

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-Around 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 -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), 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.

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 ² t)	-	-	0.043 A ² 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 _O	-	5% I _O	
No Load Output Voltage				
I _O = 350 mA	-	-	85 V	
I _O = 450 mA	-	-	59 V	
I _O = 700 mA	-	-	42 V	
I _O = 1050 mA	-	-	32 V	
I _O = 1400 mA	-	-	26 V	
I _O = 1750 mA	-	-	22 V	
Output Current Ripple	-	-	50% I _O	Related to V-I Curve of the LED
Output Current Overshoot / Undershoot	-	-	10%I _O	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 _C 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				
I _O = 350 mA	84%	85%	-	Measured at full load and 120Vac input.
I _O = 450 mA	82%	84%	-	
I _O = 700 mA	82%	84%	-	
I _O = 1050 mA	81%	83%	-	
I _O = 1400 mA	80%	81%	-	
I _O = 1750 mA	80%	81%	-	

General Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
Efficiency $I_o = 350 \text{ mA}$ $I_o = 450 \text{ mA}$ $I_o = 700 \text{ mA}$ $I_o = 1050 \text{ mA}$ $I_o = 1400 \text{ mA}$ $I_o = 1750 \text{ mA}$	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)	$3.07 \times 3.15 \times 1.06$ $78 \times 80 \times 27$			
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

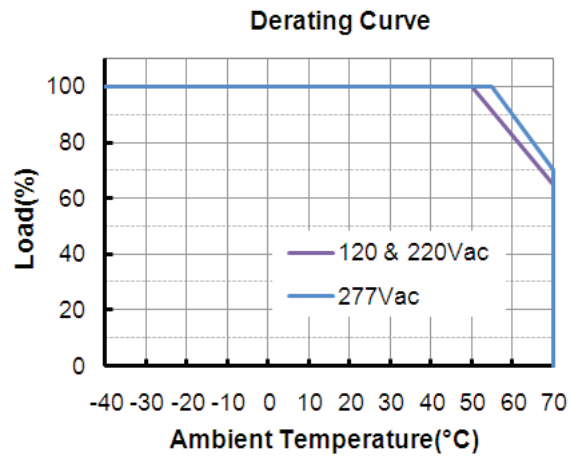
Safety & EMC Compliance

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

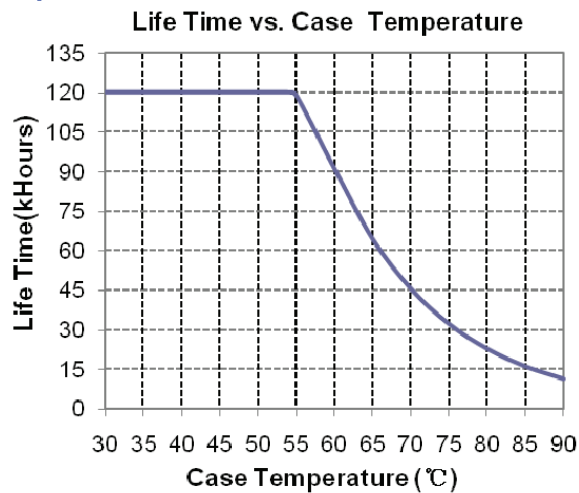
Safety & EMC Compliance (Continued)

