Features

- High Efficiency (Up to 93.0%)
- Constant Voltage Output
- Input surge protection: 4kV line-line, 6kV line-earth
- All-Around Protection: OVP, OCP, SCP, OTP
- Waterproof (IP67)
- SELV Output
- Suitable for Independent Use

Description

The *EUV-300SxxxSV* series is a 300W, constant-voltage outdoor LED driver that operates from 90-305 Vac input with excellent power factor. It is created for high bay, high mast, arena and roadway lights. 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, over current, short circuit, and over temperature.

Models

Output Voltage	Input Voltage Range(1)	Output Current Range	Max. Output Power	Typical Efficiency (2)	Power Factor		Model Number (3)(4)
					110Vac	220Vac	
12 Vdc	90 ~ 305 Vac	0~22.9 A	275 W	91.5%	0.99	0.93	EUV-300S012SV
24 Vdc	90 ~ 305 Vac	0~12.5 A	300 W	91.0%	0.99	0.96	EUV-300S024SV
28 Vdc	90 ~ 305 Vac	0~10.71 A	300 W	91.5%	0.99	0.96	EUV-300S028SV
36 Vdc	90 ~ 305 Vac	0~8.33 A	300 W	92.0%	0.99	0.96	EUV-300S036SV
42 Vdc	90 ~ 305 Vac	0~7.14 A	300 W	92.0%	0.99	0.96	EUV-300S042SV
48 Vdc	90 ~ 305 Vac	0~6.25 A	300 W	92.5%	0.99	0.96	EUV-300S048SV
54 Vdc	90 ~ 305 Vac	0~5.56 A	300 W	93.0%	0.99	0.96	EUV-300S054SV

Notes: (1) Certified input voltage range: 100-240Vac;
(2) Measured at full load and 220 Vac input.
(3) All the models are certificated to Global-mark, except EUV-300S012SV.
(4) SELV output

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage Range	90 Vac	-	305 Vac	
Input Frequency	47 Hz	-	63 Hz	
Leakage Current	-	-	0.75 mA	At 240Vac/60Hz input , grounding effectively
Input AC Current	-	-	3.6 A	Measured at full load and 100 Vac input.
	-	-	1.6 A	Measured at full load and 220 Vac input.

Input Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
Inrush Current(I^2t)	-	-	2.33 A^2s	At 220Vac input, 25℃ cold start, duration=3 ms, 10%Ipk-10%Ipk.
Power Factor	0.90	-	-	At 100-240Vac, 75%-100%load
THD	-	-	20%	

Output Specifications

Parameter		Min.	Typ.	Max.	Notes
Output Voltage Tolerance		-5%	-	5%	At full load condition.
Ripple and Noise (pk-pk)		-	-	2% V_O	Measured by 20 MHz bandwidth oscilloscope and the output paralleled a 0.1 uF ceramic capacitor and a 10 uF electrolytic capacitor.
Output Overshoot / Undershoot		-	-	10%	When power on or off.
Line Regulation		-	-	±1%	At full load condition.
Load Regulation		-	-	±3%	
Turn-on Delay Time		-	0.4 s	1.0 s	Measured at 110Vac input.
		-	0.4 s	1.0 s	Measured at 220Vac input.
Load Dynamic Response	Output Deviation	-	-	5% V_O	R/S: 1 A / uS Load: 25% ~ 75% full load.
	Settling Time	-	-	10 mS	
Temperature coefficient		-	-	0.02%/°C	Case temperature = 0°C ~Tc max

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

General Specifications

Parameter	Min.	Typ.	Max.	Notes
Efficiency at 110 Vac input:				Measured at full load and steady-state temperature in 25°C ambient; (Efficiency will be about 1.5% lower if measured immediately after startup.)
V_O = 12 V	89.0%	89.5%	-	
V_O = 24 V	88.5%	89.0%	-	
V_O = 28 V	89.0%	89.5%	-	
V_O = 36 V	89.5%	90.0%	-	
V_O = 42 V	90.5%	91.0%	-	
V_O = 48 V	90.5%	91.0%	-	
V_O = 54 V	91.0%	91.5%	-	
Efficiency at 220 Vac input:				Measured at full load and steady-state temperature in 25°C ambient; (Efficiency will be about 1.5% lower if measured immediately after startup.)
V_O = 12 V	91.0%	91.5%	-	
V_O = 24 V	90.5%	91.0%	-	
V_O = 28 V	91.0%	91.5%	-	
V_O = 36 V	91.5%	92.0%	-	
V_O = 42 V	91.5%	92.0%	-	
V_O = 48 V	92.0%	92.5%	-	
V_O = 54 V	92.5%	93.0%	-	
No Load Power Dissipation	-	-	4.5 W	

General Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
MTBF	-	278,000 hours	-	Measured at 110Vac input, 80%Load and 25°C ambient temperature (MIL-HDBK-217F)
Lifetime	-	58,000 hours	-	Measured at 220Vac input, 80%Load ,Case temperature=60℃ @ Tc point. 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	-	+60 °C	
Storage Temperature	-40 °C	-	+85 °C	Humidity: 5% RH to 100% RH
Dimensions Inches (L × W × H) Millimeters (L × W × H)	8.82 × 3.86 × 1.75 224 × 98 × 44.5			
Net Weight	-	1540 g	-	

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

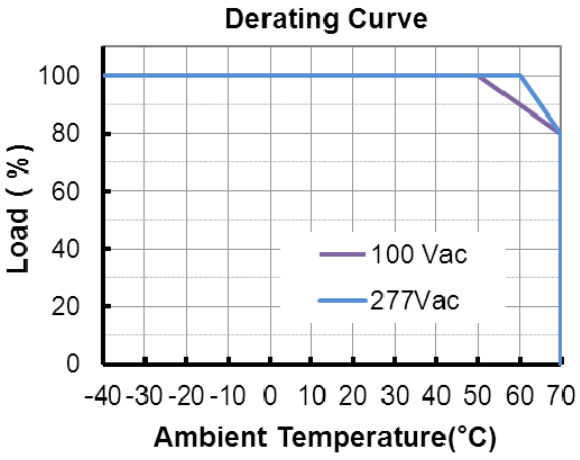
Safety & EMC Compliance

Safety Category	Standard
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
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 61000-4-5	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

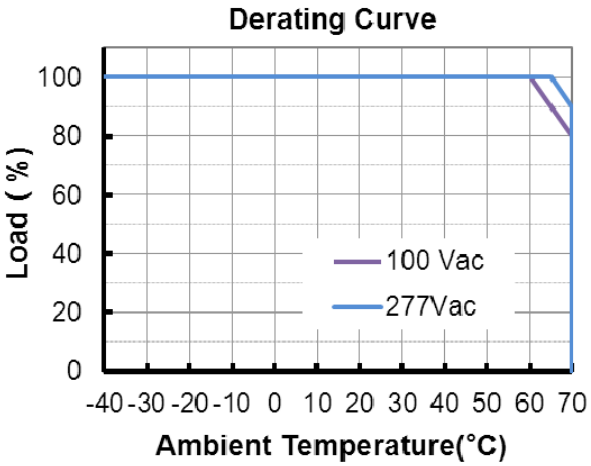
* Note: To perform electric strength (hi-pot) testing, the “GDT ground disconnect” (nut and metal lock sheet) on the driver end-cap should be removed temporarily to prevent the internal gas discharge tube from conducting (as allowed by IEC 60598-1 Clause 10.2). After testing is completed, these items must be reinstalled to restore line-to-earth surge protection and secure the end cap.

