

## Features

- High Efficiency (Up to 86%)
- Second Generation with Improved Performance
- Active Power Factor Correction (Typical 0.95)
- Constant Output Current
- Waterproof (IP66) and Damp Location
- Dimming Control
- All-Round Protection: OVP, SCP, OLP
- Class 2 and SELV



## Description

The EUC-026SxxxDS(PS) series operate 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)	Power Factor		Model Number (2, 3)
					120Vac	220Vac	
350 mA	90 ~ 305 Vac	38~75 Vdc	26 W	86%	0.96	0.95	EUC-026S035DS(PS)(4)(8)
450 mA	90 ~ 305 Vac	28~56 Vdc	25 W	85%	0.96	0.95	EUC-026S045DS(PS)(5)(8)
700 mA	90 ~ 305 Vac	19~37 Vdc	26 W	85%	0.96	0.95	EUC-026S070DS(PS)(6)(8)
1050 mA	90 ~ 305 Vac	13~25 Vdc	26 W	84%	0.96	0.95	EUC-026S105DS(PS)(7)(8)
1400 mA	90 ~ 305 Vac	10~19 Vdc	26 W	82%	0.96	0.95	EUC-026S140DS(PS)(7)(8)
1750 mA	90 ~ 305 Vac	8 ~15 Vdc	26 W	81%	0.96	0.95	EUC-026S175DS(PS)(7)(8)

- Notes:**
- (1) Measured at full 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 –xxx 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), Class 2 output (CNR) only for Wet location.
  - (7) Class 2 output (USR & CNR) for Wet location.
  - (8) SELV

## Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage Range	90 V	-	305 V	
Input Frequency	47 Hz	-	63 Hz	
Leakage Current	-	-	0.75 mA	At 277Vac 60Hz input
Input AC Current	-	-	0.4 A	Measured at full load and 100 Vac input.
	-	-	0.2 A	Measured at full load and 220 Vac input.

Specifications are subject to changes without notice.

## Input Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
Inrush Current	-	-	40 A	At 220Vac input 25°C Cold Start. Duration=100 μs, 10%Ipk-10%Ipk.
Inrush Current(I <sup>2</sup> t)	-	-	0.043 A <sup>2</sup> s	
Power Factor	0.90	-	-	At 100Vac-277Vac, 75%load-100%load
THD	-	-	20%	

## Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5% I <sub>o</sub>	-	5% I <sub>o</sub>	
No Load Output Voltage				
I <sub>o</sub> = 350 mA	-	-	85 V	
I <sub>o</sub> = 450 mA	-	-	59 V	
I <sub>o</sub> = 700 mA	-	-	42 V	
I <sub>o</sub> = 1050 mA	-	-	32 V	
I <sub>o</sub> = 1400 mA	-	-	26 V	
I <sub>o</sub> = 1750 mA	-	-	22 V	
Output Current Ripple	-	-	50% I <sub>o</sub>	Related to V-I Curve of the LED
Output Current Overshoot / Undershoot	-	-	10%I <sub>o</sub>	At full load condition.
Line Regulation	-	-	±1%	
Load Regulation	-	-	±3%	
Turn-on Delay Time	-	0.6 s	1.0 s	Measured at 120Vac input.
	-	0.3 s	0.5 s	Measured at 220Vac input.
Temperature coefficient	-	-	0.2%/°C	Case temperature = 0°C ~T <sub>c</sub> max

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

## Protection Functions

Parameter	Min.	Typ.	Max.	Notes
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				Measured at full load and 120Vac input.
I <sub>o</sub> = 350 mA	84%	85%	-	
I <sub>o</sub> = 450 mA	82%	84%	-	
I <sub>o</sub> = 700 mA	82%	84%	-	
I <sub>o</sub> = 1050 mA	81%	83%	-	
I <sub>o</sub> = 1400 mA	80%	81%	-	
I <sub>o</sub> = 1750 mA	80%	81%	-	

