Features

- High Efficiency (Up to 84%)
- Active Power Factor Correction (Typical 0.92)
- Constant Output Current
- IP66
- Dimming Control
- All-Around Protection: OVP, SCP, OLP
- Comply With UL8750 & EN61347 Safety Regulations
- Comply With ANSI/IEEE C62.41, Class A Operation

Description

The EUC-025SxxxDS(PS) Series operates from a 90 ~ 305 Vac input range. They are designed to be highly efficient and highly reliable. Features include over voltage protection, short circuit protection and over load protection.

Models

Output Current	Input Voltage Range	Output Voltage Range	Max. Output Power	Typical Efficiency (1)	Typical Power Factor		Model Number (2, 3)
					110Vac	220Vac	
2080 mA	90 ~ 305 Vac	4~12 Vdc	25 W	81.0%	0.98	0.92	EUC-025S208DS(PS)(6)
1750 mA	90 ~ 305 Vac	5~14 Vdc	25 W	81.0%	0.98	0.92	EUC-025S175DS(PS)(6)
1400 mA	90 ~ 305 Vac	6~18 Vdc	25 W	81.0%	0.98	0.92	EUC-025S140DS(PS)(6)
1050 mA	90 ~ 305 Vac	8~24 Vdc	25 W	82.0%	0.98	0.92	EUC-025S105DS(PS)(6)
700 mA	90 ~ 305 Vac	12~36 Vdc	25 W	83.0%	0.98	0.92	EUC-025S070DS(PS)(6)
620 mA	90 ~ 305 Vac	13~40 Vdc	25 W	83.0%	0.98	0.92	EUC-025S062DS(PS)(5)
450 mA	90 ~ 305 Vac	19~56 Vdc	25 W	84.0%	0.98	0.92	EUC-025S045DS(PS)(5)
350 mA	90 ~ 305 Vac	24~72 Vdc	25 W	84.0%	0.98	0.92	EUC-025S035DS(PS)(4)

Notes: (1) Measured at 100% load and 220 Vac input.
(2) The DS suffix may be changed to PS to omit the dimming function and remove the three wires associated with that function.
(3) A suffix –xxxx may be added to denote variations or modifications to the base product, where x can be any alphanumeric character or blank.
(4) Non-Class 2 output (USR & CNR).
(5) Class 2 output (USR), Non-Class 2 output (CNR).
(6) Class 2 output (USR & CNR).

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	90 Vac	-	305 Vac	

Input Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
Input Frequency	47 Hz	-	63 Hz	
Leakage Current	-	-	0.5 mA	At 277Vac 60Hz input
Input AC Current	-	-	0.32 A	Measured at 100% load and 100 Vac input.
	-	-	0.15 A	Measured at 100% load and 220 Vac input.
Inrush Current	-	-	60 A	At 230Vac input 25℃ Cold Start

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%	-	5%	
Ripple Current	-	-	50%Io	
No Load Output Voltage I_O = 2080 mA I_O = 1750 mA I_O = 1400 mA I_O = 1050 mA I_O = 700 mA I_O = 620 mA I_O = 450 mA I_O = 350 mA	 - - - - - - - -	 - - - - - - - -	 16 V 18 V 22 V 30 V 42 V 48 V 61 V 79 V	
Line Regulation	-	-	3%	
Load Regulation	-	-	5%	
Turn-on Delay Time	-	2.5 s	3.0 s	Measured at 110Vac input.
	-	1.5 s	2.0 s	Measured at 220Vac input.

Protection Functions

Parameter	Min.	Typ.	Max.	Notes
Over Voltage Protection	110%	120%	130%	Hiccup mode. The power supply shall be self-recovery when the fault condition is removed.
Over Load Protection	-	1.25 Vomax	-	Hiccup mode. The power supply shall be self-recovery when the fault condition is removed.
Short Circuit Protection	No damage shall occur when any output operating in a short circuit condition. The power supply shall be self-recovery when the fault condition is removed.			

