Features

- High Efficiency (Up to 92.5%)
- Constant Current Output
- Compact Package Design
- 0-10V Dimming Control
- Lightning Protection
- All-Around Protection: OVP, SCP, OTP
- Waterproof (IP67)
- Class II, Double Insulation
- SELV Output

Description

The *EUC-150SxxxDDA(SDA)* series is a 150W, constant-current LED driver that operates from 90-305 Vac input with excellent power factor. It is created for many lighting applications including high bay, tunnel and roadway. 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 over voltage, short circuit, and over temperature.

Models

Output Current	Input Voltage Range(1)	Output Voltage Range	Max. Output Power	Typical Efficiency (2)	Power Factor		Model Number
					120Vac	220Vac	
700 mA	90~305 Vac	107~214 Vdc	150 W	92.5%	0.99	0.95	EUC-150S070DDA(SDA)
1400 mA	90~305 Vac	53~107 Vdc	150 W	92.5%	0.99	0.95	EUC-150S140DDA(SDA)(3)

Notes: (1) Certificated input Voltage range100-240Vac.
(2) Measured at 100% load and 220 Vac input.
(3) SELV Output.

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	90 Vac	-	305 Vac	
Input Frequency	47 Hz	-	63 Hz	
Leakage Current	-	-	0.7 mA	IEC60598-1; 240Vac/ 60Hz
Input AC Current	-	-	1.8 A	Measured at 100% load and 100Vac input.
	-	-	0.9 A	Measured at 100% load and 220Vac input.
Inrush current	-	-	75 A	At 220Vac input, 25 ℃ cold start, duration=1.7 ms, 10%Ipk-10%Ipk.
Inrush current(I^2t)	-	-	3.5 A^2s	
PF	0.90	-	-	At 100-277Vac, 50-60Hz, 75%-100% load (112.5-150W)
THD	-	-	20%	

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%Io	-	5%Io	100% load
No-load Output Voltage EUC-150S070DDA(SDA) EUC-150S140DDA(SDA)	 218 V 112 V	 225 V 115 V	 236 V 118 V	
Output Current Ripple (pk-pk)	-	10%Io	15%Io	100% load
Output Current Overshoot / Undershoot	-	-	10%	100% load
Line Regulation	-	-	±1%	100% load
Load Regulation	-	-	±3%	
Turn-on Delay Time	-	1.0 s	2.0 s	Measured at 120Vac and 220Vac input.
Temperature Coefficient	-	0.03%/°C	-	Case temperature = 0°C ~Tc max

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

General Specifications

Parameter	Min.	Typ.	Max.	Notes
Efficiency at 120 Vac input: EUC-150S070DDA(SDA) EUC-150S140DDA(SDA)	 88.0% 88.0%	 90.0% 90.0%	 - -	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: EUC-150S070DDA(SDA) EUC-150S140DDA(SDA)	 90.5% 90.0%	 92.5% 92.0%	 - -	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: EUC-150S070DDA(SDA) EUC-150S140DDA(SDA)	 90.5% 90.5%	 92.5% 92.5%	 - -	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	-	383,000 Hours	-	Measured at 120Vac input, 80%Loadand 25°C ambient temperature(MIL-HDBK-217F)
Lifetime	-	120,000 Hours	-	Measured at 220Vac input, 80%Loadand 60°C case temperature; See life time vs. Tc curve for the details
Operating Case Temperature for Safety Tc_s	-40°C	-	+90°C	
Operating Case Temperature for Warranty Tc_w	-40°C	-	+75°C	
Storage Temperature	-40°C	-	+90°C	Humidity: 5%RH to 100%RH
Dimensions Inches (L × W × H) Millimeters (L × W ×H)	 7.83 × 2.66 × 1.56 199 × 67.5 ×39.5			With mounting ear 8.90 × 2.66 × 1.56 226 × 67.5 ×39.5
Net Weight	-	1000 g	-	

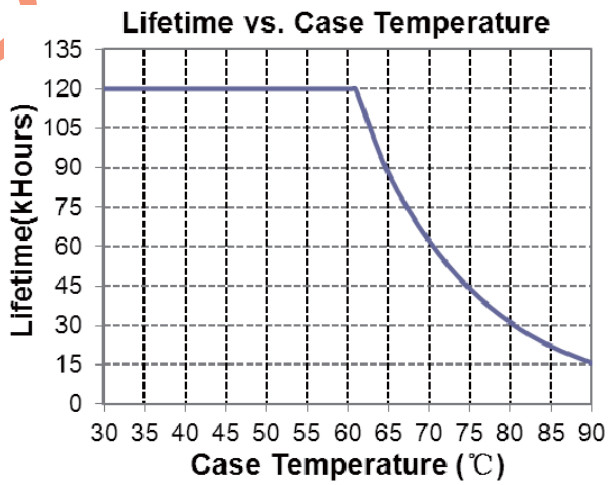
Note: All specifications are typical at 25°C unless stated otherwise.

