

Features

- High Efficiency (Up to 90%)
- Active Power Factor Correction (0.99 Typical)
- Constant Current Output
- 0-10V Dimming Control
- Input Surge Protection: DM 6 kV
- All-Around Protection: SCP, OTP, OVP
- IP67
- SELV Output
- Class II with Double isolation (回)
- Suitable for Independent Use



Description

The *EUC-075S070DD(SD)* series is a 75W, Class II constant-current LED driver that operates from 90-305 Vac input with excellent power factor. It is created for many lighting applications including low bay, tunnel and street, etc. 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

Output Current	Input Voltage Range(1)	Output Voltage Range	Max. Output Power	Typical Efficiency (2)	Power Factor		Model Number (3)
					120Vac	220Vac	
700 mA	90~305 Vac	54~108 Vdc	75 W	90%	0.99	0.95	EUC-075S070DD(SD)

Notes: (1) Certificated input Voltage range 100-240Vac.

(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	-	-	0.9 A	Measured at 100% load and 100Vac input.
	-	-	0.42 A	Measured at 100% load and 220Vac input.
Inrush current	-	-	60 A	At 220Vac input, 25°C cold start, duration=1 ms, 10%lpk-10%lpk.
Inrush current(I ² t)	-	-	1.2 A ² s	
PF	0.90	-	-	At 100Vac-277Vac, 50-60Hz, 75%-100% Load(56.25W-75W)
THD	-	-	20%	

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%	-	5%	
Total Output Current Ripple (pk-pk)	-	10%Io	15%Io	At 100% load condition, 20 MHz BW
Output Current Ripple at < 200 Hz (pk-pk)	-	2%Io	-	At 100% load condition. Only this component of ripple is associated with visible flicker.
Startup Overshoot Current	-	8%	10%	At 100% load condition.
No Load Output Voltage	-	-	116 V	
Line Regulation	-	-	±1%	
Load Regulation	-	-	±3%	
Turn-on Delay Time	-	0.8 s	2.0 s	Measured at 120Vac input, 75%-100% Load
	-	0.4 s	1.0 s	Measured at 220Vac input, 75%-100% Load
Temperature Coefficient	-	0.03%/°C	-	Case temperature = 0°C ~Tc max

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	Latch mode. When case temperature is higher than the default, OTP will be triggered. The power supply shall return to normal operation only after the power is turn-on again.

General Specifications

Parameter	Min.	Typ.	Max.	Notes
Efficiency at 120 Vac input:	86%	88%	-	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:	88%	90%	-	Measured at 100% load and steady-state temperature in 25°C ambient; (Efficiency will be about 2.0% lower if measured immediately after startup.)
No Load Power Dissipation	-	-	5 W	
MTBF	-	380,000 Hours	-	Measured at 120Vac input, 80%Load and 25°C ambient temperature(MIL-HDBK-217F)
Lifetime	-	118,000 Hours	-	Measured at 120Vac input, 80%Load and 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	-	+70°C	
Storage Temperature	-40°C	-	+90°C	Humidity: 5%RH to 100%RH

General Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
Dimensions Inches (L x W x H) Millimeters (L x W xH)	5.91 x 2.66 x 1.44 150 x 67.5 x36.5			With mounting ear 6.97 x 2.66 x 1.44 177 x 67.5 x36.5
Net Weight	-	780 g	-	

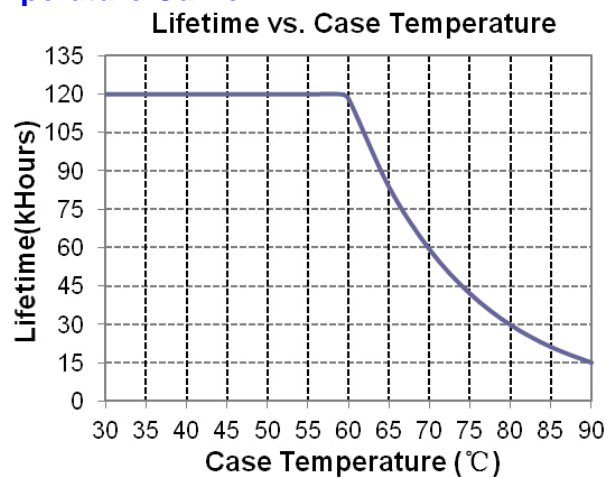
Safety & EMC Compliance

Safety Category	Standard
ENEC & CE	EN 61347-1 ⁽¹⁾ , EN 61347-2-13
CB	IEC 61347-1, IEC 61347-2-13
KS	KS C 7655
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: Differential Mode 6 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