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



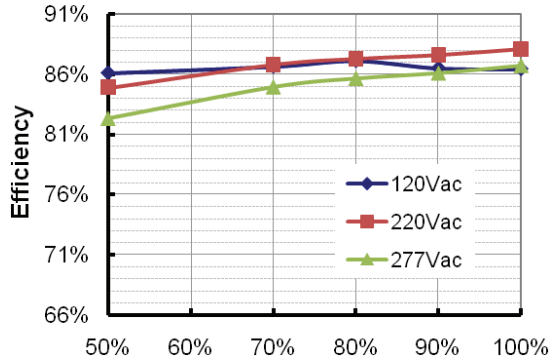
Life Time vs. Case Temperature Curve



Efficiency vs. Load

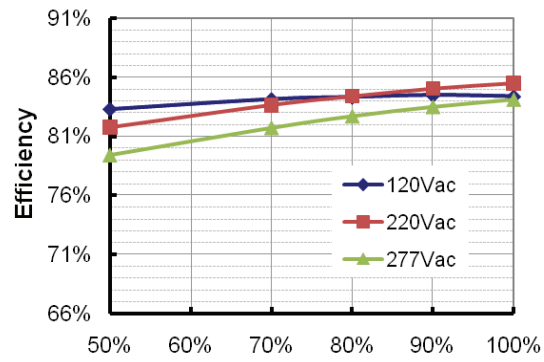
EUC-026S035DS(PS)

Efficiency vs. Output Voltage



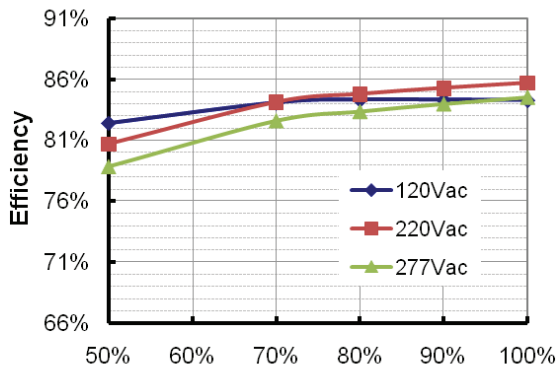
EUC-026S045DS(PS)

Efficiency vs. Output Voltage



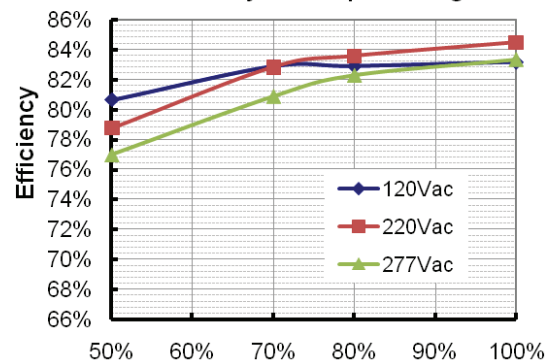
EUC-026S070DS(PS)

Efficiency vs. Output Voltage



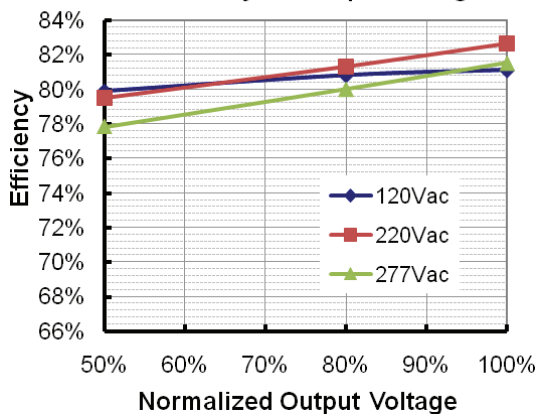
EUC-026S105DS(PS)

Efficiency vs. Output Voltage



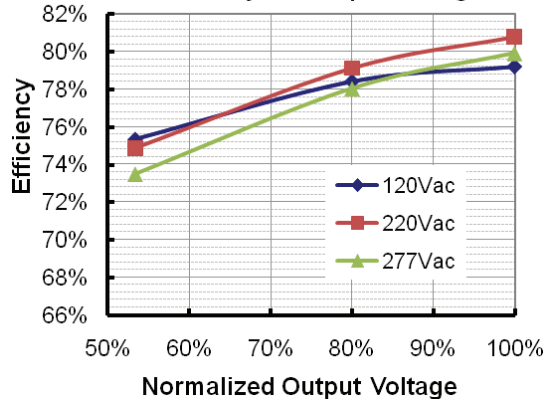
EUC-026S140DS(PS)

