Features

- High Efficiency (Up to 92.5%)
- Constant Voltage Output
- Input Surge Protection: DM 4kV, CM 6kV
- All-Around Protection: OVP, OCP, SCP, OTP
- IP67
- SELV Output
- 5 Years Warranty

Description

The *EUV-200SxxxSV* series is a 200W, constant-voltage LED driver that operates from 90-305 Vac input with excellent power factor. It is created for many lighting applications including high bay, high mast, sports and roadway, etc. 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)	Typical Power Factor		Model Number (3)(5)
					120Vac	220Vac	
12 Vdc	90 ~ 305 Vac	0~15.0 A	180 W	91.0%	0.99	0.97	EUV-200S012SV
24 Vdc	90 ~ 305 Vac	0~8.33 A	200 W	92.0%	0.99	0.97	EUV-200S024SV(4)
36 Vdc	90 ~ 305 Vac	0~5.56 A	200 W	92.0%	0.99	0.97	EUV-200S036SV
42 Vdc	90 ~ 305 Vac	0~4.76 A	200 W	92.5%	0.99	0.97	EUV-200S042SV
48 Vdc	90 ~ 305 Vac	0~4.17 A	200 W	92.5%	0.99	0.97	EUV-200S048SV(4)
54 Vdc	90 ~ 305 Vac	0~3.70 A	200 W	92.5%	0.99	0.97	EUV-200S054SV

Notes: (1) Certified Voltage range 100-240Vac.
(2) Measured at 100% load and 220 Vac input.
(3) All the models are certificated to CB, CCC and ENEC, except EUV-200S012SV.
(4) EUV-200S024SV and EUV-200S048SV are certificated to BIS.
(5) SELV output.
(6) For BIS models add suffix -3000.

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	90 Vac	-	305 Vac	
Input Frequency	47 Hz	-	63 Hz	
Leakage Current	-	-	0.70 mA	IEC60598-1; 240Vac/ 60Hz, grounding effectively
Input AC Current	-	-	2.5 A	Measured at 100% load and 100 Vac input.
	-	-	1.1 A	Measured at 100% load and 220 Vac input.

Input Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
Inrush Current(I^2t)	-	-	1.5 A^2s	At 220Vac input 25℃ Cold Start, duration=1.2 ms, 10%Ipk-10%Ipk
PF	0.90	-	-	At 100-240 Vac, 50-60Hz, 100% Load
THD	-	-	20%	

Output Specifications

Parameter		Min.	Typ.	Max.	Notes
Output Voltage Tolerance		-2.5%	-	2.5%	EUV-200S042SV. At 100% load condition.
		-5%	-	5%	Others. At 100 % 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 100% load condition.
Load Regulation		-	-	±2%	
Turn-on Delay Time		-	0.9 s	1.5 s	Measured at 110Vac input, 100% Load
		-	0.5 s	1.0 s	Measured at 220Vac input, 100% Load
Load Dynamic Response	Output Deviation	-	-	5% V_O	R/S: 1 A/uS Load: 25% ~ 75% 100% load.
	Settling Time	-	-	10 mS	
Temperature coefficient		-	0.05%/°C	-	Case temperature = 0°C ~Tc max

General Specifications

Parameter	Min.	Typ.	Max.	Notes
Efficiency at 110 Vac input:				Measured at 100% load and steady-state temperature in 25°C ambient; (Efficiency will be about 1.0% lower if measured immediately after startup.)
V_O = 12 V	88.0%	89.0%	-	
V_O = 24 V	89.0%	90.0%	-	
V_O = 36 V	89.0%	90.0%	-	
V_O = 42 V	89.5%	90.5%	-	
V_O = 48 V	89.5%	90.5%	-	
V_O = 54 V	89.5%	90.5%	-	
Efficiency at 220 Vac input:				Measured at 100% load and steady-state temperature in 25°C ambient; (Efficiency will be about 1.0% lower if measured immediately after startup.)
V_O = 12 V	90.0%	91.0%	-	
V_O = 24 V	91.0%	92.0%	-	
V_O = 36 V	91.0%	92.0%	-	
V_O = 42 V	91.5%	92.5%	-	
V_O = 48 V	91.5%	92.5%	-	
V_O = 54 V	91.5%	92.5%	-	
No Load Power Dissipation	-	-	3 W	

General Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
MTBF	-	276,000 hours	-	Measured at 110Vac input, 80%Load and 25°C ambient temperature (MIL-HDBK-217F)
Lifetime	-	95,200 hours	-	Measured at 220Vac input, 80%Load and 60°C case temperature; See life time vs. Tc curve for the details
Operating Case Temperature for Safety Tc_s	-35 °C	-	+90 °C	@90-305 Vac
	-40 °C	-	+90 °C	@198-305 Vac
Operating Case Temperature for Warranty Tc_w	-35 °C	-	+70 °C	@90-305 Vac, Case temperature for 5 years warranty Humidity: 10% RH to 95% RH
	-40 °C	-	+70 °C	@198-305 Vac, Case temperature for 5 years warranty Humidity: 10% RH to 95% RH
Storage Temperature	-40 °C	-	+85 °C	Humidity: 5% RH to 95% RH
Dimensions Inches (L × W × H) Millimeters (L × W × H)	7.83 × 2.66 × 1.56 199 × 67.5 × 39.5			With mounting ear 8.90 × 2.66 × 1.56 226 × 67.5 × 39.5
Net Weight	-	1150 g	-	

Safety & EMC Compliance

Safety Category	Standard
ENEC & CE	EN 61347-1, EN 61347-2-13
CB	IEC 61347-1, IEC 61347-2-13
CCC	GB 19510.1, GB 19510.14
BIS	IS 15885(PART2/SEC13)
KS	KS C 7655
EMI Standards	**Notes**
EN 55015/GB 17743/KN 15(1)	Conducted emission Test & Radiated emission Test
EN 61000-3-2/GB 17625.1	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: Differential Mode 4 kV, Common Mode 6 kV (2)
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

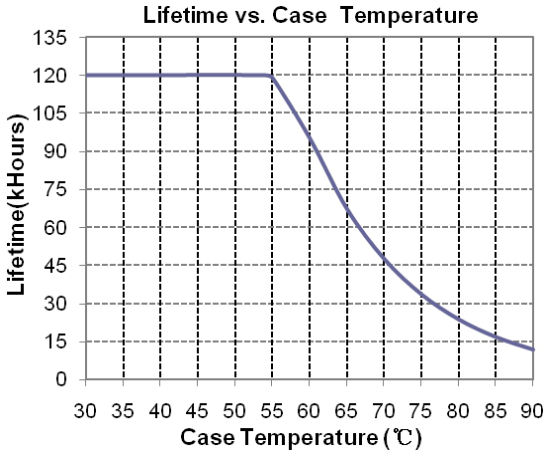
Safety & EMC Compliance (Continued)

EMS Standards	Notes
EN 61547	Electromagnetic Immunity Requirements Applies To Lighting Equipment

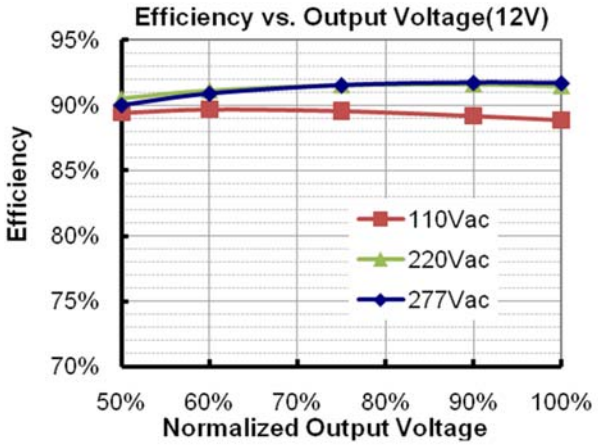
Note: (1) This LED driver meets the EMI specifications above, but EMI performance of a luminaire that contains it depends also on the other devices connected to the driver and on the fixture itself.

