

Features

- High Efficiency (Up to 88%)
- Active Power Factor Correction (Typical 0.95)
- Constant Output Voltage
- Waterproof (IP67)
- All-Round Protection: OVP, SCP, OCP, OTP
- Comply With UL8750 & EN61347 Safety Regulations
- Comply With FCC Part15 Class B



Description

The EUV-052SxxxST 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, over current protection and over temperature protection.

Models

Output Voltage	Input Voltage Range	Output Current Range	Max. Output Power	Typical Efficiency (1)	Power Factor		Model Number (2)
					110Vac	220Vac	
24 Vdc	90 ~ 305 Vac	0~2170mA	52 W	85%	0.96	0.95	EUV-052S024ST(3)
36 Vdc	90 ~ 305 Vac	0~1450mA	52 W	86%	0.96	0.95	EUV-052S036ST(3)
48 Vdc	90 ~ 305 Vac	0~1080mA	52 W	88%	0.96	0.95	EUV-052S048ST(4)

Notes: (1) Measured at full load and 220 Vac input.

(2) A suffix –xxxx may be added to denote variations or modifications to the base product, where x can be any alphanumeric character or blank.

(3) Class 2 output (USR & CNR).

(4) Class 2 output (USR), Non-Class 2 output (CNR).

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	90 V	-	305 V	
Input Frequency	47 Hz	-	63 Hz	
Leakage Current	-	-	0.75 mA	At 277Vac 60Hz input
Input AC Current	-	-	0.8 A	Measured at full load and 100 Vac input.
	-	-	0.4 A	Measured at full load and 220 Vac input.
Inrush Current	-	-	60 A	At 230Vac input 25°C Cold Start. Duration=100µs

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Voltage Tolerance	-5%		5%	

Specifications are subject to changes without notice.

Output Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
No Load Output Voltage Vo = 24 V Vo = 36 V Vo = 48 V			28V 40V 52V	
Ripple and Noise Vo = 24 V Vo = 36 V Vo = 48 V	- - -	- - -	3 V 4 V 4 V	Load conditions, Measured by 20 MHz bandwidth oscilloscope and the output paralleled a 0.1 uF ceramic capacitor and a 10 uF electrolytic capacitor.
Line Regulation	-	-	2%	
Load Regulation	-	-	3%	
Turn-on Delay Time	-	0.6 s	1.0 s	Measured at 110Vac input.
	-	0.3 s	0.5 s	Measured at 220Vac input.
Output Overshoot / Undershoot	-	-	10%	When power on or off.

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

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 Current Protection	1.1 Io	1.40 Io	1.70 Io	Hiccup mode. The power supply shall be self-recovery when the fault condition is removed.
Over Temperature Protection	Hiccup mode. When the case temperature is higher than 110°C, the power supply will turn off automatically; when the case temperature is lower than 75°C, the power supply will be auto recovery.			
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 Vo = 24 V Vo = 36 V Vo = 48 V	83%	84%	-	Measured at full load and 110 Vac input.
	84%	85%	-	
	85%	86%	-	
Efficiency Vo = 24 V Vo = 36 V Vo = 48 V	84%	85%	-	Measured at full load and 220 Vac input.
	85%	86%	-	
	87%	88%	-	
No Load Power Dissipation			6 W	

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General Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
MTBF	321,000 hours			Measured at 110Vac input, 80%Load and 25°C ambient temperature (MIL-HDBK-217F)
Life Time	50,000 hours			Measured at 110Vac input, 80%Load, Case temperature=60°C @ Tc point. See the life vs. Tc curve for the details
Dimensions Inches (L × W × H) Millimeters (L × W × H)	6.77 × 1.67 × 1.36 172 × 42.5 × 34.5			
Net Weight	-	480 g	-	

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

Environmental Specifications

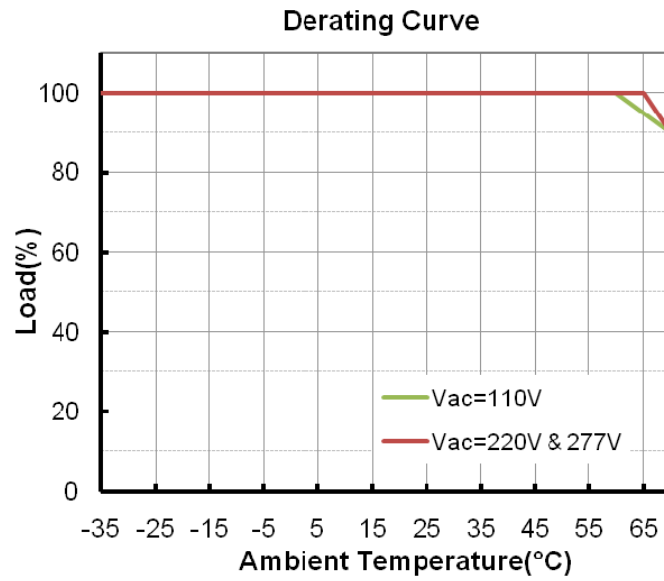
Parameter	Min.	Typ.	Max.	Notes
Operating Temperature	-35 °C	-	+70 °C	Humidity: 10% RH to 100% RH See Derating Curve for more details
Storage Temperature	-40 °C	-	+85 °C	Humidity: 5% RH to 100% RH