General Specifications

Parameter	Min.	Typ.	Max.	Notes
Efficiency@120 Vac input:				
I_O = 2080 mA	77.5%	79.5%	-	Measured at 100% load and 110 Vac input.
I_O = 1750 mA	78.0%	80.0%	-	
I_O = 1400 mA	78.0%	80.0%	-	
I_O = 1050 mA	79.0%	81.0%	-	
I_O = 700 mA	80.0%	82.0%	-	
I_O = 620 mA	80.0%	82.0%	-	
I_O = 450 mA	81.0%	83.0%	-	
I_O = 350 mA	81.0%	83.0%	-	
Efficiency@220 Vac input:				
I_O = 2080 mA	79.0%	81.0%	-	Measured at 100% load and 220 Vac input.
I_O = 1750 mA	79.0%	81.0%	-	
I_O = 1400 mA	79.0%	81.0%	-	
I_O = 1050 mA	80.0%	82.0%	-	
I_O = 700 mA	81.0%	83.0%	-	
I_O = 620 mA	81.0%	83.0%	-	
I_O = 450 mA	82.0%	84.0%	-	
I_O = 350 mA	82.0%	84.0%	-	
No Load Power Dissipation	-	-	6 W	
MTBF	484,000 hours	-	-	Measured at 110Vac input, 80%Load and 25°C ambient temperature (MIL-HDBK-217F)
Life Time	79,000 hours	-	-	Measured at 110Vac input, 80%Load and 45°C ambient temperature
Case Temperature	-	-	89 ℃	
Dimensions Inches (L × W × H) Millimeters (L × W × H)	3.07 × 3.15 × 1.06 78 × 80 × 27			
Net Weight	-	200 g	-	

Environmental Specifications

Parameter	Min.	Typ.	Max.	Notes
Operating Temperature	-20 ℃	-	+70 ℃	Humidity: 10% RH to 95% RH. See Derating Curve for more details
Storage Temperature	-40 ℃	-	+85 ℃	Humidity: 5% RH to 95% RH

Safety & EMC Compliance

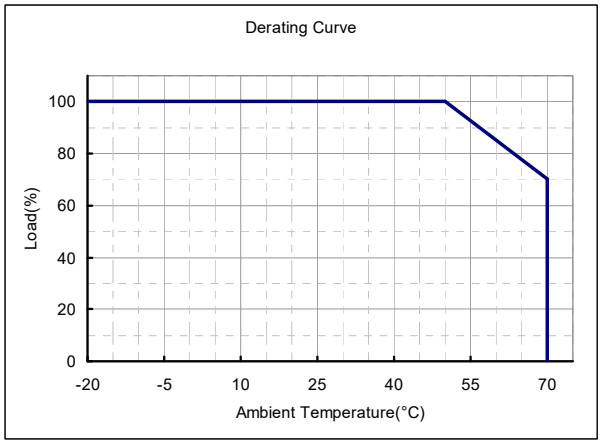
Safety Category	Standard
UL/CUL	UL8750, UL 1310, CAN/CSA-C22.2 No. 250.13, CAN/CSA-C22.2 No. 223-M91
CE	EN 61347-1, EN 61347-2-13
KS	KS C 7655
EMI Standards	**Notes**
EN 55015(1)	Conducted emission Test & Radiated emission Test
EN 61000-3-2	Harmonic current emissions
EN 61000-3-3	Voltage fluctuations & flicker

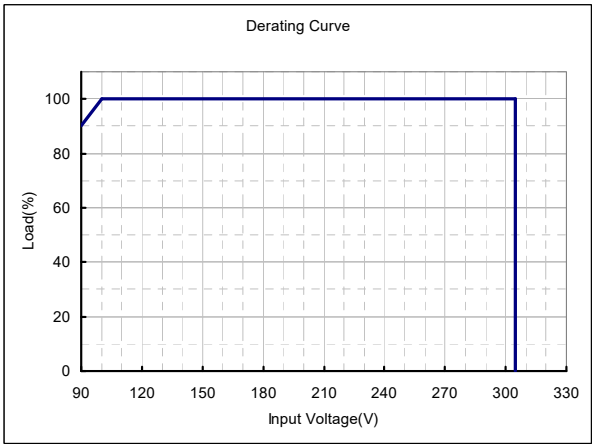
Safety & EMC Compliance (Continued)

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 61000-4-6	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
ENERGY STAR Standards	**Notes**
ANSI/IEEE C62.41-1991	Transient Protection, power supply shall comply with Class A operation. The line transient shall consist of seven strikes of a 100 kHz ring wave, 2.5 kV level, for both common mode and differential mode.