Efficiency vs. Output Voltage



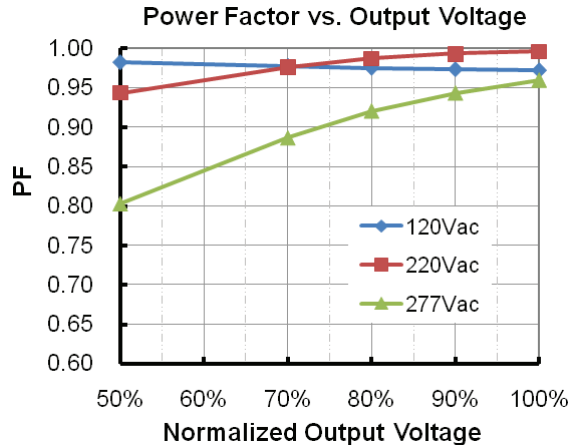
EUC-026S175DS(PS)

Efficiency vs. Output Voltage

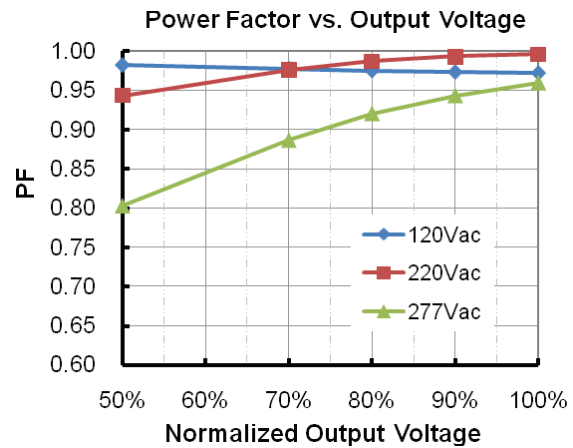


Power Factor Characteristics

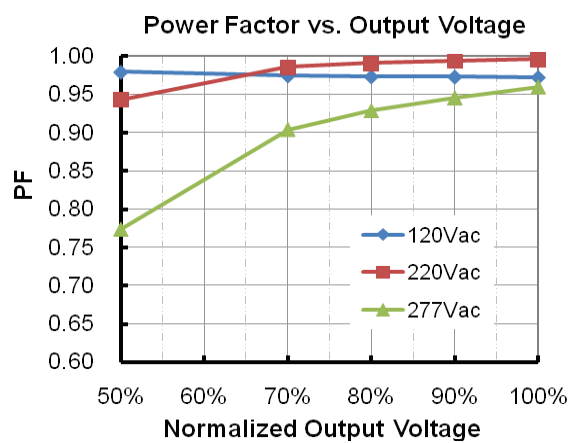
EUC-026S035DS(PS)



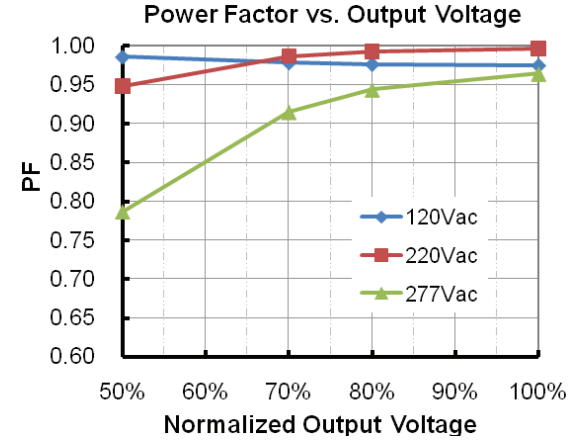
EUC-026S045DS(PS)