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## General Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
Efficiency I <sub>o</sub> = 350 mA I <sub>o</sub> = 450 mA I <sub>o</sub> = 700 mA I <sub>o</sub> = 1050 mA I <sub>o</sub> = 1400 mA I <sub>o</sub> = 1750 mA	85% 83% 83% 82% 80% 80%	86% 85% 85% 84% 82% 81%	- - - - - -	Measured at full load and 220 Vac input.
No Load Power Dissipation	-	-	5 W	
MTBF	200,000 Hours	-	-	Measured at 120Vac input, 80%Load and 25°C ambient temperature (MIL-HDBK-217F)
Life Time	-	91,100 Hours	-	Measured at 120Vac input, 80%Load and 60°C Case temperature. See life time vs. Tc curve for the details
Case temperature	-	-	90 °C	
Dimensions Inches (L × W × H) Millimeters (L × W × H)	3.07 × 3.15 × 1.06 78 × 80 × 27			
Net Weight	-	200 g	-	

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

## Environmental Specifications

Parameter	Min.	Typ.	Max.	Notes
Operating Temperature	-40 °C	-	+70 °C	Humidity: 10% RH to 100% RH See Derating Curve for more details
Storage Temperature	-40 °C	-	+85 °C	Humidity: 5% RH to 100% RH

## Safety & EMC Compliance

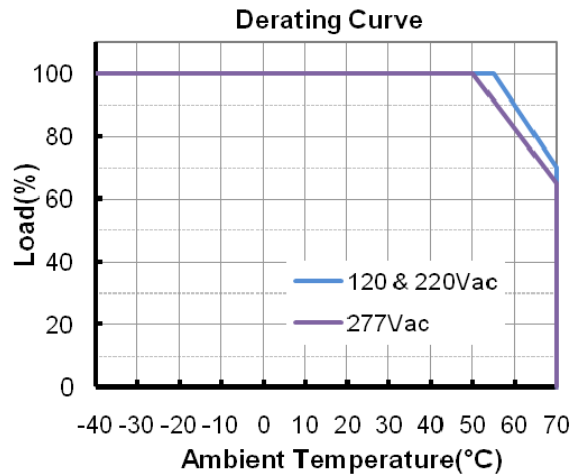
Safety Category	Standard
UL/CUL	UL8750, UL1012, UL1310 Class 2, CSA-C22.2 No. 107.1, CSA C22.2 NO. 223-M91 Class 2
CE	EN 61347-1, EN61347-2-13
CQC	GB19510.14-2009, GB19510.1-2009, GB17743-2007, GB17625.1-2003
EMI Standards	Notes
EN 55015	Conducted emission Test & Radiated emission Test
EN 61000-3-2	Harmonic Current Emissions
EN 61000-3-3	Voltage Fluctuations & Flicker
FCC Part 15	ANSI C63.4:2009 Class B
EMS Standards	Notes
EN 61000-4-2	Electrostatic Discharge (ESD): 8 kV air discharge, 4 kV contact discharge

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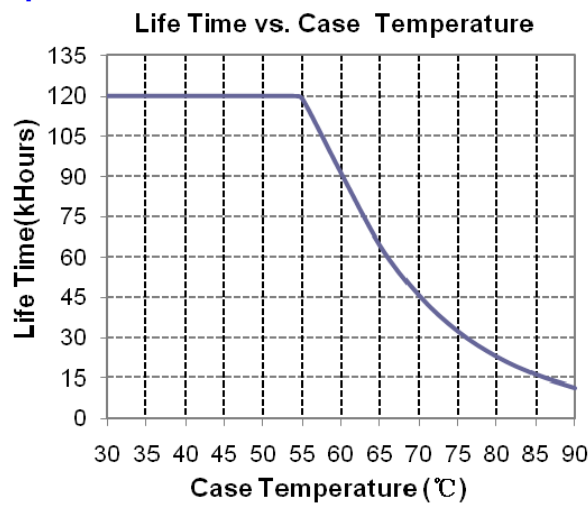
## Safety & EMC Compliance (Continued)

EMS Standards	Notes
EN 61000-4-3	Radio-Frequency Electromagnetic Field Susceptibility Test-RS
EN 61000-4-4	Electrical Fast Transient / Burst-EFT : level 3, criteria A
EN 61000-4-5	Surge Immunity Test: AC Power Line: line to line 2 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