Safety & EMC Compliance

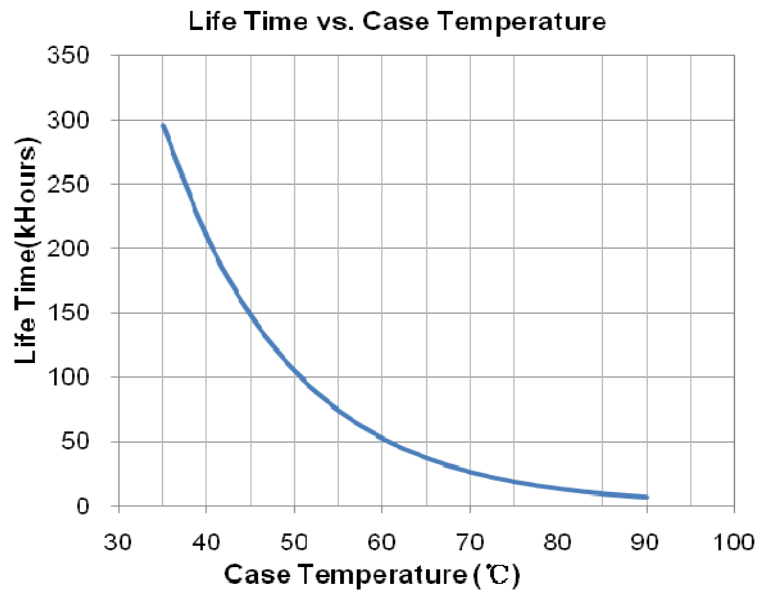
Safety Category	Standard
CUL	UL8750, UL935, UL1012, UL1310 Class 2, CSA-C22.2 No. 107.1, CSA C22.2 NO. 223-M91 Class 2
CE	EN 61347-1, EN61347-2-13
EMI Standards	Notes
EN 55015	Conducted emission Test & Radiated emission Test
EN 61000-3-2	Harmonic current emissions
EN 61000-3-3	Voltage fluctuations & flicker
FCC	FCC Part 15 Class B, ANSI C63.4: 2009.
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: Level 3, Criteria A
EN 61000-4-5	Surge Immunity Test: AC Power Line: line to line 4 kV, line to earth 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