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 itsel.

Derating Curve

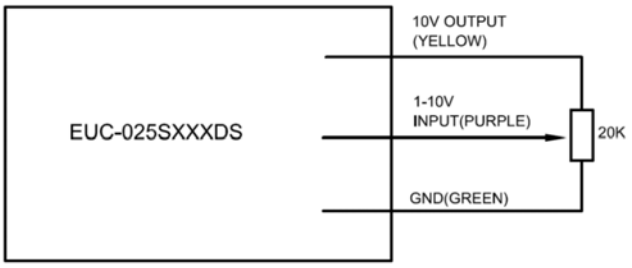


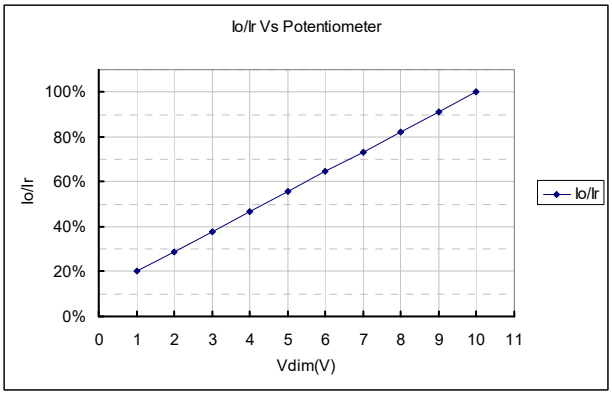


Dimming Control (On secondary side)

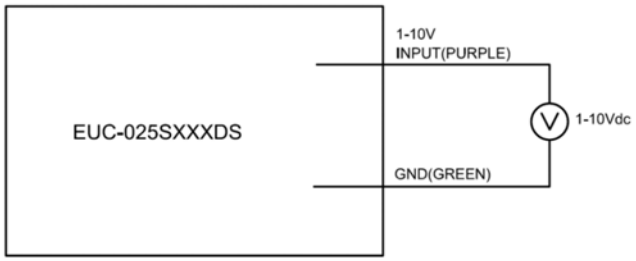
Parameter	Min.	Typ.	Max.	Notes
10V output voltage	9.8 V	10 V	10.2 V	
10V output source current	-10 mA	-	2 mA	
Absolute maximum voltage on the 1~10V input pin	-2 V	-	15 V	
Source current on 1~10V input pin	0 mA	-	1 mA	

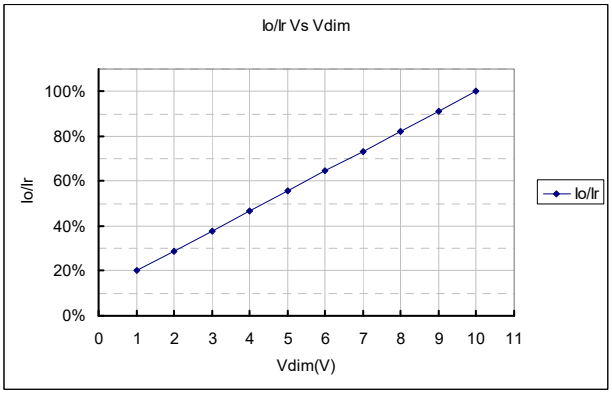
The dimmer control may be operated from either a potentiometer or from an input signal of 1 – 10 Vdc. Two recommended implementations are provided below.





