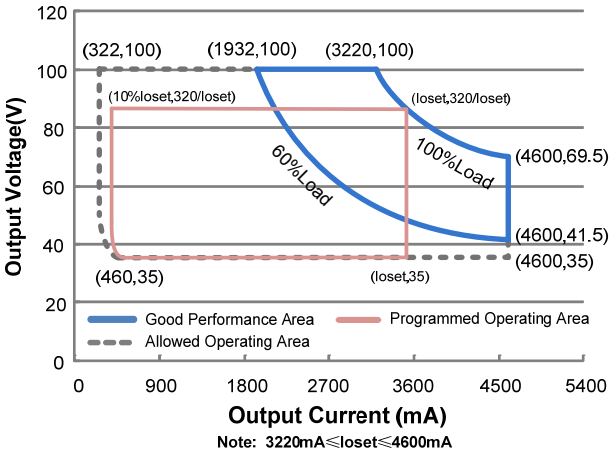
Models

Adjustable Output Current Range	Full-Power Current Range (1)	Default Output Current	Input Voltage Range (2)	Output Voltage Range	Max. Output Power	Typical Efficiency (3)	Power Factor		Model Number (4)
							120Vac	220Vac	
322-4600mA	3220-4600mA	4200 mA	90~305 Vac/ 127~300 Vdc	35~100Vdc	320 W	92.5%	0.99	0.96	EUR-320S460DT
2800-4600mA	3220-4600mA	4200 mA	90~305 Vac/ 127~300 Vdc	35~100Vdc	320 W	92.5%	0.99	0.96	EUR-320S460ST
469-6700mA	4690-6700mA	6700 mA	90~305 Vac/ 127~300 Vdc	24 ~ 68Vdc	320 W	92.5%	0.99	0.96	EUR-320S670DT
4000-6700mA	4690-6700mA	6700 mA	90~305 Vac/ 127~300 Vdc	24 ~ 68Vdc	320 W	92.5%	0.99	0.96	EUR-320S670ST

Notes: (1) Output current range with constant power at 320W
(2) UL, FCC certified input voltage range: 100-277Vac or 127-300Vdc; otherwise 100-240Vac or 127-250Vdc.
(3) Measured at 100% load and 220Vac input (see below “General Specifications” for details).
(4) SELV Output.