## Derating Curve



## Life Time vs. Case Temperature Curve

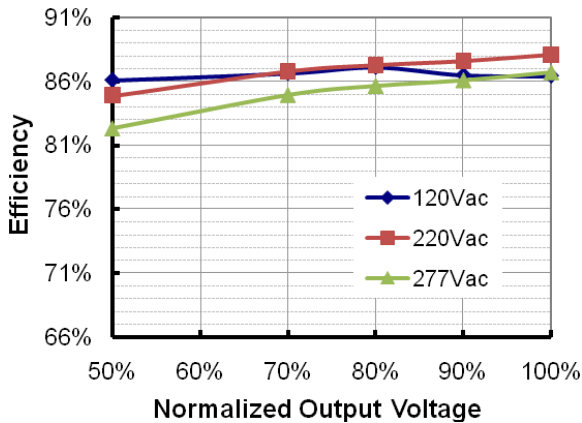


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## Efficiency vs. Load

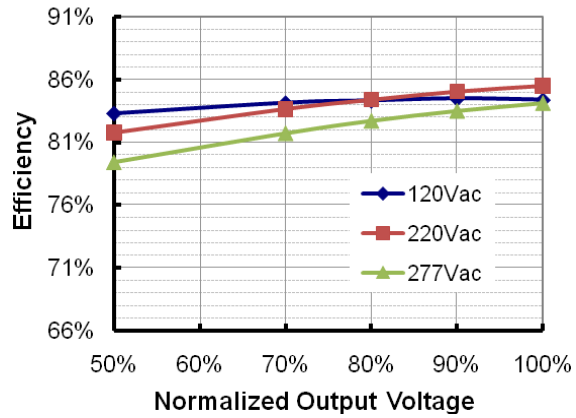
EUC-026S035DS(PS)

Efficiency vs. Output Voltage



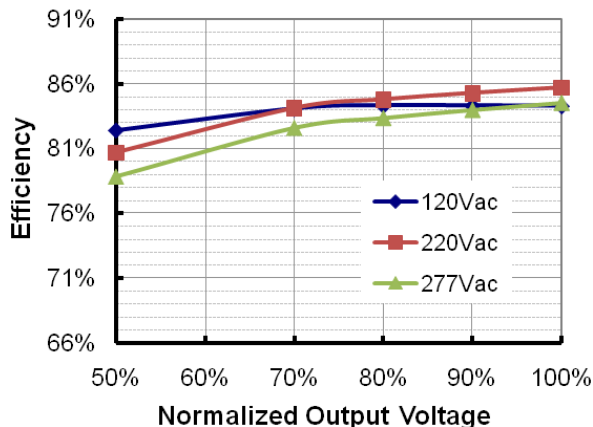
EUC-026S045DS(PS)

Efficiency vs. Output Voltage



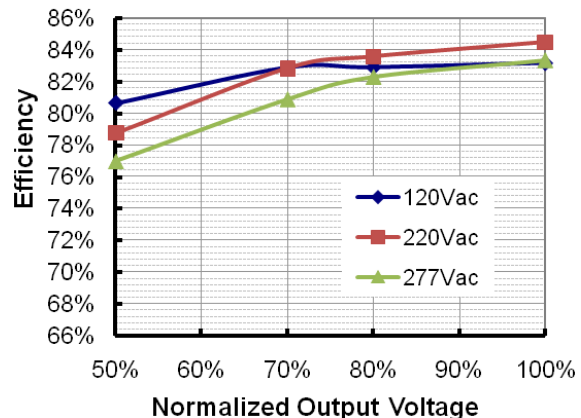
EUC-026S070DS(PS)

Efficiency vs. Output Voltage



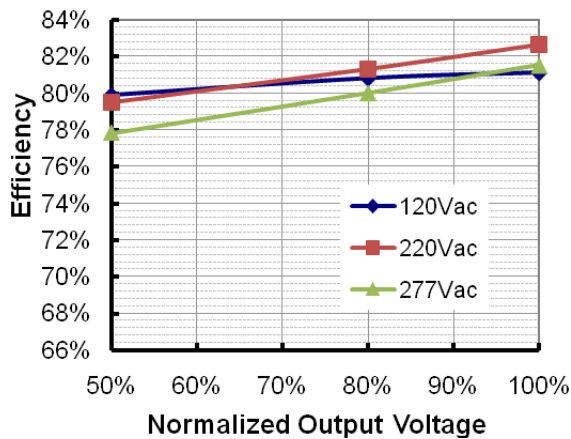
EUC-026S105DS(PS)