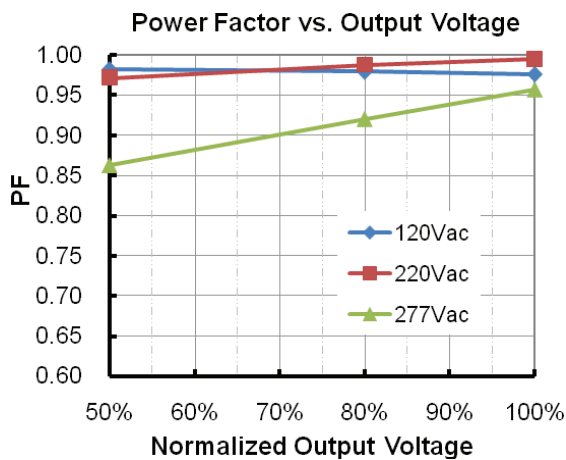
EUC-026S070DS(PS)



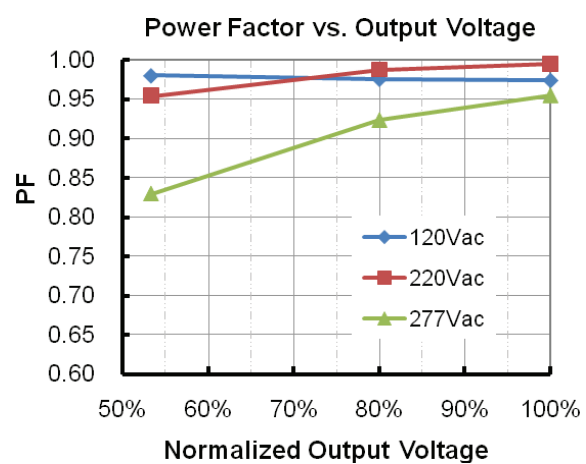
EUC-026S105DS(PS)



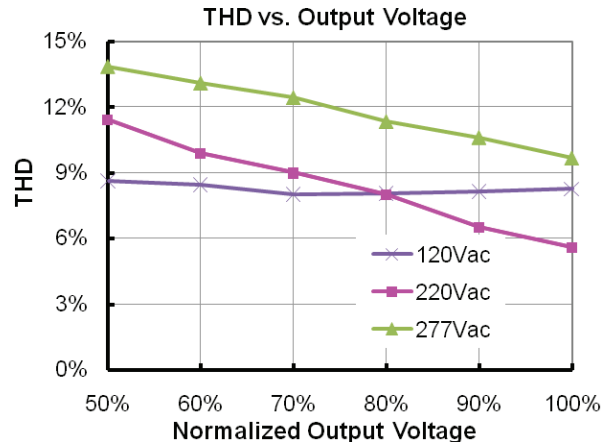
EUC-026S140DS(PS)



EUC-026S175DS(PS)



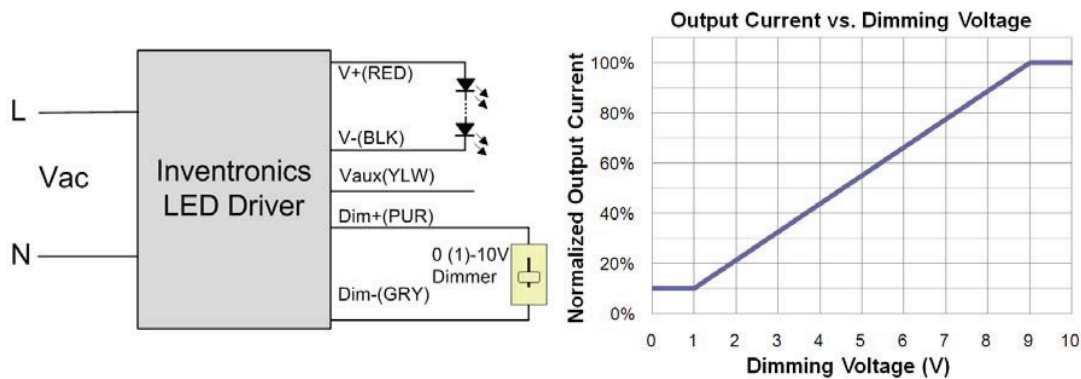
Total Harmonic Distortion Curve (700mA Model)