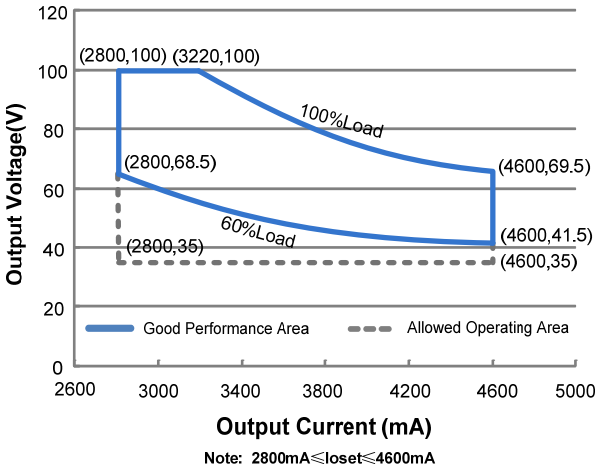
I-V Operation Area

EUR-320S460DT



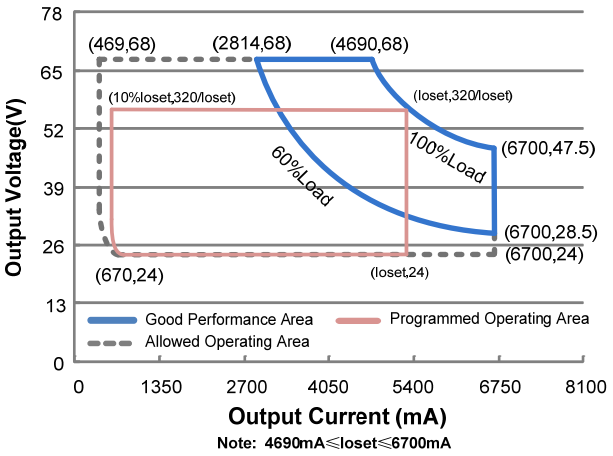
Note: 3220mA≤Ioset≤4600mA

EUR-320S460ST



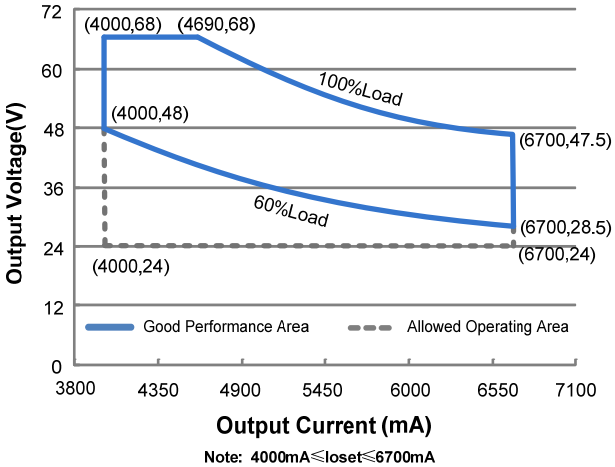
Note: 2800mA≤Ioset≤4600mA

EUR-320S670DT



Note: 4690mA≤Ioset≤6700mA

EUR-320S670ST



Note: 4000mA≤Ioset≤6700mA

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	90 Vac	-	305 Vac	127~300 Vdc
Input Frequency	47 Hz	-	63 Hz	
Leakage Current	-	-	0.75 MIU	UL8750; 277Vac/ 60Hz
	-	-	0.70 mA	IEC60598-1; 240Vac/ 60Hz
Input AC Current	-	-	3.20 A	Measured at 100% load and 120 Vac input.
	-	-	1.70 A	Measured at 100% load and 220 Vac input.
Inrush Current(I^2t)	-	-	1.30 A^2s	At 220Vac input, 25°C cold start, duration=3.92 ms, 10%Ipk-10%Ipk. See Inrush Current Waveform for the details.

Input Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
PF	0.90	-	-	At 100-277Vac, 50-60Hz, 60%-100% Load (192-320W)
THD	-	-	20%	
THD	-	-	10%	At 220-240Vac, 50-60Hz, 75%-100% Load (240-320W)

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%Ioset	-	5%Ioset	At 100% load condition
Output Current Setting(Ioset) Range EUR-320S460DT EUR-320S460ST EUR-320S670DT EUR-320S670ST	 322 mA 2800 mA 469 mA 4000 mA	 - - - -	 4600 mA 4600 mA 6700 mA 6700 mA	
Output Current Setting Range with Constant Power EUR-320S460DT EUR-320S460ST EUR-320S670DT EUR-320S670ST	 3220 mA 3220 mA 4690 mA 4690 mA	 - - - -	 4600 mA 4600 mA 6700 mA 6700 mA	
Total Output Current Ripple (pk-pk)	-	5%Iomax	10%Iomax	At 100% load condition. 20 MHz BW
Output Current Ripple at < 200 Hz (pk-pk)	-	2%Iomax	-	At 100% load condition. Only this component of ripple is associated with visible flicker.
Startup Overshoot Current	-	-	10%Iomax	At 100% load condition
No Load Output Voltage EUR-320S460DT/ST EUR-320S670DT/ST	 - -	 - -	 120 V 85 V	
Line Regulation	-	-	±0.5%	Measured at 100% load
Load Regulation	-	-	±1.5%	
Turn-on Delay Time	-	-	1.0 s	Measured at 120Vac input, 60%-100% Load
	-	-	0.5 s	Measured at 220Vac input, 60%-100% Load
Temperature Coefficient of Ioset	-	0.03%/°C	-	Case temperature = 0°C ~Tc max
12V Auxiliary Output Voltage	10.8 V	12 V	13.2 V	
12V Auxiliary Output Source Current	0 mA	-	20 mA	Return terminal is “Dim−“

Note: All specifications are typical at 25°C unless otherwise stated.

General Specifications

Parameter	Min.	Typ.	Max.	Notes
Efficiency at 120 Vac input: EUR-320S460DT/ST Io=3220 mA Io=4600 mA EUR-320S670DT/ST Io=4690 mA Io=6700 mA	 88.00% 87.00% 88.00% 87.00%	 90.00% 89.00% 90.00% 89.00%	 - - - -	Measured at 100% load and steady-state temperature in 25°C ambient; (Efficiency will be about 2.0% lower if measured immediately after startup.)
Efficiency at 220 Vac input: EUR-320S460DT/ST Io=3220 mA Io=4600 mA EUR-320S670DT/ST Io=4690 mA Io=6700 mA	 90.50% 90.00% 90.50% 89.50%	 92.50% 92.00% 92.50% 91.50%	 - - - -	Measured at 100% load and steady-state temperature in 25°C ambient; (Efficiency will be about 2.0% lower if measured immediately after startup.)
Efficiency at 277 Vac input: EUR-320S460DT/ST Io=3220 mA Io=4600 mA EUR-320S670DT/ST Io=4690 mA Io=6700 mA	 90.00% 90.00% 90.50% 90.00%	 92.00% 92.00% 92.50% 92.00%	 - - - -	Measured at 100% load and steady-state temperature in 25°C ambient; (Efficiency will be about 2.0% lower if measured immediately after startup.)
MTBF	-	294,000 Hours	-	Measured at 220Vac input, 80%Load and 25°C ambient temperature (MIL-HDBK-217F)
Lifetime	-	75,000 Hours	-	Measured at 220Vac input, 80%Load and 70°C case temperature; See lifetime vs. Tc curve for the details
Operating Case Temperature for Safety Tc_s	-40°C	-	+83°C	
Operating Case Temperature for Warranty Tc_w	-40°C	-	+75°C	Case temperature for 5 years warranty
Storage Temperature	-40°C	-	+85°C	Humidity: 5%RH to 100%RH
Dimensions Inches (Ø × H) Millimeters (Ø × H)	Ø7.48 x 3.13 Ø190 x 79.6			
Net Weight	-	2280 g	-	

Note: All specifications are typical at 25°C unless otherwise stated.