Efficiency vs. Output Voltage



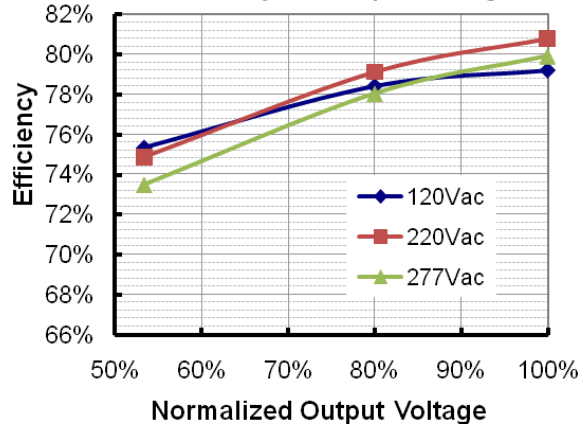
EUC-026S140DS(PS)

Efficiency vs. Output Voltage



EUC-026S175DS(PS)

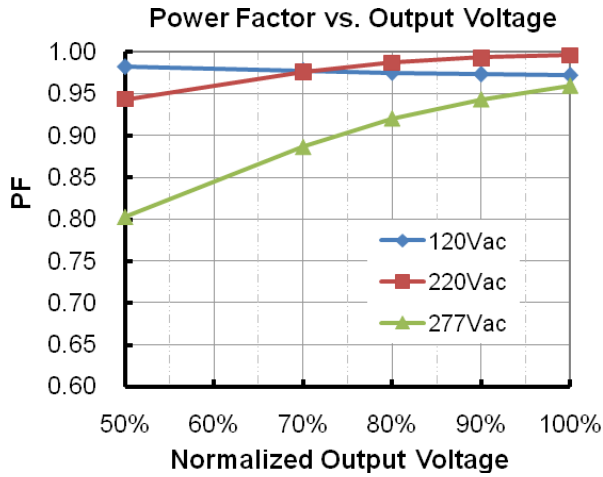
Efficiency vs. Output Voltage



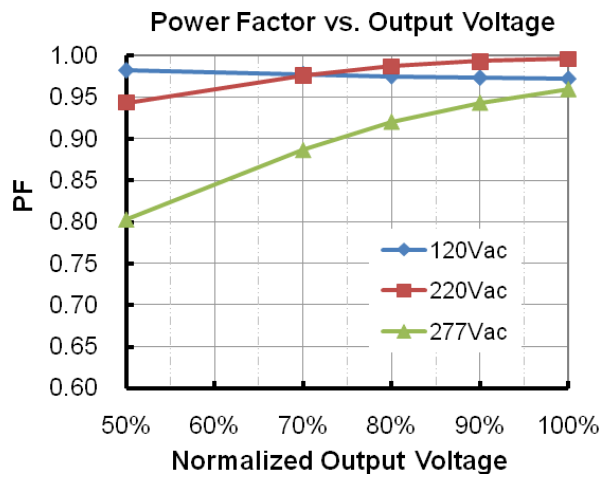
Specifications are subject to changes without notice.

## Power Factor Characteristics

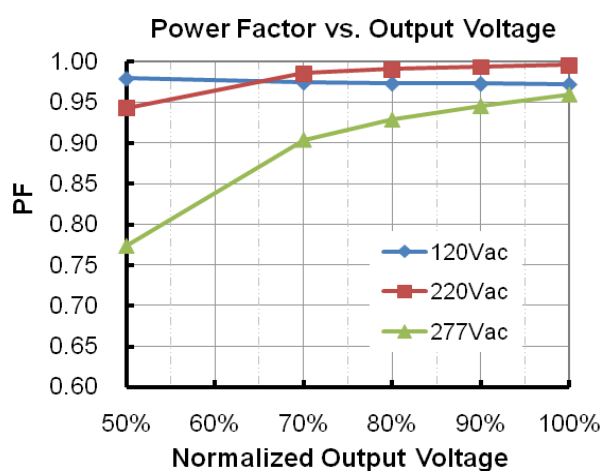
EUC-026S035DS(PS)