Implementation 1: Potentiometer Control





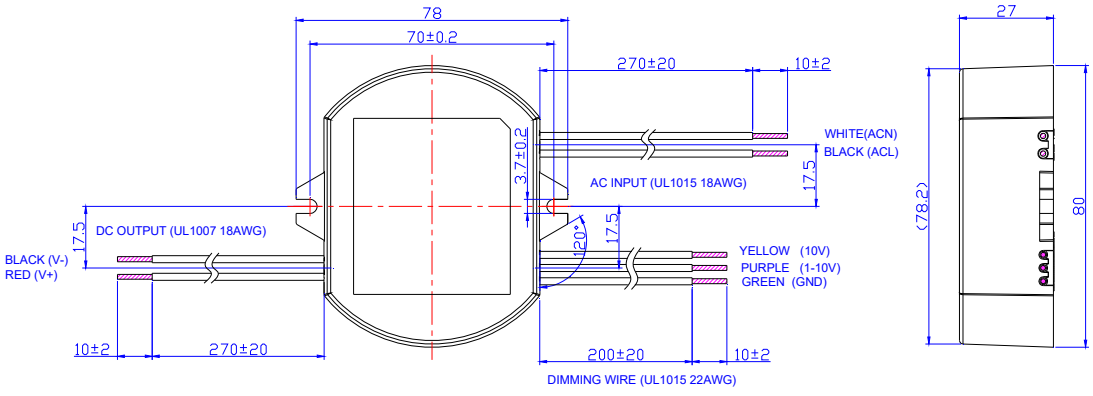
Implementation 2: DC input

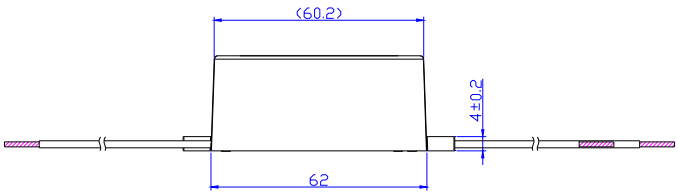
Notes:

1. The dimming voltage can be tuned down to less than 1V, and the output current will be decreased to about 20%Ir; but the connected LEDs may flicker. Keeping dimming voltage greater than 1V in application is strongly recommended.
2. Do not connect the GND of dimming to the output; otherwise, the LED driver can not work normally.