Dimming Specifications

Parameter		Min.	Typ.	Max.	Notes
Absolute Maximum Voltage on the Vdim (+) Pin		-20 V	-	20 V	
Source Current on Vdim (+)Pin		200 uA	300 uA	450 uA	Vdim(+) = 0 V
Dimming Output Range	EUR-320S460DT EUR-320S670DT	10%Ioset	-	Ioset	3220 mA ⩽ Ioset ⩽ 4600 mA 4690 mA ⩽ Ioset ⩽ 6700 mA
	EUR-320S460DT EUR-320S670DT	322 mA 469 mA	-	Ioset	322 mA ⩽ Ioset < 3220 mA 469 mA ⩽ Ioset < 4690 mA
Recommended Dimming Input Range		0 V	-	10 V	Default 0-10V dimming mode.

Dimming Specifications (Continued)

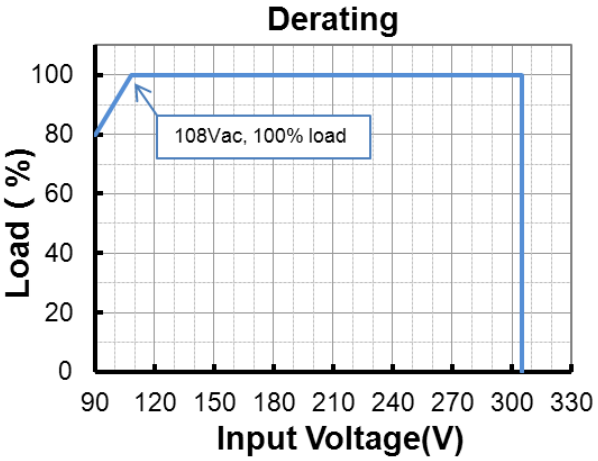
Parameter	Min.	Typ.	Max.	Notes
PWM_in High Level	-	10V	-	Dimming mode set to PWM in PC interface.
PWM_in Low Level	-	0V	-	
PWM_in Frequency Range	200 Hz	-	2 KHz	
PWM_in Duty Cycle	0%	-	100%	

Safety & EMC Compliance

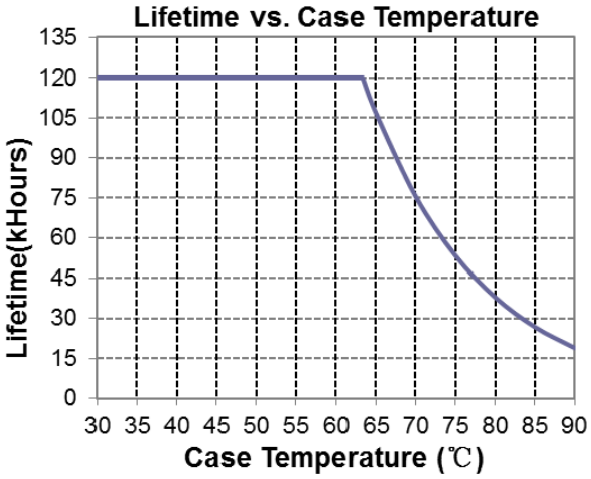
Safety Category	Standard
UL/CUL	UL 8750, CAN/CSA-C22.2 No. 250.13
CE	EN 61347-1, EN61347-2-13
EMI Standards	**Notes**
EN 55015(1)	Conducted emission Test &Radiated emission Test
EN 61000-3-2	Harmonic current emissions
EN 61000-3-3	Voltage fluctuations & flicker
FCC Part 15(1)	ANSI C63.4 Class B
	This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: [1] this device may not cause harmful interference, and [2] this device must accept any interference received, including interference that may cause undesired Operation.
EMS Standards	**Notes**
EN 61000-4-2	Electrostatic Discharge (ESD): 8 kV air discharge, 4 kV contact discharge
EN 61000-4-3	Radio-Frequency Electromagnetic Field Susceptibility Test-RS
EN 61000-4-4	Electrical Fast Transient / Burst-EFT
EN 61000-4-5	Surge Immunity Test: AC Power Line: line to line 4 kV, line to earth 4kV
EN 61000-4-6	Conducted Radio Frequency Disturbances Test-CS
EN 61000-4-8	Power Frequency Magnetic Field Test
EN 61000-4-11	Voltage Dips
EN 61547	Electromagnetic Immunity Requirements Applies To Lighting Equipment

Note: (1) This LED driver meets the EMI specifications above, but EMI performance of a luminaire that contains it depends also on the other devices connected to the driver and on the fixture itself.