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Derating Curve

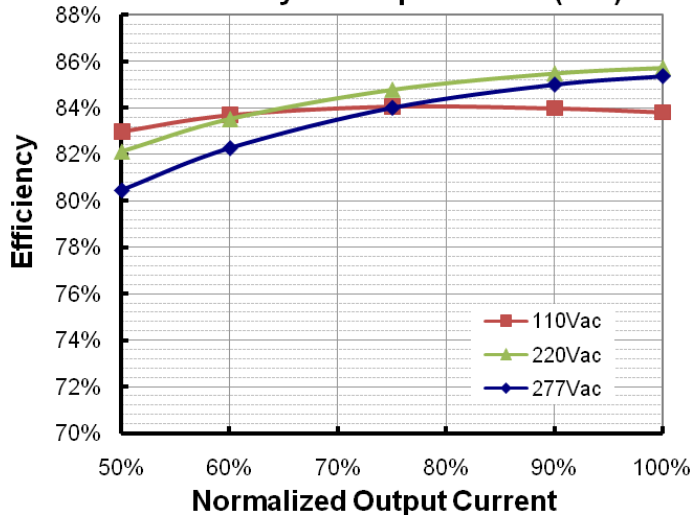


Life Time vs. Case Temperature Curve

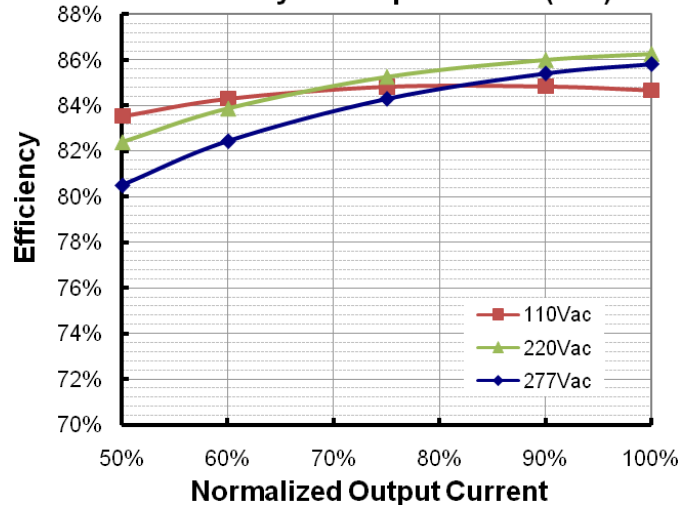


Efficiency vs. Load

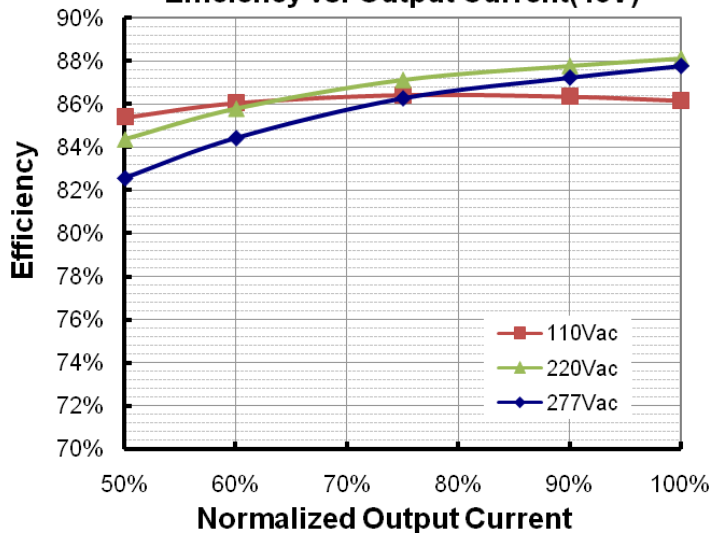
Efficiency vs. Output Current(24V)



Efficiency vs. Output Current(36V)

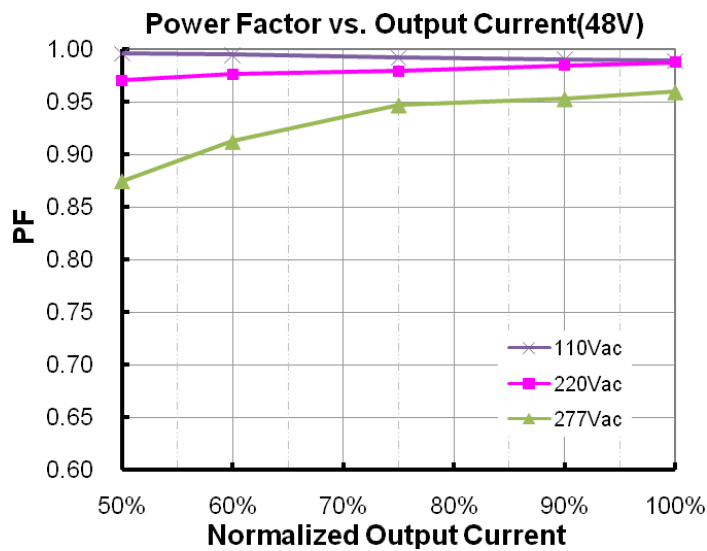
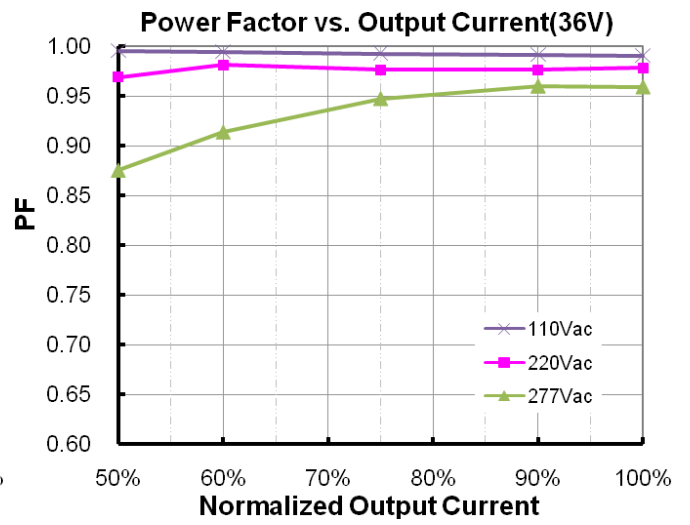
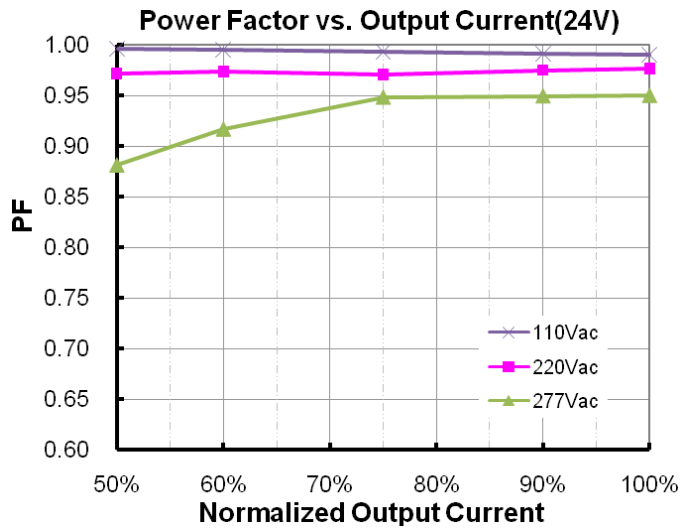