Derating Curve

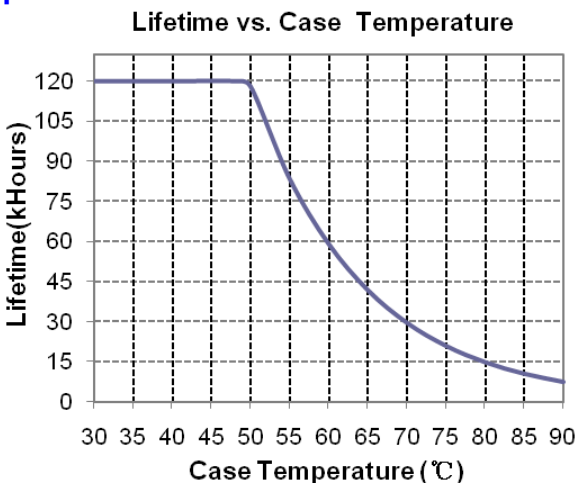
EUV-300S012SV



Others



Lifetime vs. Case Temperature Curve

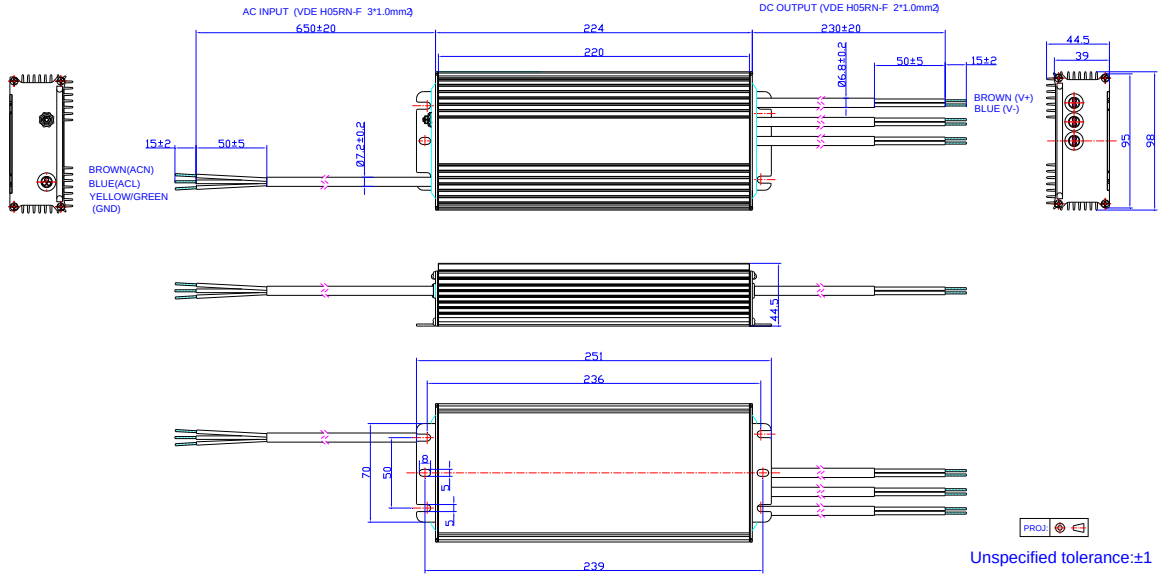


Protection Functions

Parameter	Min.	Typ.	Max.	Notes
Over Current Protection	130% I_O	165% I_O	200% I_O	Hiccup mode. The power supply shall be self-recovery when the fault condition is removed.
Over Temperature Protection	Auto Recovery, returning to normal after over temperature is removed.			
Short Circuit Protection	No damage will occur when any output is short circuited. The output shall return to normal when the fault condition is removed.			
Over Voltage Protection	Limits output voltage at no load and in case the normal voltage limit fails.			