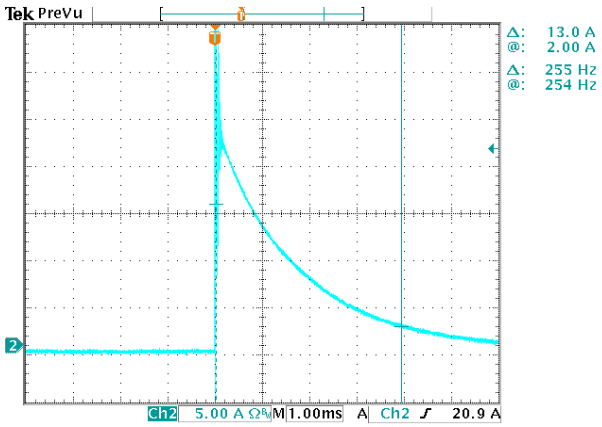
Derating



Lifetime vs. Case Temperature

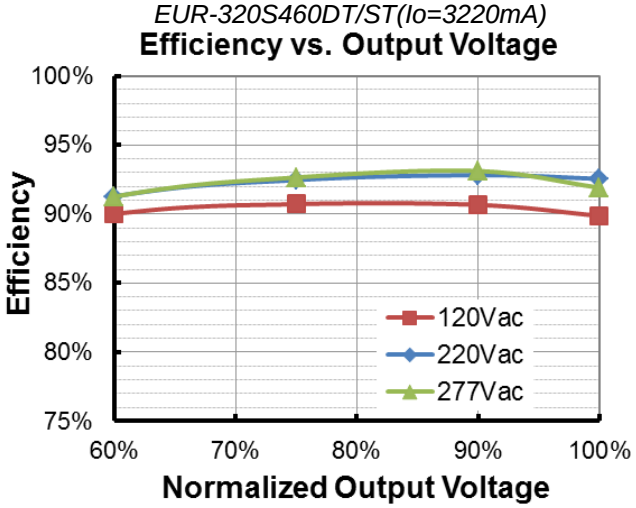


Inrush Current Waveform

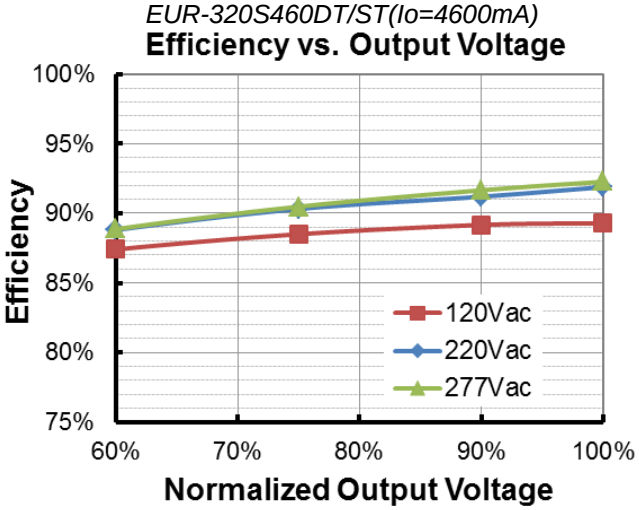


Efficiency vs. Load

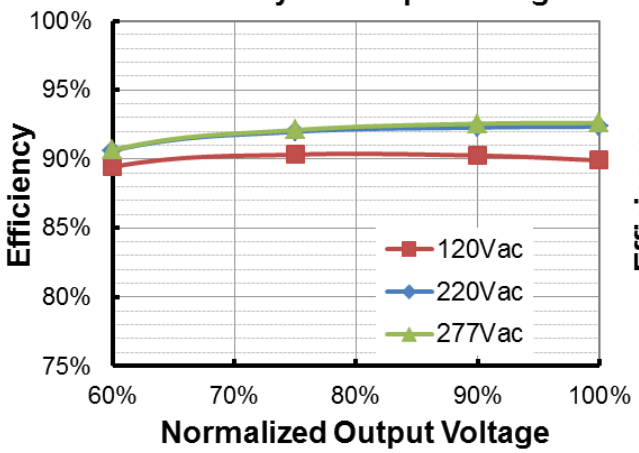
EUR-320S460DT/ST(Io=3220mA)



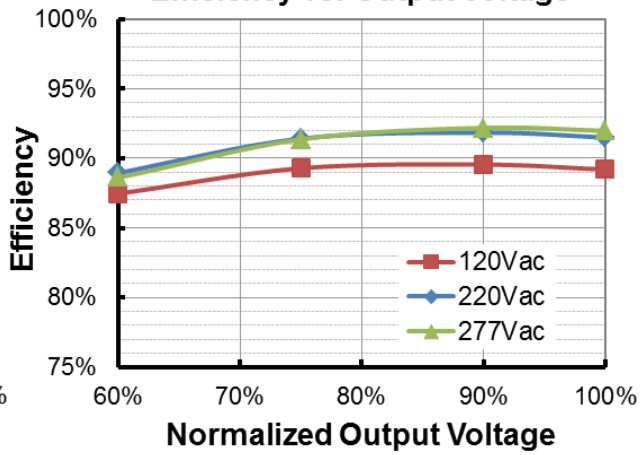
EUR-320S460DT/ST(Io=4600mA)



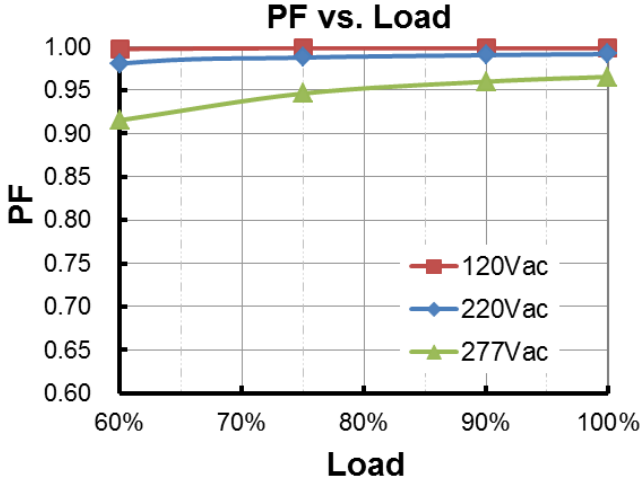
EUR-320S670DT/ST(Io=4690mA)