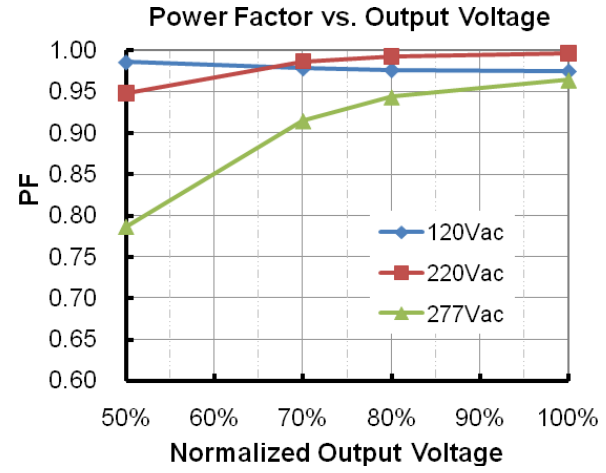
EUC-026S045DS(PS)



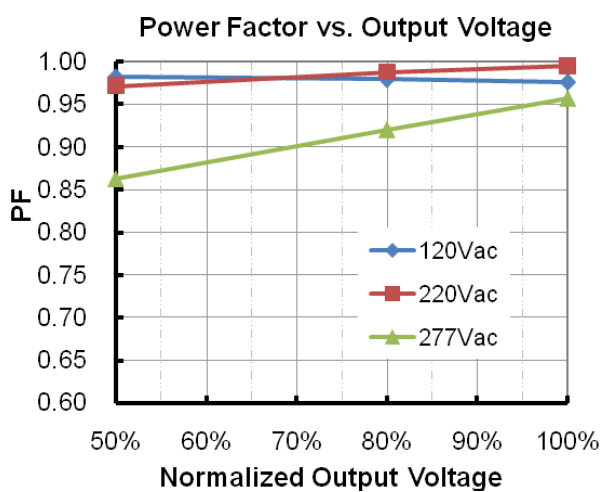
EUC-026S070DS(PS)



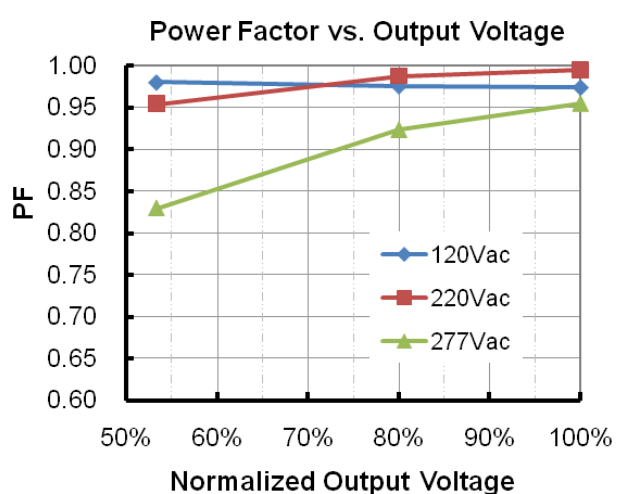
EUC-026S105DS(PS)



EUC-026S140DS(PS)

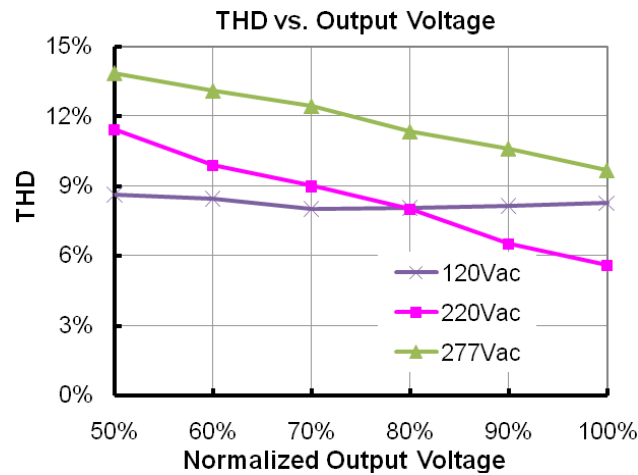


EUC-026S175DS(PS)