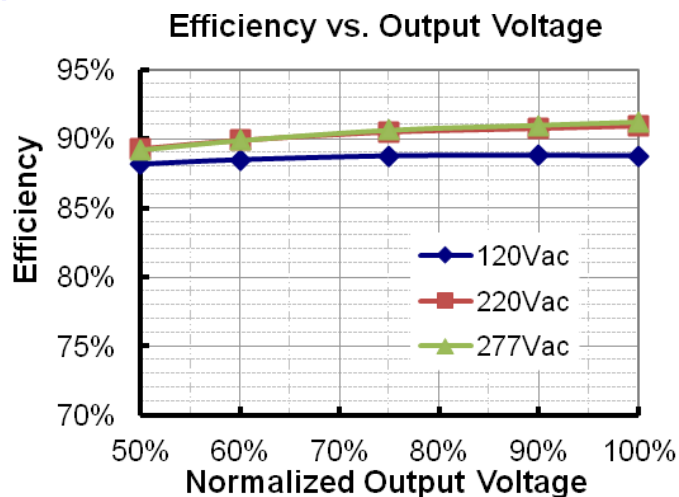
Note: (1) This product meets all requirements for EN=61347-1, A2:2013 Annex O (Double insulation). When the driver is energized, the allowed leakage current is perceptible but harmless.

(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.

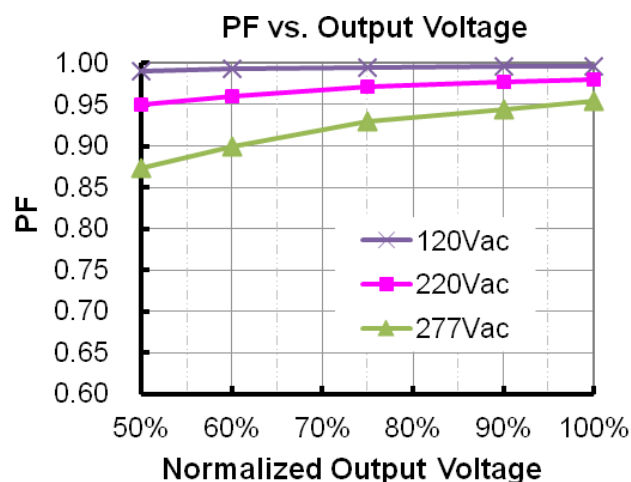
Lifetime vs. Case Temperature Curve



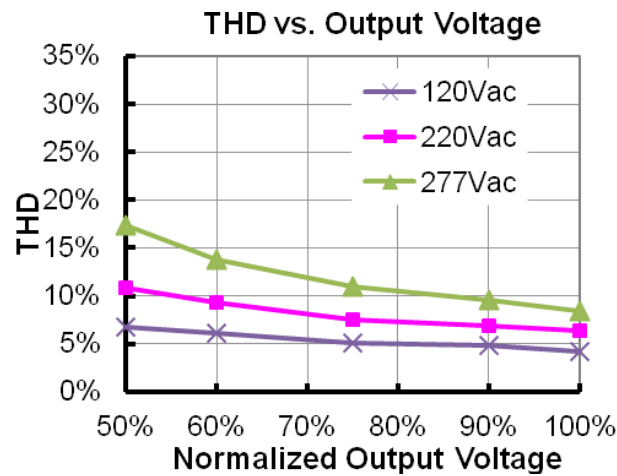
Efficiency vs. Load



Power Factor Characteristics

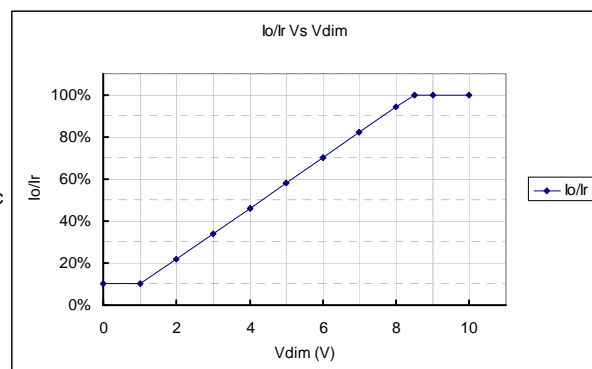
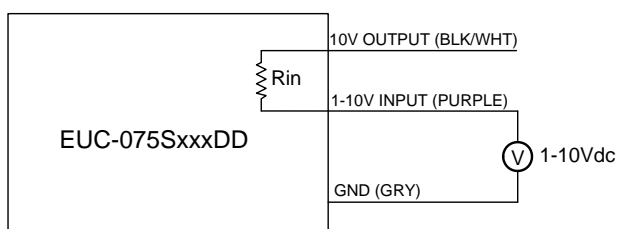