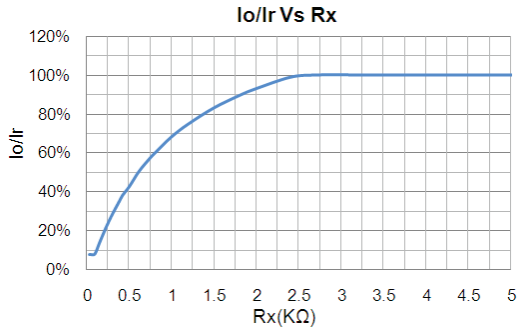
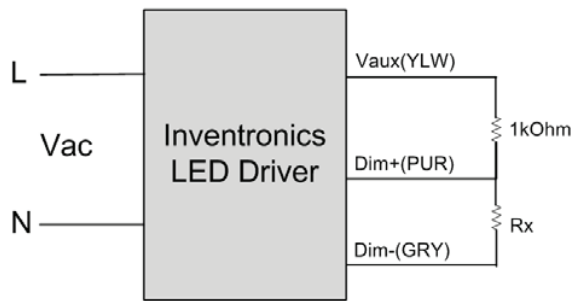
Dimming Control (On secondary side)

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	

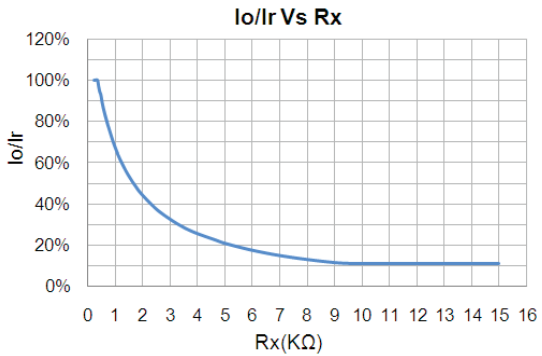
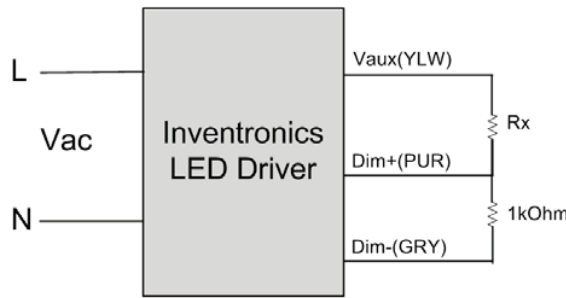
The dimmer control may be operated from either a dimmer or from an input signal of 0 – 10 Vdc. The recommended implementation is provided below.