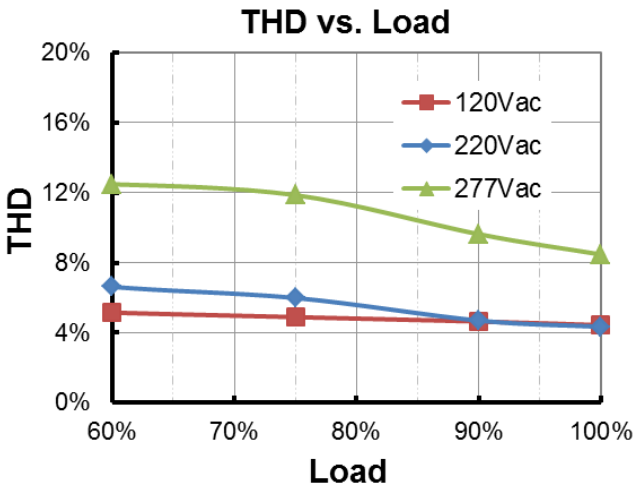
EUR-320S670DT/ST(Io=6700mA)



Power Factor



Total Harmonic Distortion



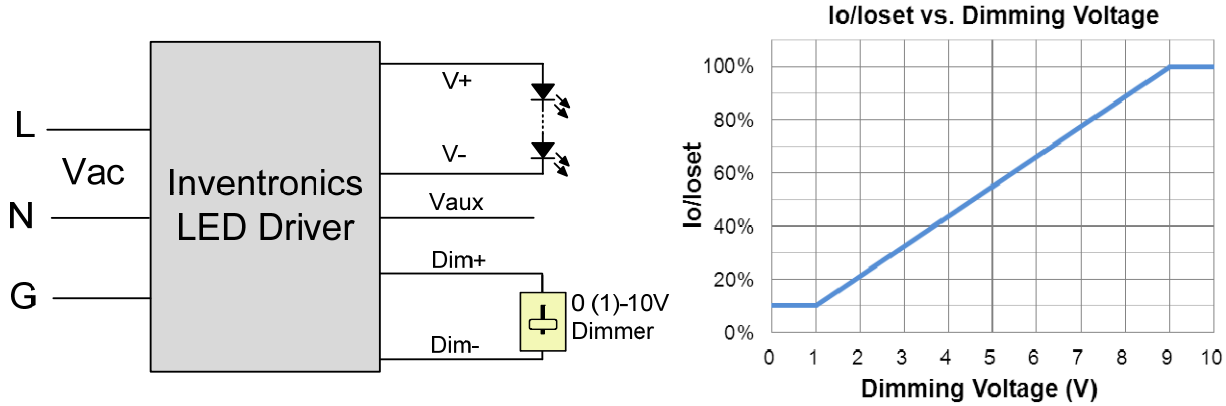
Protection Functions

Parameter	Notes
Over Temperature Protection	Decreases output current, returning to normal after over temperature is removed.
Short Circuit Protection	Auto Recovery. No damage will occur when any output is short circuited. The output shall return to normal when the fault condition is removed.
Over Voltage Protection	Limits output voltage at no load and in case the normal voltage limit fails.

Dimming

- **0-10V Dimming (Only DT models)**

The recommended implementation of the dimming control is provided below.



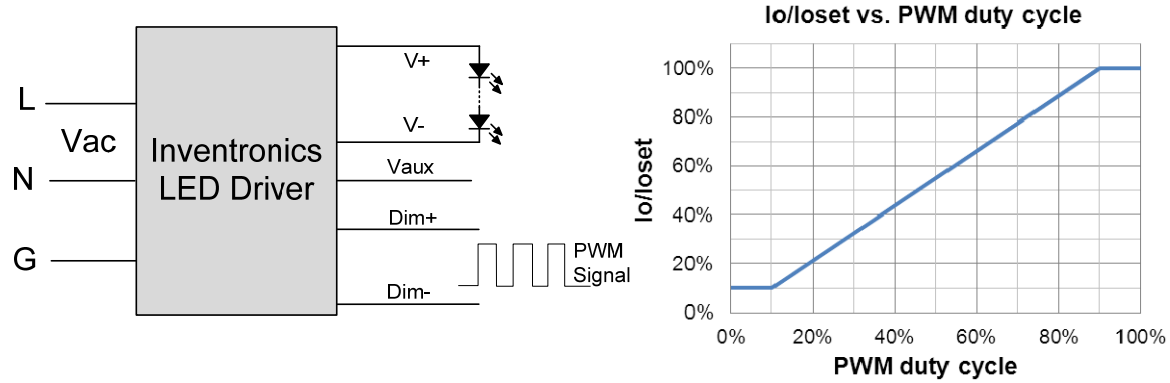
Implementation 1: Positive logic

Notes:

1. The dimmer can also be replaced by an active 0-10V voltage source signal or passive components like resistors and zener.
2. If 0-10V dimming is not used, Dim + should be open.

- **10V PWM Dimming (Only DT models)**

The recommended implementation of the dimming control is provided below.