Efficiency vs. Output Current(48V)



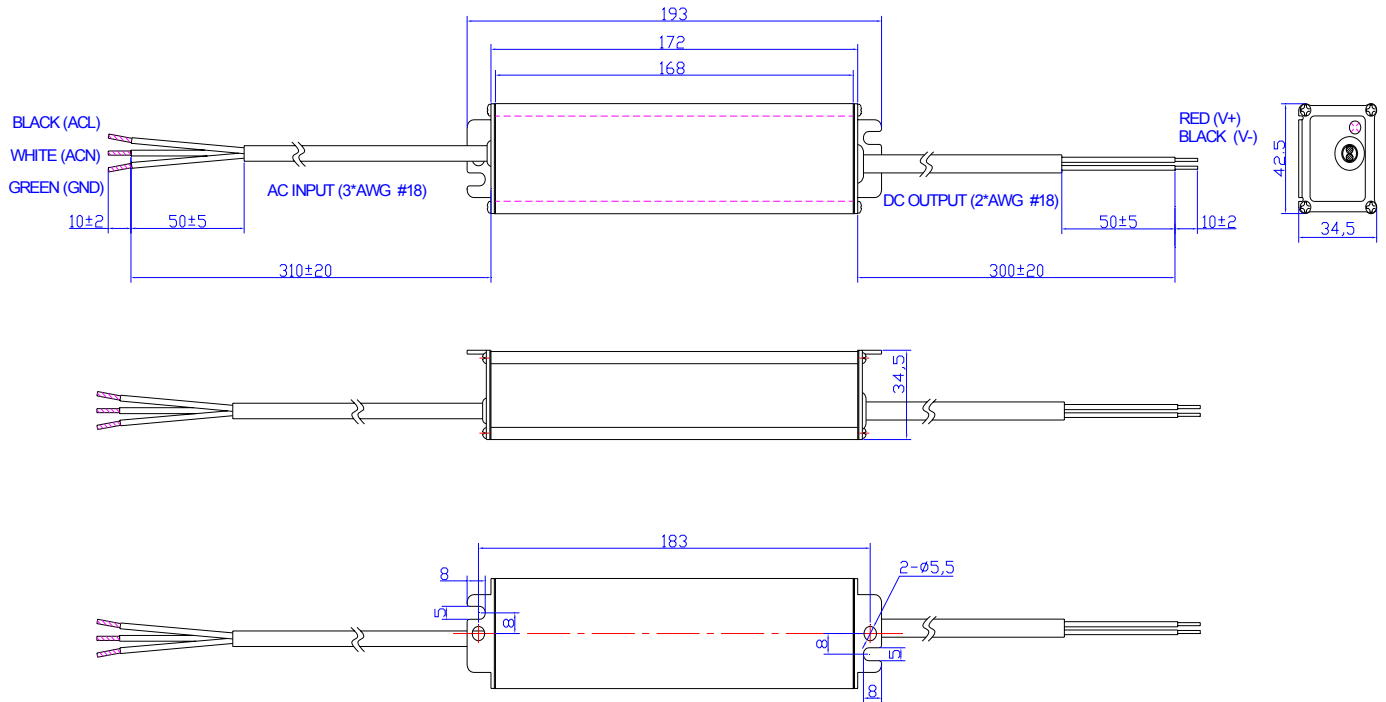
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Power Factor Characteristics



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Mechanical Outline



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
2012-4-24	A	Datasheets Release	/	/
2012-05-25	B	OTP	/	Added
2012-06-06	C	Life time vs. Tc Curve	/	Added
		Notes of life time	/	Updated
2012-7-2	D	Description of OTP	/	Updated