Safety &EMC Compliance

Safety Category	Standard
CE	EN 61347-1(1), EN61347-2-13
Performance	**Standard**
ENEC	EN 62384
EMI Standards	**Notes**
EN 55015(2)	Conducted emission Test &Radiated emission Test
EN 61000-3-2	Harmonic Current Emissions
EN 61000-3-3	Voltage Fluctuations &Flicker
EMS Standards	**Notes**
EN 61000-4-2	Electrostatic Discharge(ESD): 8kV air discharge, 4kV 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
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 product meets all requirements for EN 61347-1, Annex O (Double insulation). However, the allowed leakage current could cause a mild shock if the case is touched while energized.
(2) 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.

Lifetime vs. Case Temperature Curve



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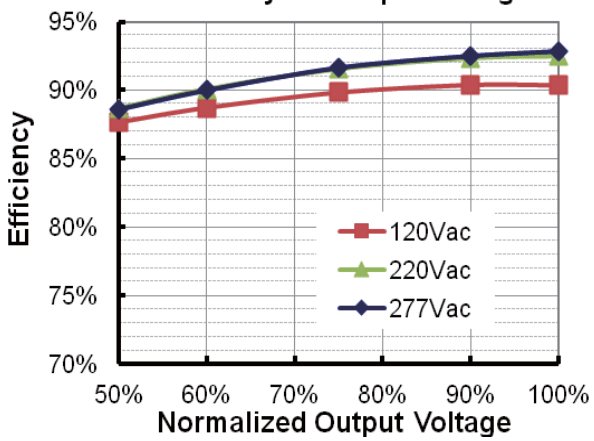
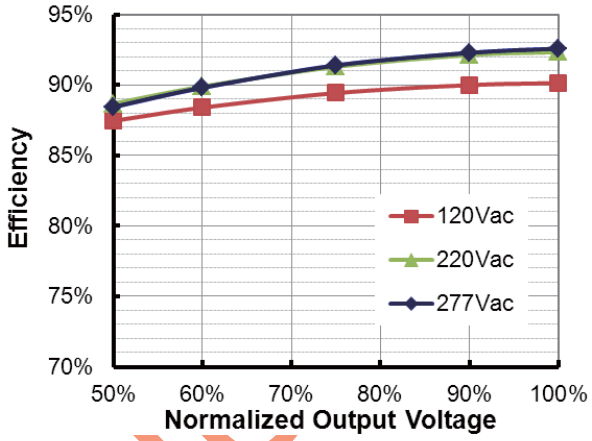
Efficiency vs. Load

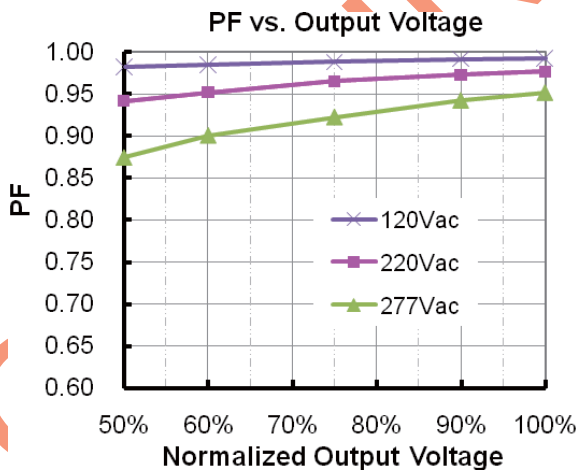
EUC-150S070DDA(SDA)