Implementation 1: DC Input



Implementation 2: External Resistor



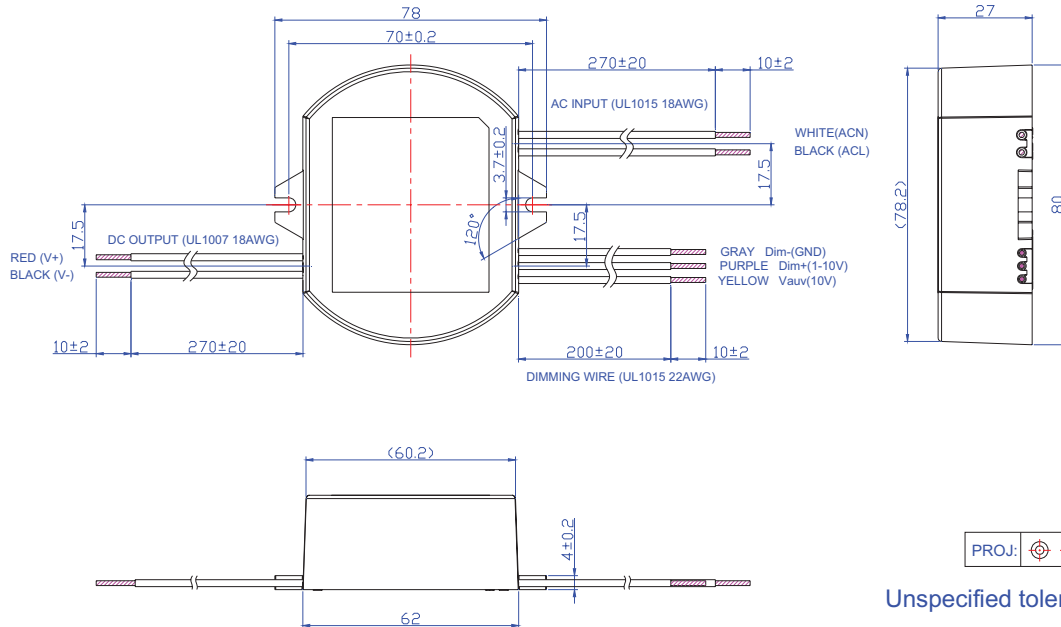
Implementation 3: External Resistor

Notes:

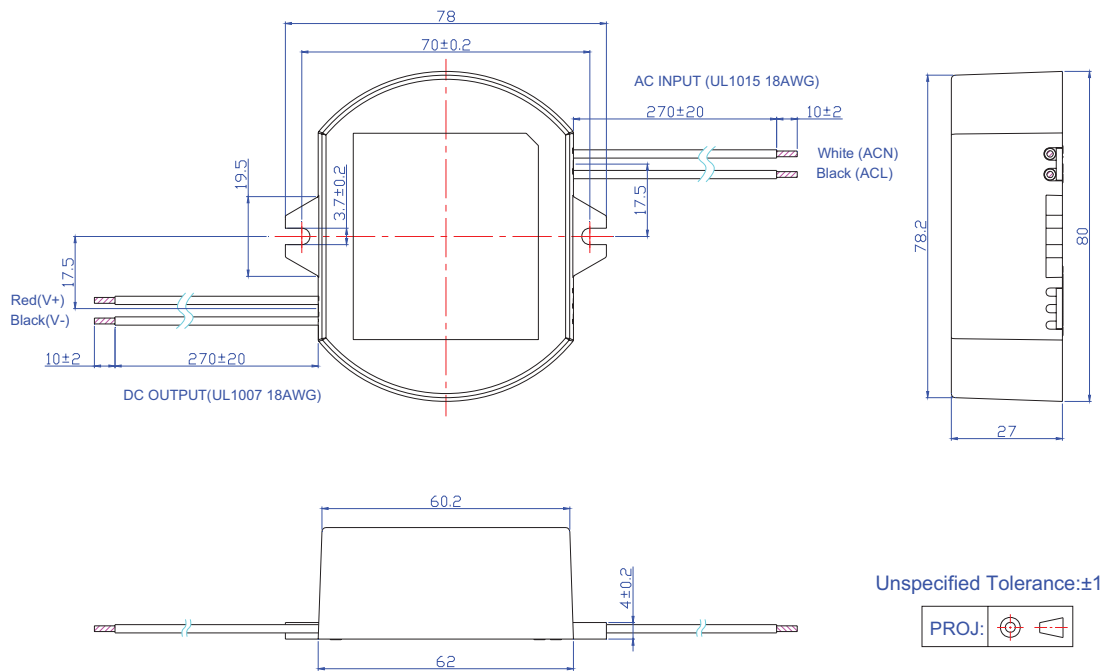
1. Do not connect the Dim- to the V-, otherwise, the LED driver cannot work normally.
2. If 0-10V dimming is not used, Dim + can be either open or connected to Vaux.

Mechanical Outline

EUC-026SxxxDS



EUC-026SxxxPS



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
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℃	-40℃
2012-08-20	F	Derating Curve	/	Updated
		Life time Curve	/	Updated
		Inrush Current	60 A	40 A
		Inrush Current(I ² 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