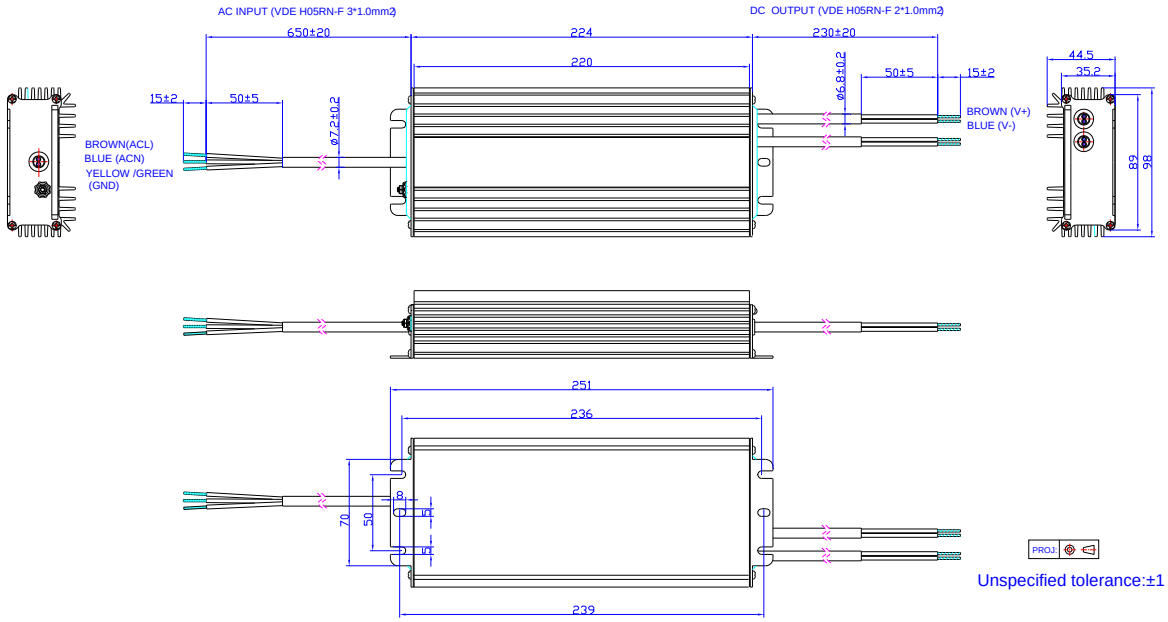
Mechanical Outline

EUV-300S012SV



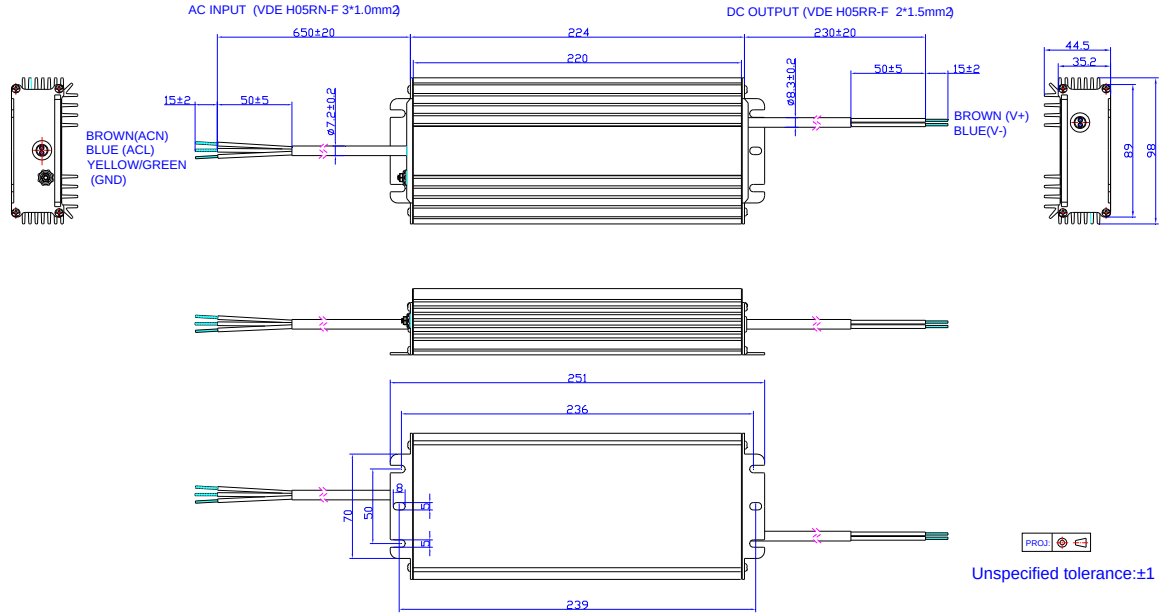
Note: The 3 DC output cables are connected in parallel internally because one 1.0mm^2 wire can only carry 10A. Please connect the 3 brown wires together and 3 blue wires together in application, or ensure each cable carries same current.