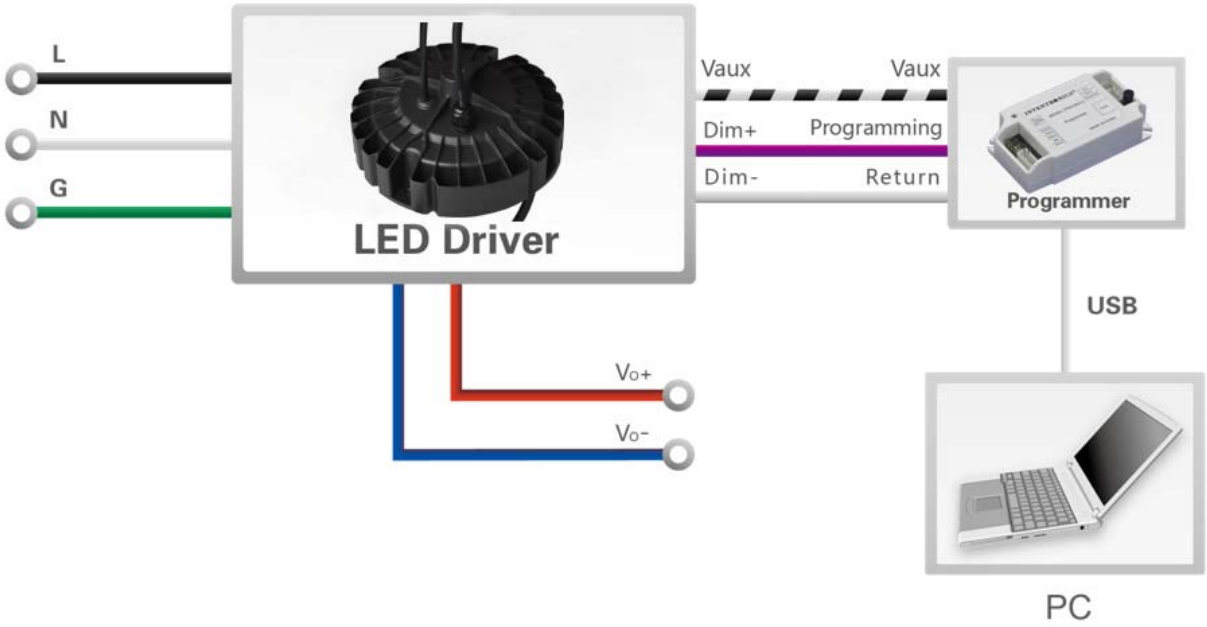


Implementation 2: Positive logic

Notes:

1. If PWM dimming is not used, Dim + should be open.

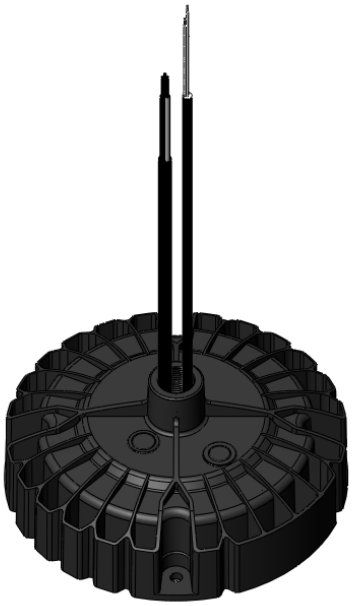
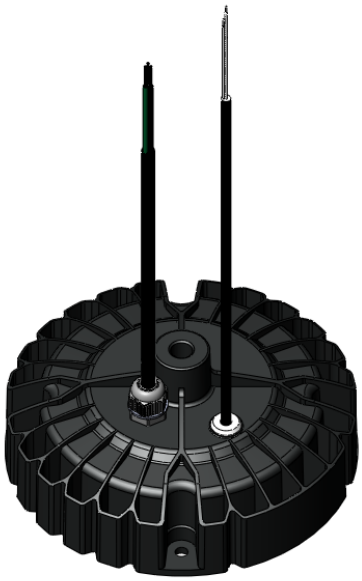
Programming Connection Diagram (Only DT models)



Note: The driver does not need to be powered on during the programming process.

- **Please refer to PRG-MUL2 Multi-Programmer datasheet for details.**

Installations

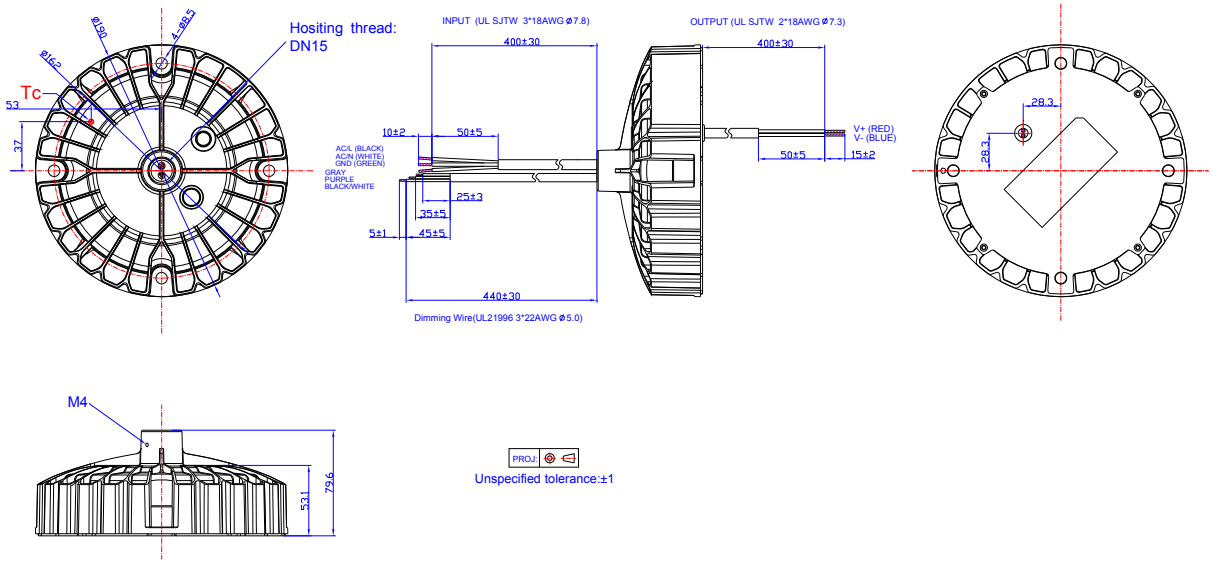
Part Number Suffix	-0000	-0001
Product Type	Center Wire Feed	Outside Wire Feed
Product Appearance		
Installation Type		