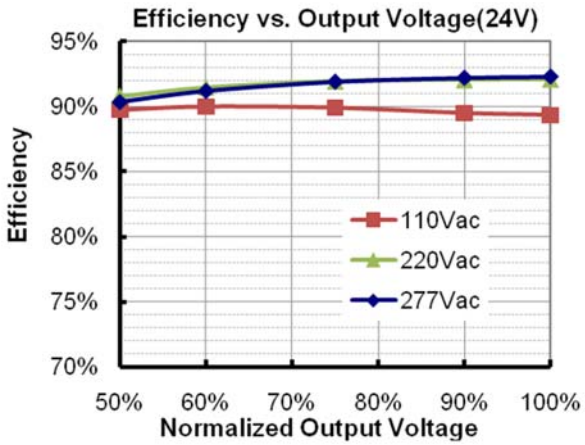
(2) To perform electric strength (hi-pot) testing, the "GDT ground disconnect" (nut and metal lock sheet) on the driver end-cap should be removed temporarily to prevent the internal gas discharge tube from conducting (as allowed by IEC 60598-1 Clause 10.2). After testing is completed, these items must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

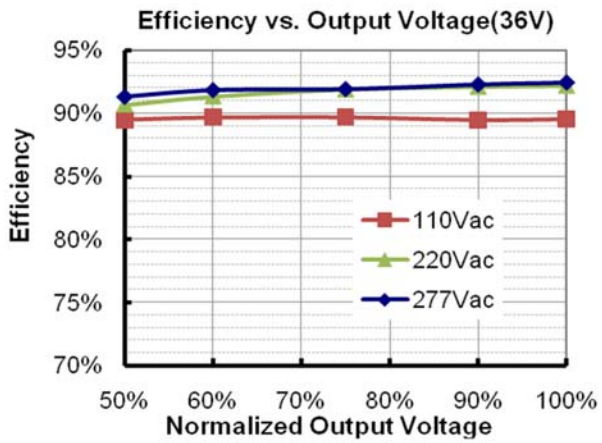
Lifetime vs. Case Temperature Curve

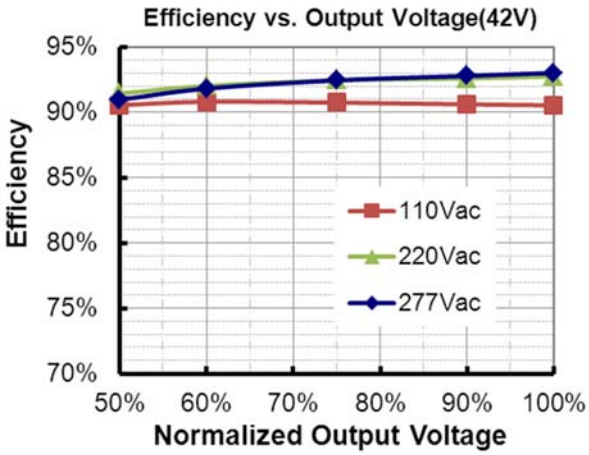


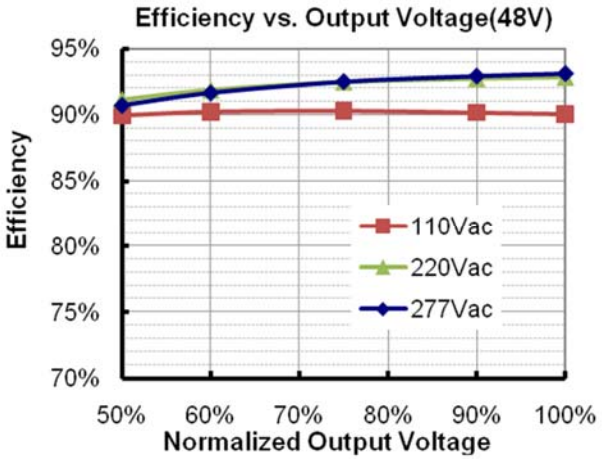
Efficiency vs. Load

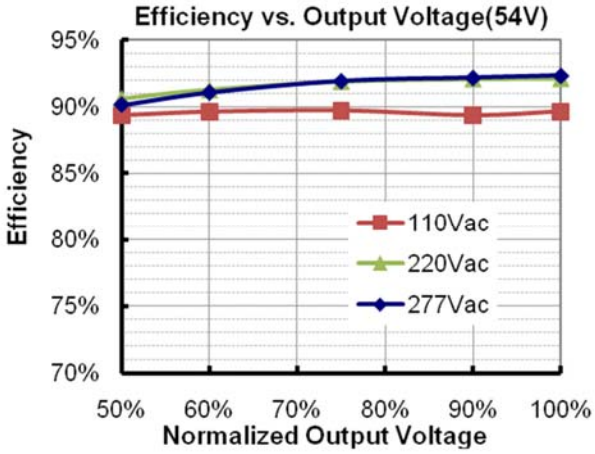




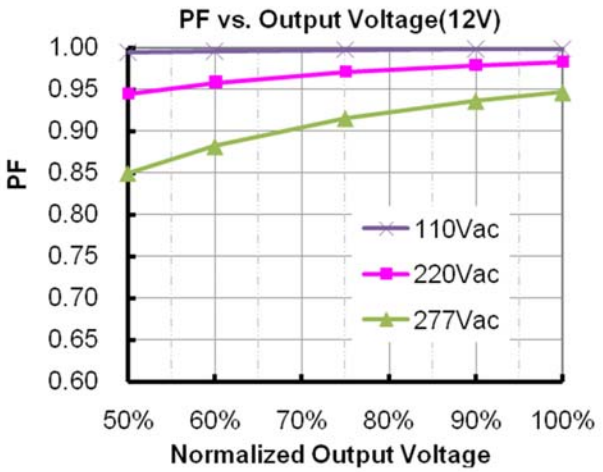