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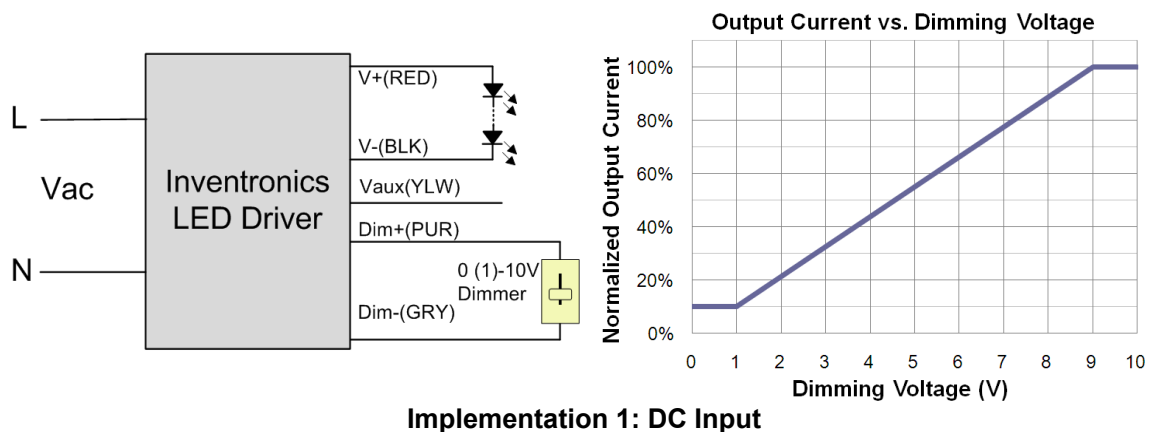
## Total Harmonic Distortion Curve (700mA Model)

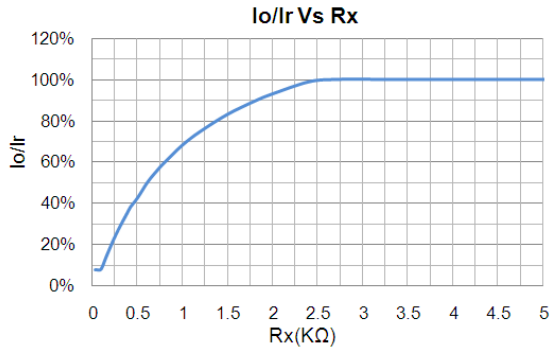
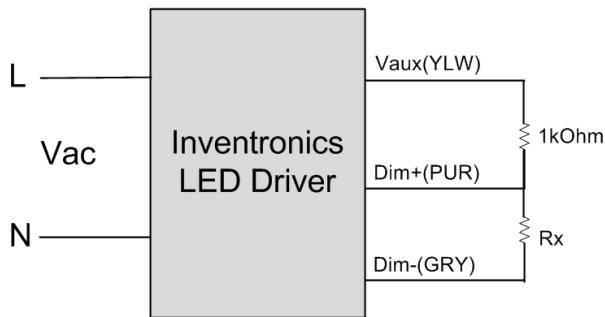