Mechanical Outline

EUC-025SxxxDS

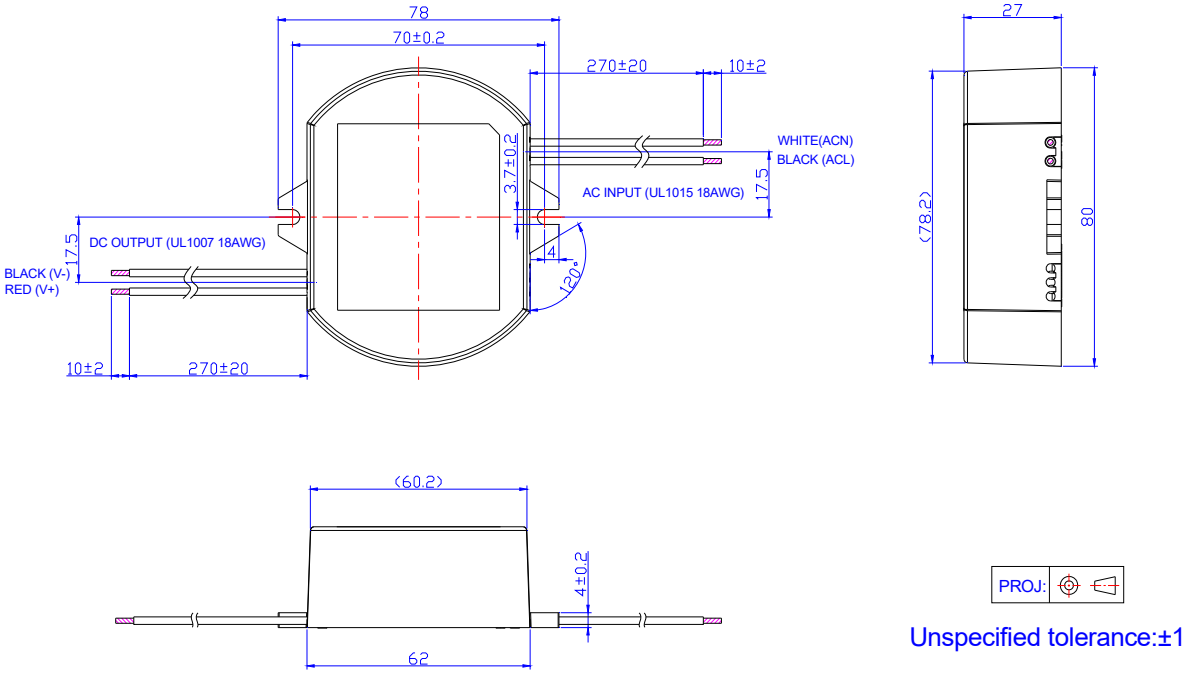




PROJ:

Unspecified tolerance:±1

EUC-025SxxxPS



Unspecified tolerance:±1

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
2009-12-15	A	Change Typical Efficiency and Ripple and Noise，No Load Power Dissipation		
2010-01-13	B	Modify the derating curve		
2010-04-12	C	Change the Power Factor 110Vac 220Vac	 0.99 0.94	 0.98 0.92
		Add Leakage Current in Input Specifications	/	Max. 0.5 Ma At 277Vac 50Hz input
		Change Inrush Current	20A	60A
		Change Line Regulation	2%	3%
		Add No Load Output Voltage	/	The max. value of every model.
		Change Ripple and Noise	Max. 25% V_O	The max. value of every model.
		Change Turn-on Delay Time 110Vac 220Vac	Typ. Max. 1.7S 2.0S 0.7S 1.0S	Typ. Max. 2.5S 3.0S 1.5S 2.0S
		Delete Output Overshoot / Undershoot	Max. 10%	/
		Change Over Load Protection	Typ.: 1.25Po	Typ.: 1.25 Vmax
		Change the efficiency (110Vac) I_O = 1750 Ma I_O = 1400 Ma	Min. Typ. 78% 79% 80% 81%	Min. Typ. 79% 80% 79% 80%
		Change the efficiency (220Vac) I_O = 1750 Ma I_O = 1400 Ma	Min. Typ. 79% 80% 81% 82%	Min. Typ. 80% 81% 80% 81%
		Change No Load Power Dissipation	≤ 5 W	≤ 6 W
		Change linearity of dimming curve	/	/
		Change the notes in Dimming Control	/	/
2010-05-31	D	Add star rank for recommended models	/	☆: Popular model.
2010-06-04	E	Change Dimensions and Mechanical Outline (The height)	25 cm	27 cm
2010-10-14	F	Change the notes in Dimming Control	/	/
		Add Energy Star Standard	/	Comply With ANSI/IEEE C62.41, Class A Operation
2011-1-10	G	Change popular models	/	/
		Change Over Voltage Protection I_O = 2080 Ma I_O = 1750 Ma I_O = 1400 Ma I_O = 1050 Ma I_O = 700 Ma I_O = 620 Ma I_O = 450 Ma I_O = 350 Ma	Min. Typ. Max. 13V 15V 18V 16V 18V 20V 21V 23V 24V 26V 28V 30V 42V 44V 46V 44V 46V 48V 59V 50V 62V 82V 88V 90V	Min. Typ. Max. 110% 120% 130%
2011-11-14	H	Mechanical outline---center to center distance and slot Width	70 MM & 4 MM	71 MM & 3.8 MM

Revision History (Continued)

Change Date	Rev.	Description of Change		
		Item	From	To
2012-7-17	I	Max Case Temperature	/	Updated
2013-02-22	J	Dimming Notes	/	Updated
2019-09-20	K	UL Logo	/	Added
		CE Logo	/	Added
		KS Logo	/	Added
		Features	Waterproof (IP66)	IP66
		Models	(7) ☆: Popular model	Deleted
		Safety &EMC Compliance	UL/CUL	Updated
		Safety &EMC Compliance	KS	Added
		Safety &EMC Compliance	Note	Added
		RoHS Compliance	/	Updated
2021-10-14	L	Models	Typical Efficiency	Updated
		General Specifications	Efficiency @120 Vac input:	Updated
		General Specifications	Efficiency @220 Vac input:	Updated