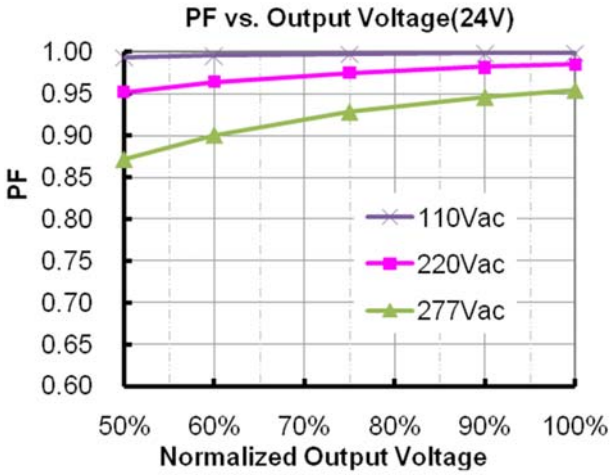


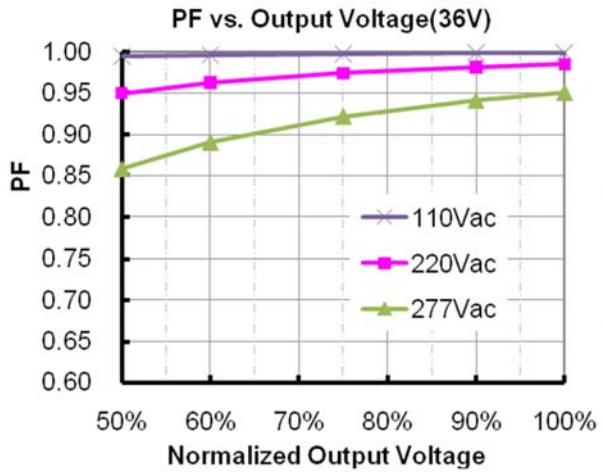


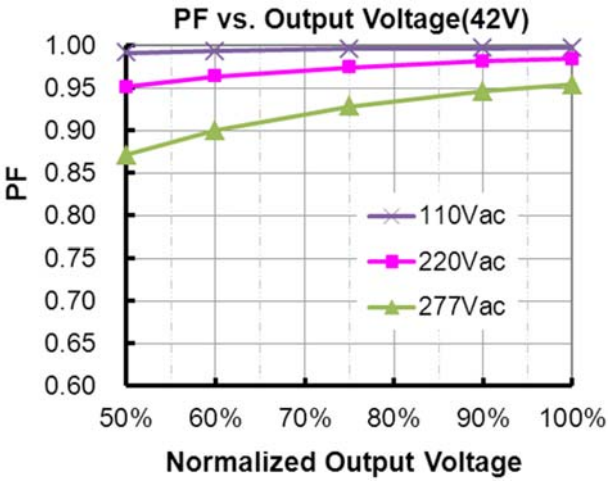


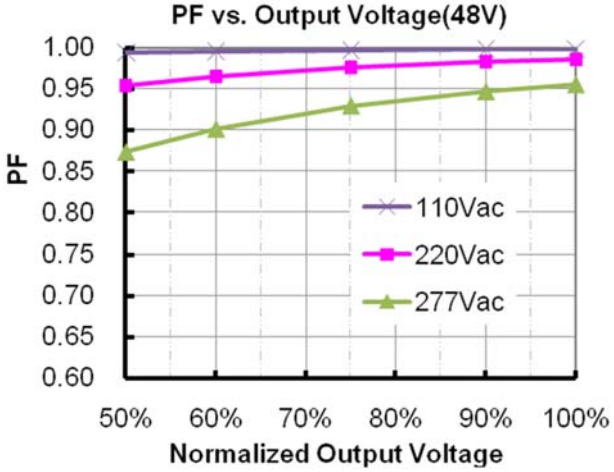
Power Factor Characteristics

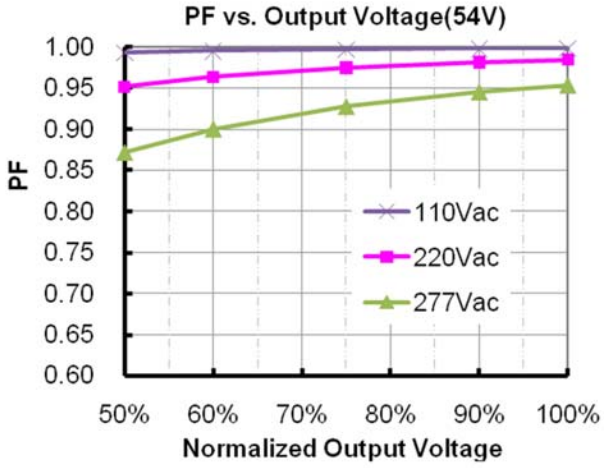




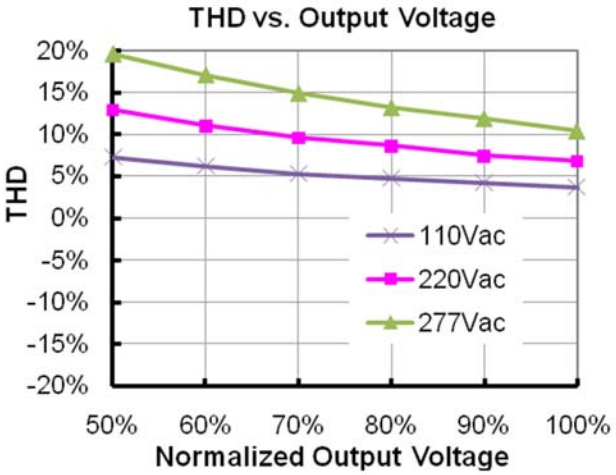








Total Harmonic Distortion Curve (24V)