## Dimming Control (On secondary side)

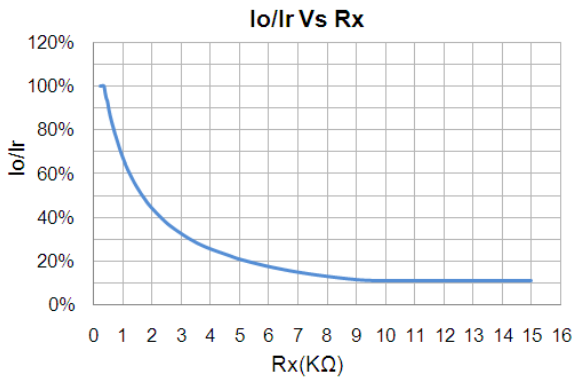
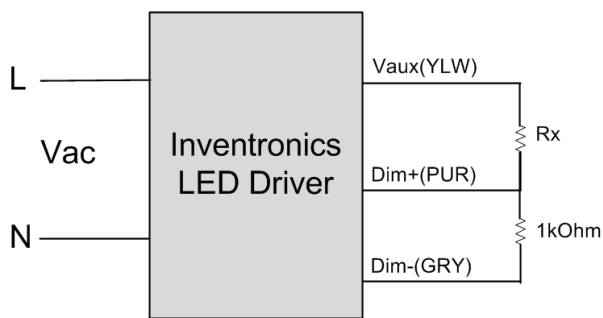
Parameter	Min.	Typ.	Max.	Notes
12V Output Voltage	10.8 V	12 V	13.2 V	
12V Output Source Current	0 mA	-	20 mA	
Absolute Maximum Voltage on the 0~10V Input Pin	0 V	-	15 V	
Source Current on 0~10V Input Pin	0 uA	-	200 uA	

The dimmer control may be operated from either a dimmer or from an input signal of 0 – 10 Vdc. The recommended implementation is provided below.





Implementation 2: External Resistor



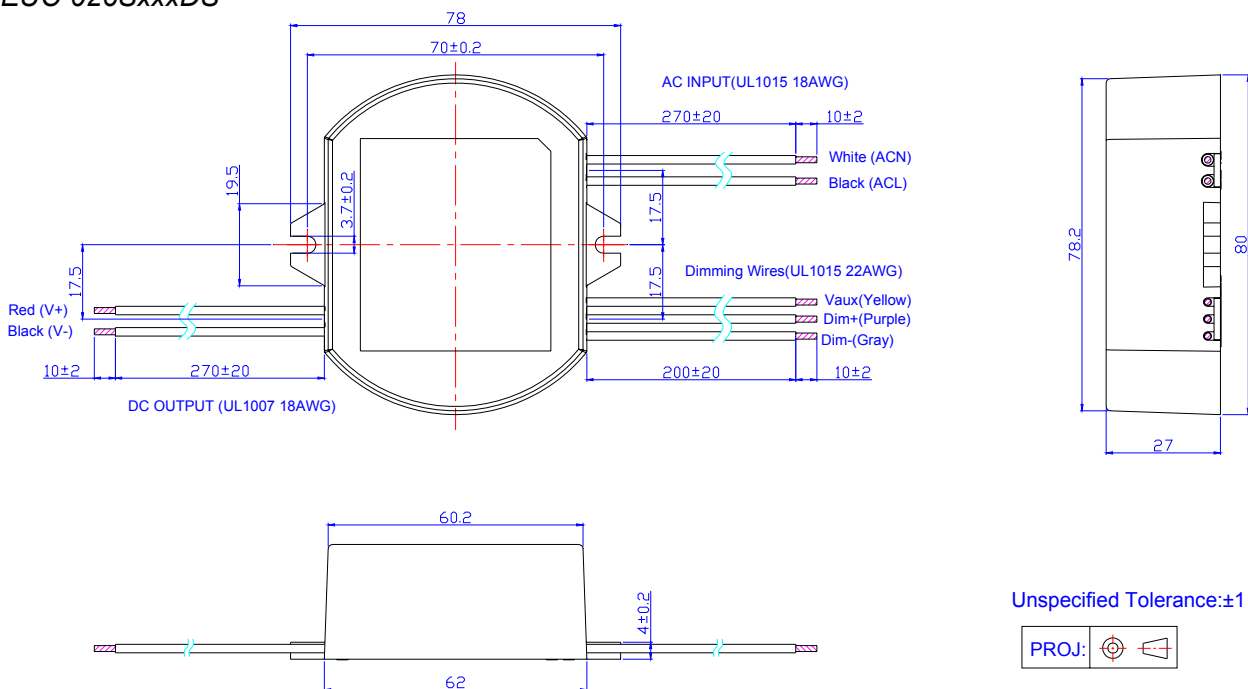
Implementation 3: External Resistor

**Notes:**

Do not connect the Dim- to the V-, otherwise, the LED driver cannot work normally.