Total Harmonic Distortion

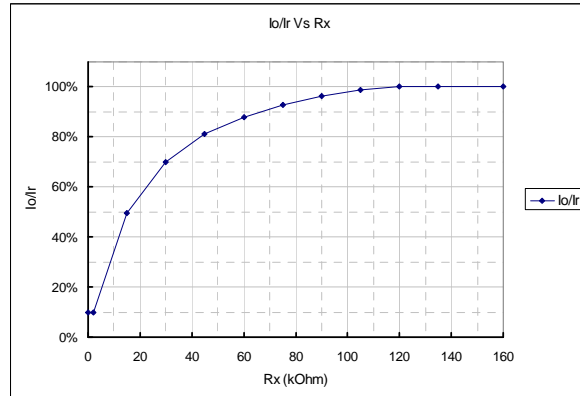
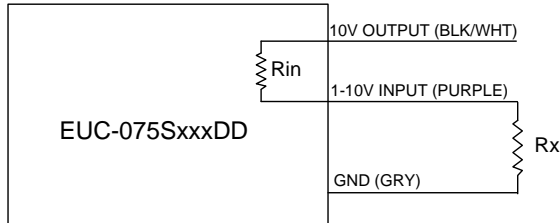


Dimming

Parameter	Min.	Typ.	Max.	Notes
10V output voltage	9.8 V	10 V	10.2 V	
10V output source current	0 mA	-	10 mA	
Absolute maximum voltage on the 1~10V input pin	-2 V	-	12 V	
Source current on 1~10V input pin	0 mA	-	0.5 mA	
Value of Rin (the resistor inside the LED driver which locate between the 1-10V input and 10V output pin)	19.8 K	20 K	20.2 K	



Implementation 1: DC input



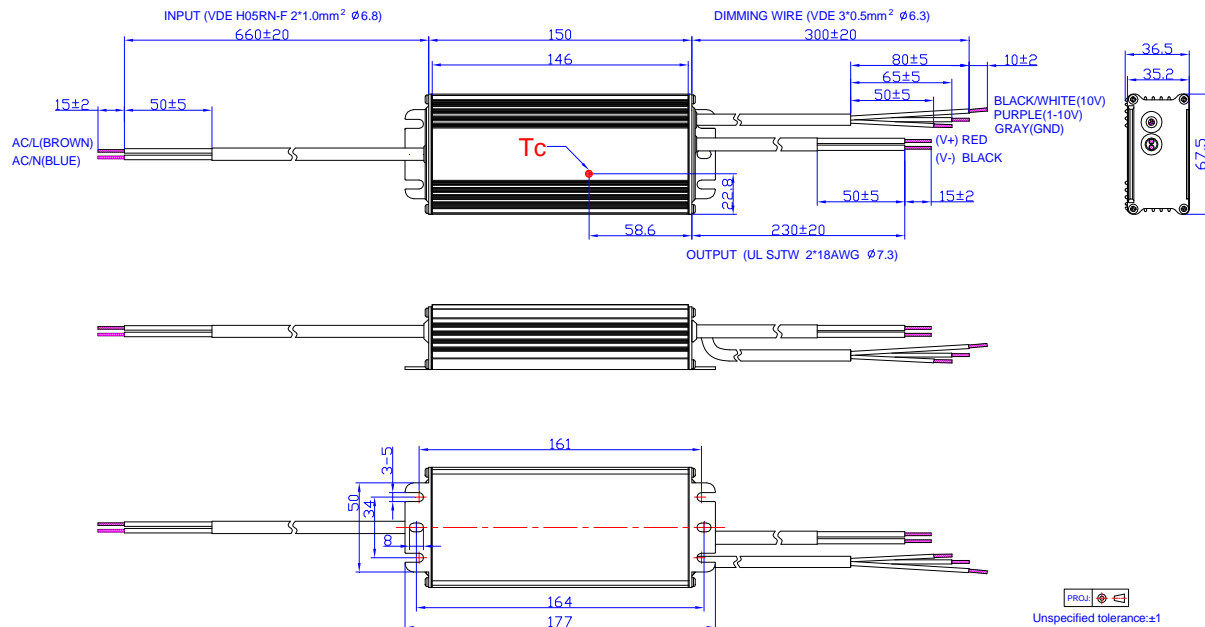
Implementation 2: External resistor

Notes:

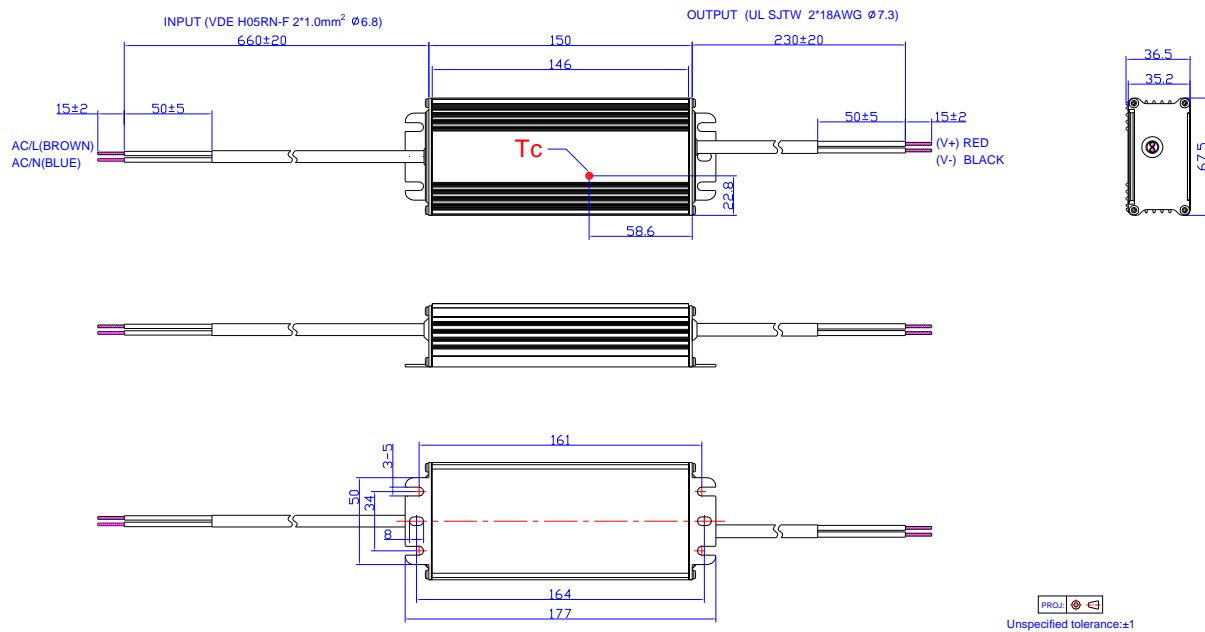
1. If the dimming function is not used, please let the dimming leads floated.
2. I_o is actual output current and I_r is rated current without dimming control.
3. For the driver to operate properly, the load voltage must be maintained above the minimum voltage threshold (approx. 50% of the max. output voltage for any given model).
4. If the output voltage is maintained above 50% of the maximum output voltage, the dimming control may be operated over the entire 1-10V range with output current varying from 100% down to practically 10%.
5. The dimming signal is allowed to be less than 1V, however, when it for 0-1V, the output current can maintain about 10% I_r . When it for 8.5-10V, the output current can maintain about 100% I_r .
6. Do not connect the GND of dimming to the output; otherwise, the LED driver cannot work normally.

Mechanical Outline

EUC-075SxxxDD



EUC-075SxxxSD



Note: Must Be Installed Inside the Light Fixture

RoHS Compliance

Our products comply with reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU, calling for the elimination of lead and other hazardous substances from electronic products.

Revision History

Change Date	Rev.	Description of Change		
		Item	From	To
2013-11-27	A	Datasheets Release	/	/
2014-06-30	B	Description	/	Updated
2016-03-28	C	Format	/	Updated
		Features	/	Updated
		Description	/	Updated
		Models	Notes	Updated
		Output Specifications	Output Current Ripple (pk-pk)	Total Output Current Ripple (pk-pk)
		Output Specifications	Output Current Ripple at < 200 Hz (pk-pk)	Added
		Output Specifications	Output Current Overshoot / Undershoot	Startup Overshoot Current
		General Specifications	Life Time	Lifetime
		General Specifications	Case Temperature	Operating Case Temperature for Safety Tc_s
		General Specifications	Operating Case Temperature for Warranty Tc_w	Added
		General Specifications	Storage Temperature	Added
		General Specifications	With mounting ear	Updated
		General Specifications	Net Weight	Updated
		Environmental Specifications	/	Delete
		Safety & EMC Compliance	KS	Added
		With pull-down resistor: (The model number has a suffix -0040)	/	Delete
		Mechanical Outline	/	Updated
2019-08-26	D	ENEC Logo	/	Updated
		Features	Input surge protection	Updated
		Description	/	Updated
		Input Specifications(PF/THD)	50-60Hz	Added
		Safety & EMC Compliance	CB	Added
		Safety & EMC Compliance	KS	Updated
		Safety & EMC Compliance	EN 61000-4-5	Updated
		Mechanical Outline	/	Updated
		RoHS Compliance	/	Updated

Revision History

Change Date	Rev.	Description of Change		
		Item	From	To
2020-01-15	E	Features	Waterproof (IP67)	IP67
		Derating Curve	/	Deleted
		Format	Page footer	Updated