EUV-300S024/036/042SV

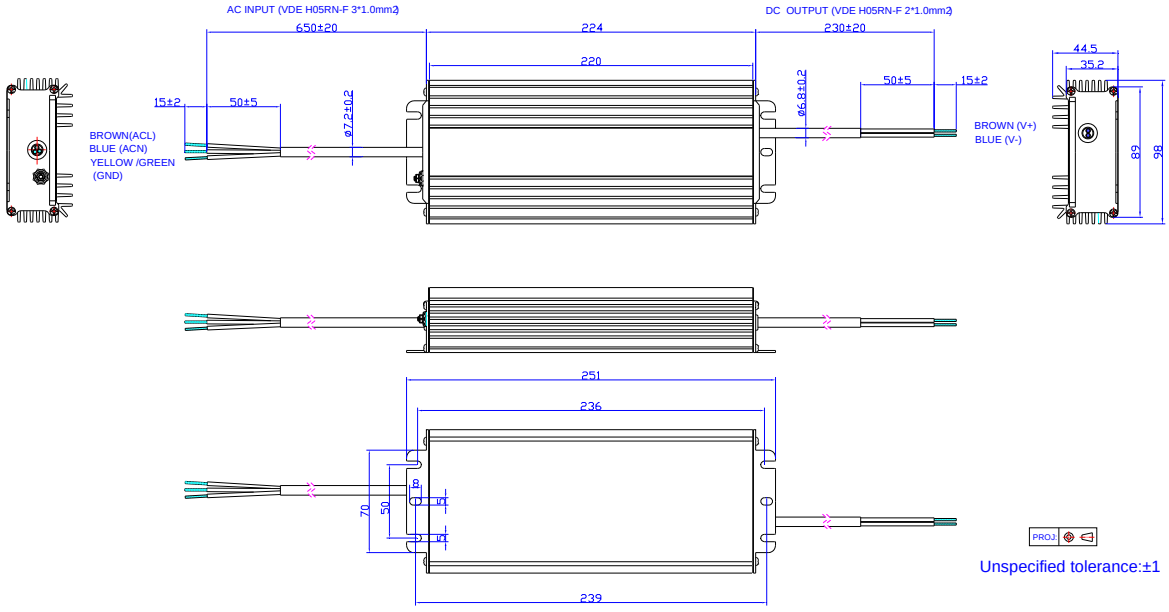


Note: The 2 DC output cables are connected in parallel internally because one 1.0mm^2 wire can only carry 10A. Please connect the 2 brown wires together and 2 blue wires together in application, or ensure each cable carries same current.

EUV-300S028SV



EUV-300S048/054SV



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
2010-09-15	A	First Release.		
2011-07-20	B	MTBF	Delete 24V	Add 28V
		Life	Use Tcase data to replace the old test condition	
2012-02-20	C	Efficiency of 24V,28V,36V	/	2% Lower
2012-3-27	D	Notes of Life time	Case temperature=80°C	Measured at 220Vac input, 80%Load and 45°C ambient temperature
2012-5-04	E	Efficiency of 28V	/	0.5% Higher
		Mechanical Outline	/	Updated
		Life time Curve	/	added
		Life time & MTBF	/	Corrected
2012-7-17	F	Max Case Temperature	/	Updated
2012-8-14	G	Deleted 42V Model & Added 54VModel	/	Updated
		Efficiency of 48V Model	/	0.5% Lower
		Input AC Current @100Vac	3.3 A	3.5 A
		MTBF	250,000Hrs	200,000Hours
		Life Time	100,000Hrs @ Tc70°C	50,000Hrs @ Tc65°C
		Min Operating Temperature/ Derating Curve	-35°C	-40°C
2013-01-05	H	Inrush current	50A	150A
		Min PF and max THD	/	Added
		Temperature Coefficient	/	Added
		MTBF	Min 250,000 hours	Typ.278,000 hours
		Life time	Min 50,000 hours	Typ.58,000 hours
		Life time curve	/	Updated
		Input AC Current @100Vac	Max3.5 A	Typ3.3A, Max3.5A
2013-02-26	I	Efficiency of 48V, 54V	/	0.5%lower
2013-03-11	J	Over Current Protection	110%,155%,180%	130%,165%,200%
2013-12-13	K	Turn-on delay time	0.1s,0.2s	0.4s,1.0s
2014-09-26	L	Derating curve	/	Updated
		Derating curve of EUV-300S012SV	/	Added

		Mechanical outline of EUV-200S012SV	/	Updated
2015-09-11	M	Format	/	Updated
		External Grounding Screw Solution	/	/
		Features	/	Updated
		Description	/	Updated
		Models	EUV-300S042SV	Added
		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
		Environmental Specifications	/	Delete
		Safety & EMC Compliance	/	Update
		Protection Functions	/	Update
		Mechanical Outline	/	Update