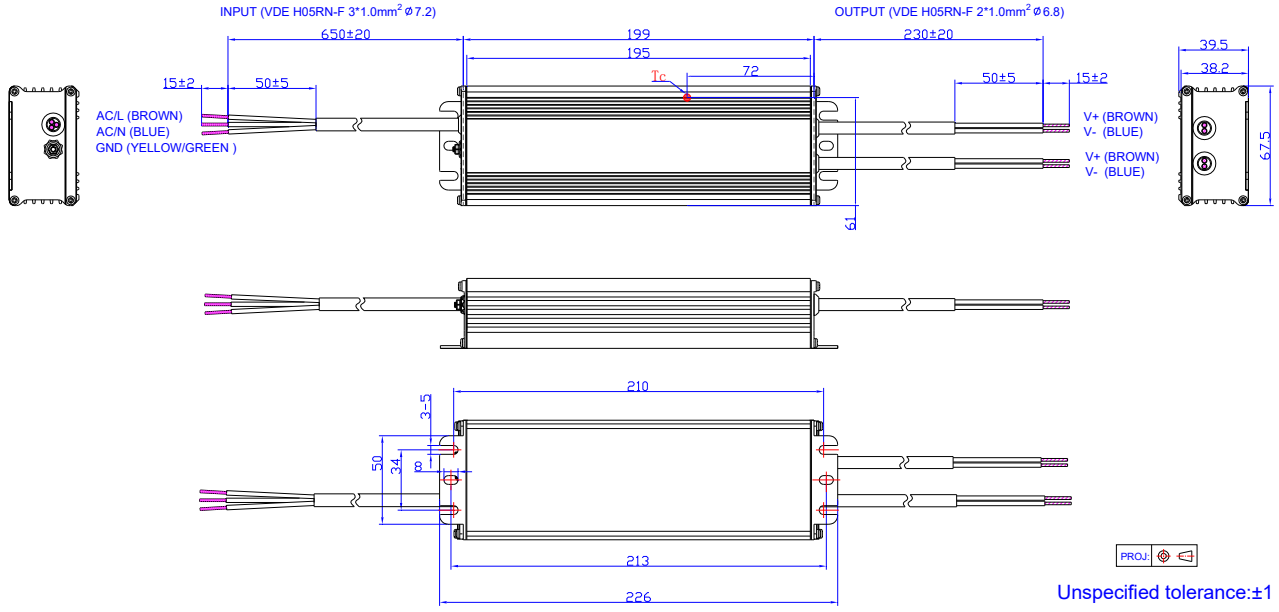


Protection Functions

Parameter	Min.	Typ.	Max.	Notes
Over Current Protection	120% I_O	140% 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.			