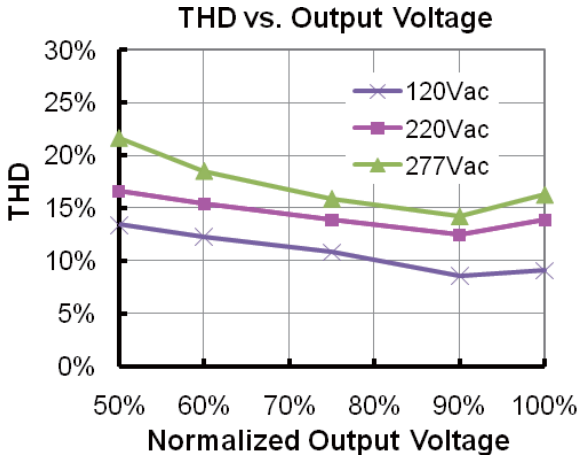
EUC-150S140DDA(SDA)



Power Factor Characteristics



Total Harmonic Distortion



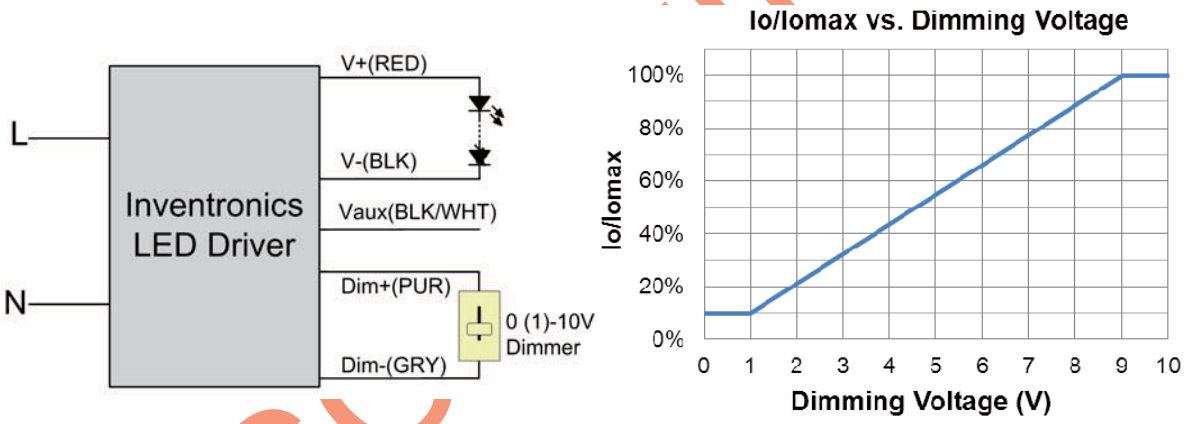
Protection Functions

Parameter	Notes
Short Circuit Protection	No damage should occur due to any output operating under a short circuit condition. The power supply will self-recover once the fault condition is removed.
Over Temperature Protection	Decrease output current mode. When the case temperature reaches 120±10℃, the output current decreases to 50%Io until the case temperature reaches 75℃.

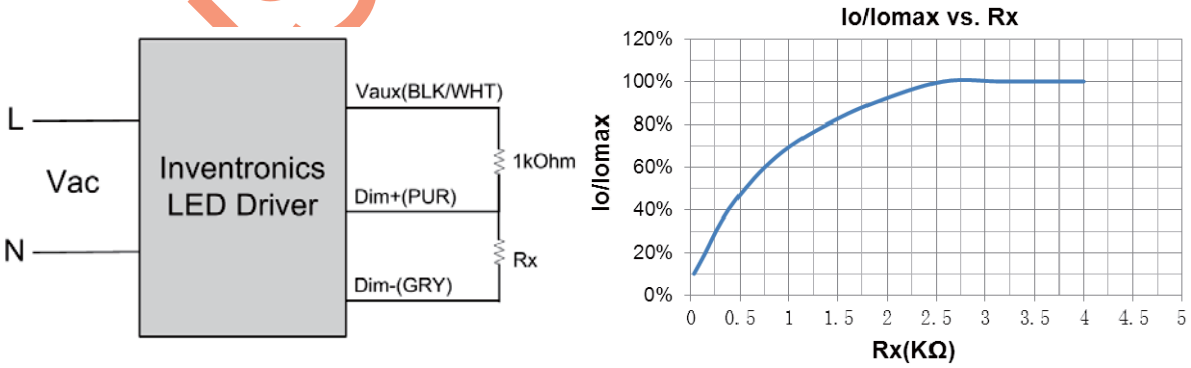
Dimming Control

Parameter	Min.	Typ.	Max.	Notes
12V output voltage (Vaux)	10V	12 V	13 V	
Vaux source current	-	-	20 mA	
Absolute maximum voltage Range on the 0~10V input pin	-20 V	-	20 V	
Source current on 0~10V input pin	100 uA	140 uA	180 uA	