Caution:

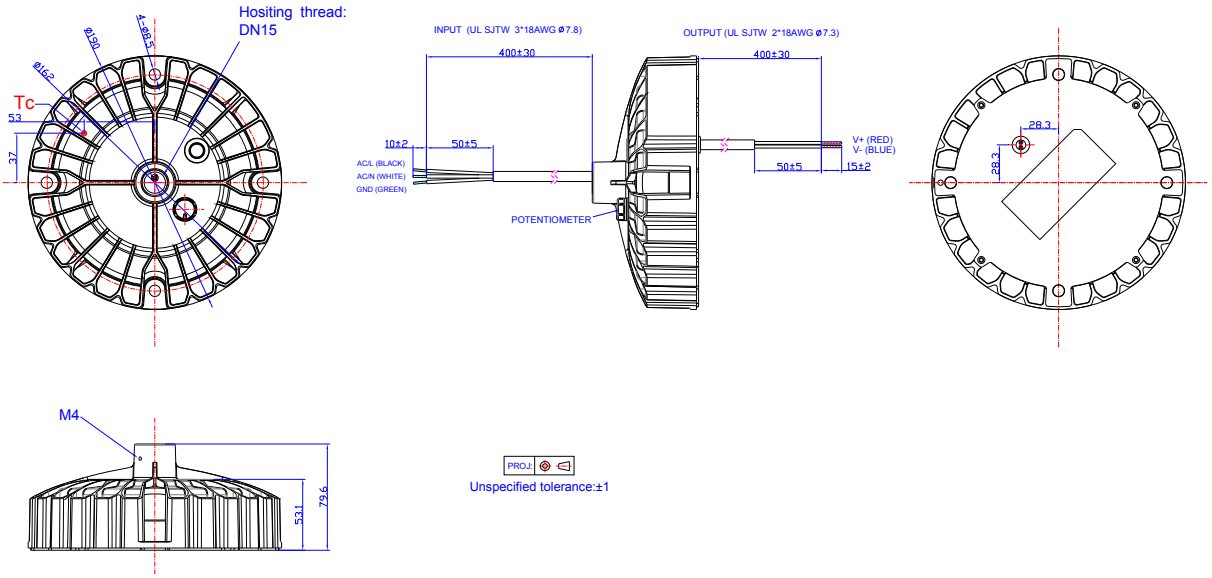
1. Complete visual inspection prior to assembly to insure driver is received in proper condition.
2. Thread length for mounting accessory (hook, ring, etc.) should be 16-22mm. After mounting accessory (hook, ring, etc.) is installed an M4 set screw should be secured in the open location on the driver collar.
3. Maximum weight of combined luminaire/driver assembly should not exceed 16.5Kg.