**Mechanical Outline**

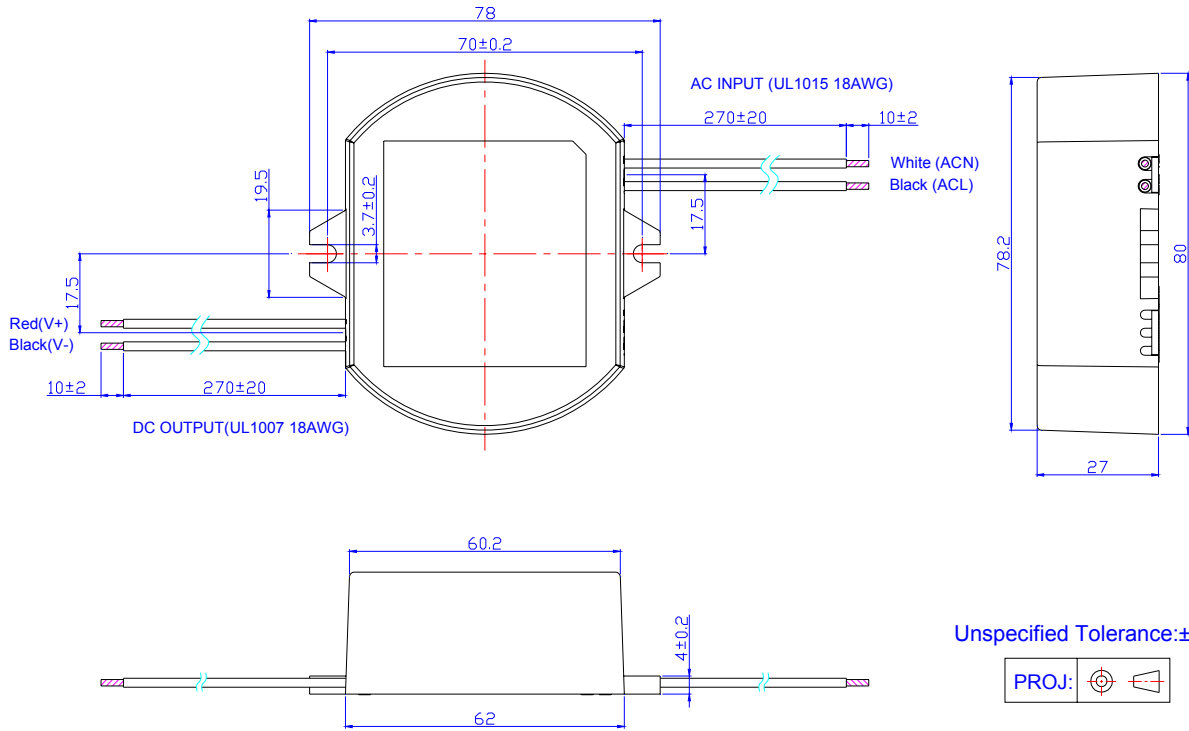
EUC-026SxxxDS



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EUC-026SxxxPS



## RoHS Compliance

Our products comply with the European Directive 2002/95/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
2012-2-17	A	Datasheets Release	/	/
2012-05-25	B	EN 61000-4-5--- line to line 2 kV, line to earth 4 kV	/	Corrected
		Life time	/	50,000 Hours
		EUC-026S045DS(PS)-0001	/	Added
2012-06-06	C	Life time vs. Tc Curve	/	Added
		EUC-026S045DS(PS)-0001	/	Deleted
		Notes of life time	/	Updated
2012-7-17	D	Max Case Temperature	/	Updated
2012-7-30	E	Min Operating Temperature	-20°C	-40°C
2012-08-20	F	Derating Curve	/	Updated
		Life time Curve	/	Updated
		Inrush Current	60 A	40 A
		Inrush Current(I <sup>2</sup> t)	/	Added
		Temperature co-efficient	/	Added
2012-11-09	G	Life time	Min 50,000hrs	Typical 91,100hrs
		Life time Curve	/	Updated
		THD Curve	/	Added
		Io/Ir Vs Rx Curve	/	Added
		Efficiency Curve and PF Curve of other models except 350 mA	/	Added