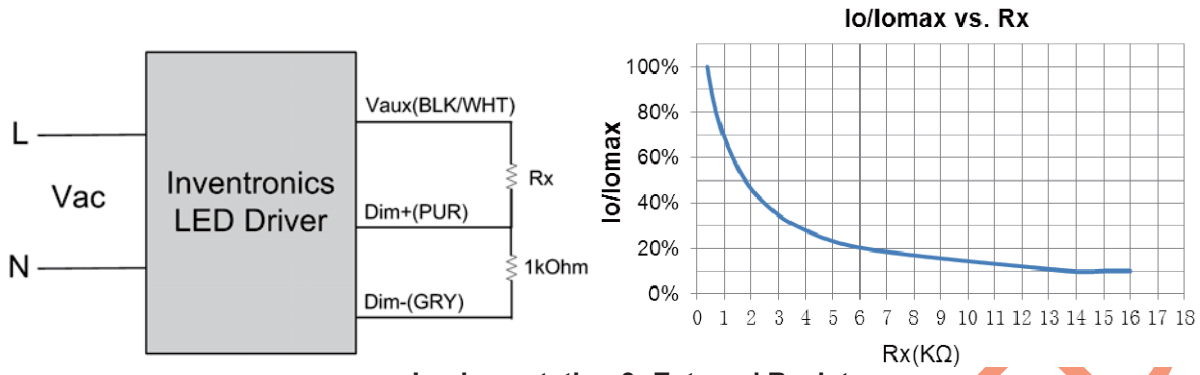
The dimmer control is operated from an input signal of 0-10 Vdc. Recommended implementations are provided below.



Implementation 1: DC Input



Implementation 2: External Resistor



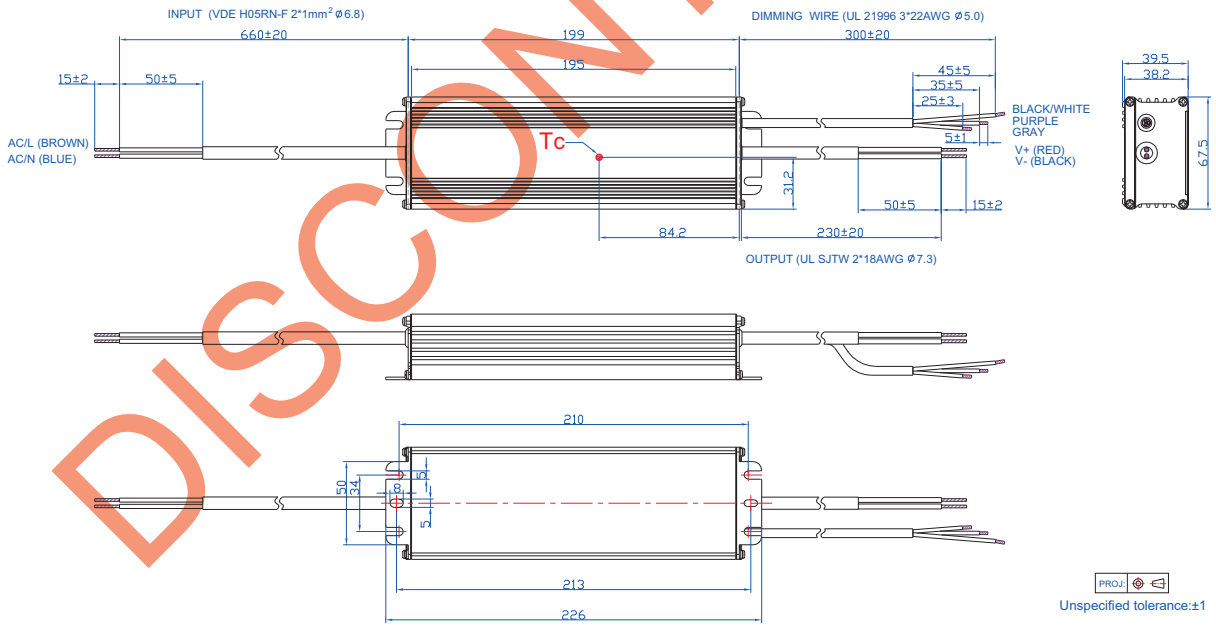
Implementation 3: External Resistor

Notes:

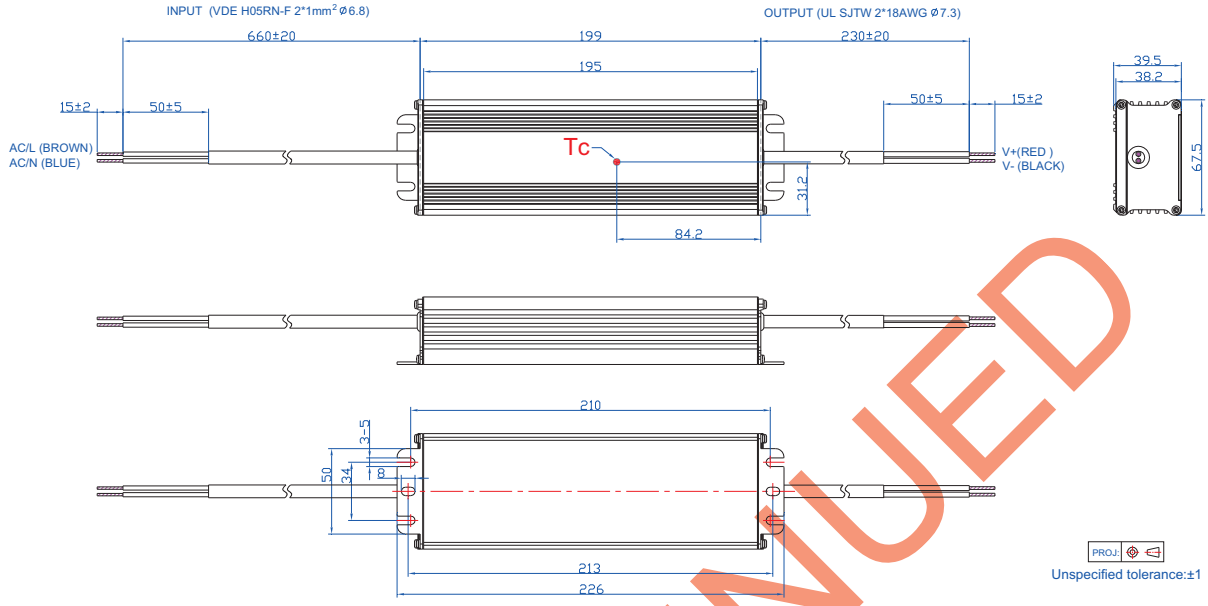
1. The dimmer can also be replaced by an active 0-10V voltage source signal or passive components like resistors and zener.
2. The dimming signal is allowed to be less than 1V, when it is between 0 and 1V, the output level is 10%.
3. Do NOT connect the Gray Wire (dim-) and Black Wire (V-) together.
4. The dimming section is not isolated from output.
5. If 0-10V dimming is not used, Dim + can be either open or connected to Vaux.

Mechanical Outline

EUC-150SxxxDDA



EUC-150SxxxSDA



Note: Must be installed inside the light fixture.

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
2013-04-24	A	Datasheets Release	/	/
2014-06-30	B	1400 mA Model	/	Added
		Description	/	Updated
2015-01-06	C	Format	/	Updated
		Leakage Current	At 240Vac 60Hz input	IEC60598-1; 240Vac/ 60Hz
		No Load Power Dissipation	/	Delete
		Case Temperature	Case Temperature	Operating Case Temperature for Safety Tc_s
		Operating Case Temperature for Warranty Tc_w	/	Added
		Mechanical Outline	/	Updated
2018-04-03	D	Description	/	Updated
		Models	Notes:	Updated
		Input Specifications	PF/THD	Updated
		Output Specifications	No-load Output Voltage	Updated
		Output Specifications	Temperature Coefficient	Updated
		General Specifications	Efficiency at 120 Vac input:	Updated
		General Specifications	Efficiency at 220 Vac input:	Updated
		General Specifications	Efficiency at 277 Vac input:	Updated
		General Specifications	Operating Case Temperature for Safety Tc_s	Updated
		General Specifications	Operating Case Temperature for Warranty Tc_w	Updated
		General Specifications	Storage Temperature	Updated
		General Specifications	Dimensions	Updated
		Environmental Specifications	/	Deleted
		Safety &EMC Compliance	/	Updated
		Derating Curve	/	Deleted
		Mechanical Outline	/	Updated