Mechanical Outline

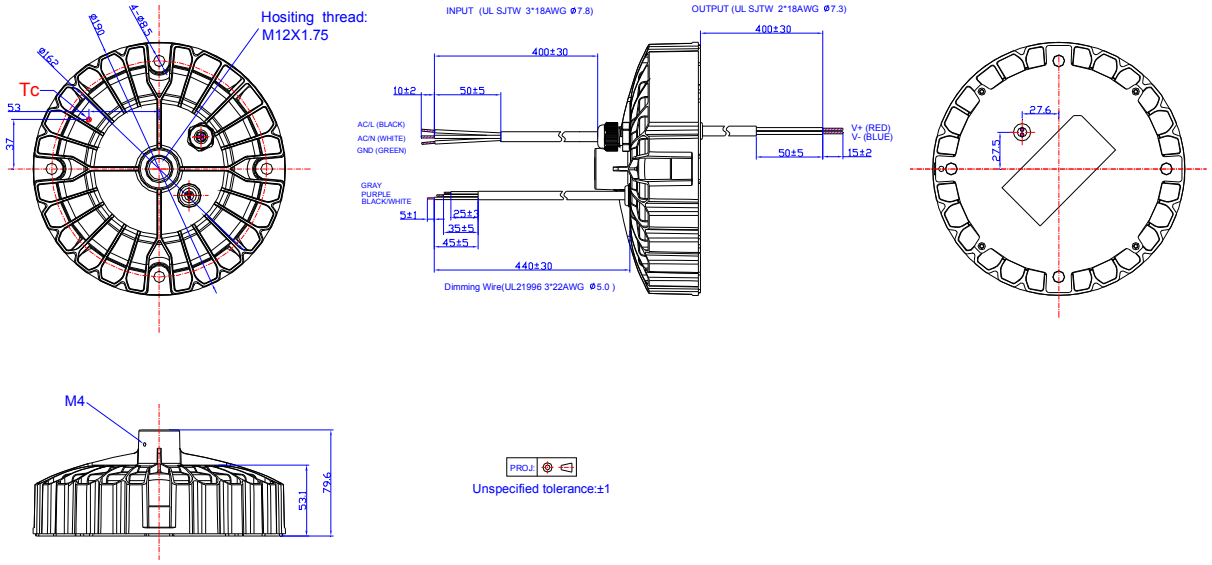
EUR-320SxxxDT-0000



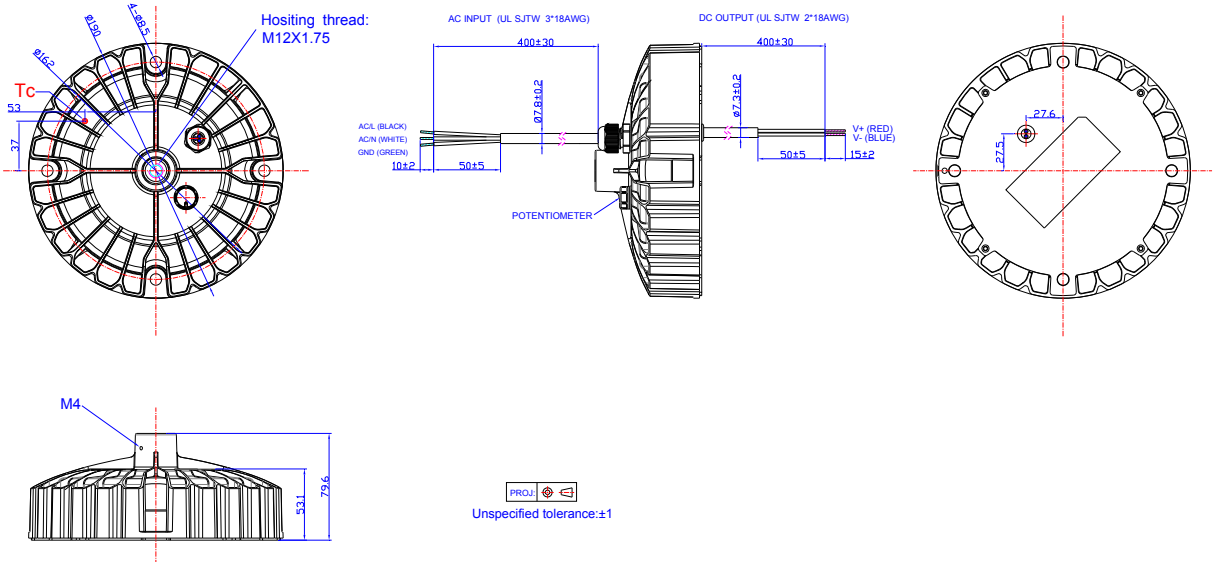
EUR-320SxxxST-0000



EUR-320SxxxDT-0001



EUR-320SxxxST-0001



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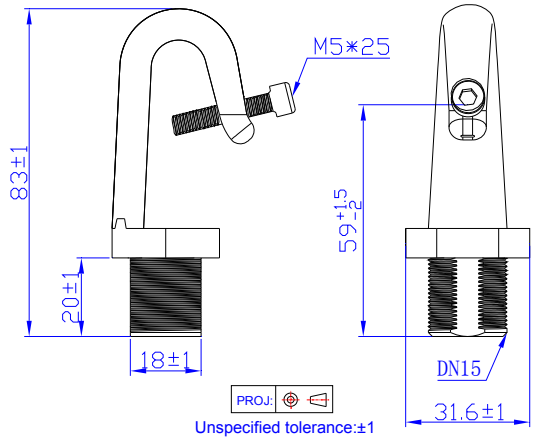
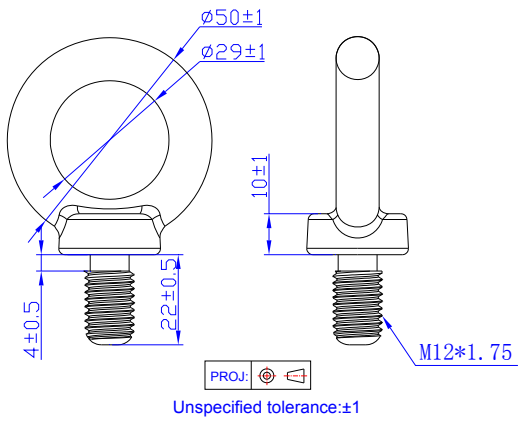
Optional Metal Parts

HKK-D1500



BLT-M1200



RoHS Compliance

Our products comply with the European Directive 2011/65/EC, calling for the elimination of lead and other hazardous substances from electronic products.

Revision History

Change Date	Rev.	Description of Change		
		Item	From	To
2019-01-09	A	Datasheets Release	/	/