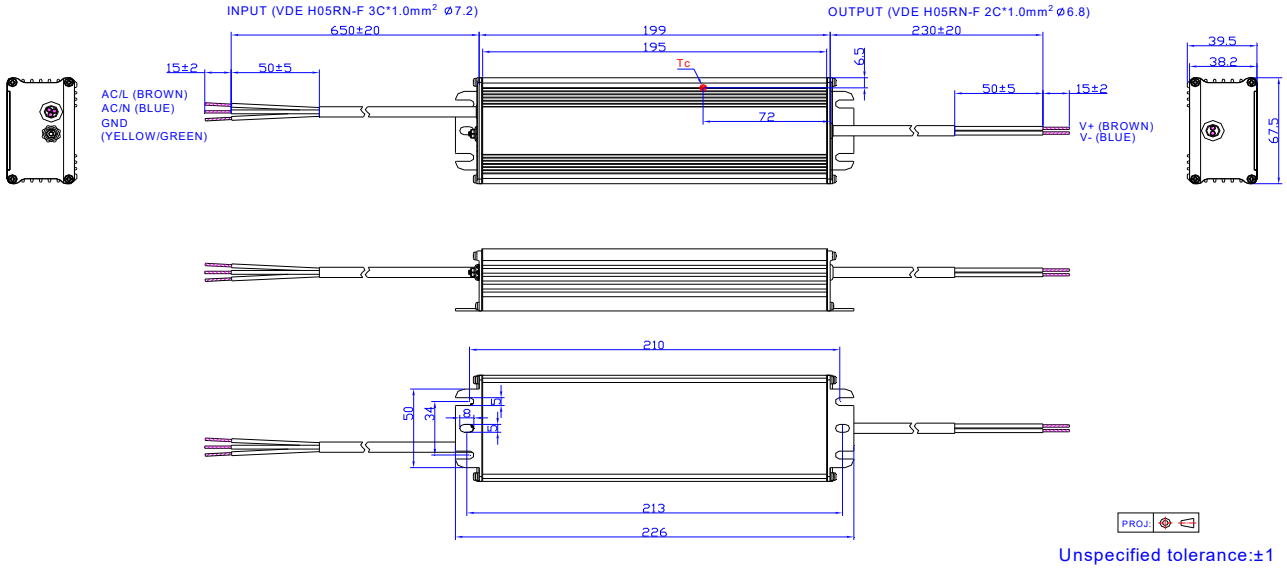
Mechanical Outline

EUV-200S012SV



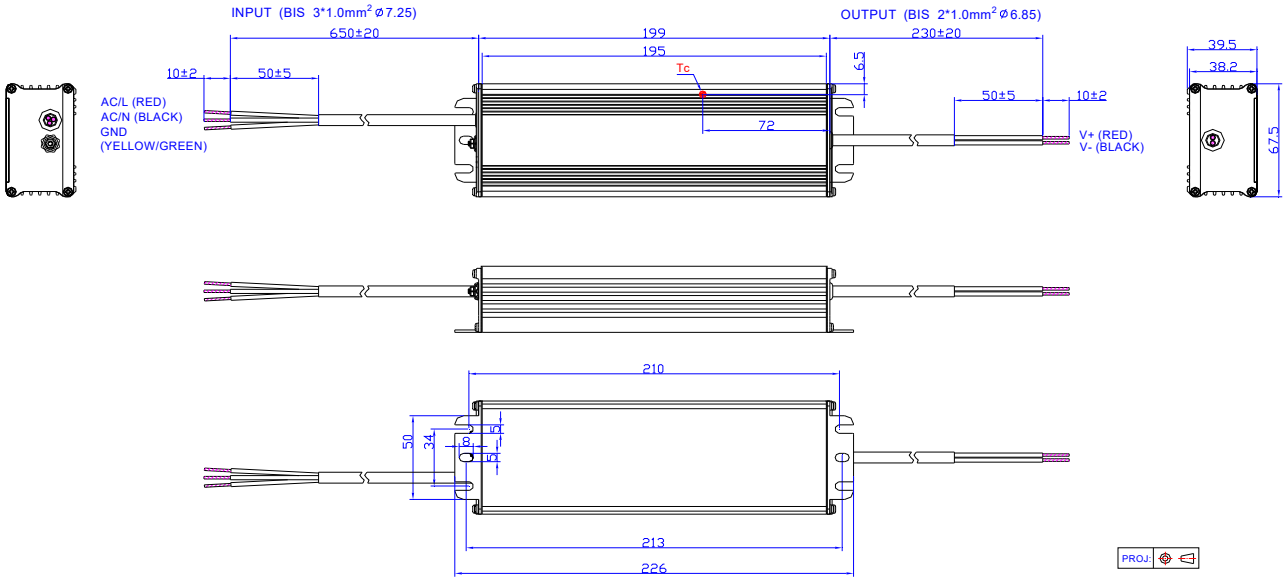
Note: The 2 DC output cables are connected in parallel internally because one 1.0mm2 wire can only carry 10A. Please connect the 2 brown wires together and 2 blue wires together in application, or ensure each cable carries same current.

Others



Unspecified tolerance:±1

EUV-200S024/048SV-3000



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	
2009-12-03	A	Change the Max. output current/power and efficiency of 12V. Update the Ambient Temperature Derating Curve				
2009-12-16	B	Add note for mechanical outline.				
2010-05-31	C	Add star rank for recommended models	/		☆: Popular model.	
		Add Leakage Current in Input Specifications	/		Max. 0.75 Ma At 277Vac 50Hz input	
		Standardize the tolerance in Mechanical Outline	/		/	
2012-06-12	D	42V,50V,52V, 81V, 105V Models	/		Deleted	
		Turn-on delay time	0.7 s	1.0 s	0.9 s	1.5 s
			0.3 s	0.5 s	0.5 s	1.0 s
		Efficiency of EUV-200S054SV @ 110 Vac	/		1 % lower	
		Life Time Curve	/		Added	
		Mechanical Outline	/		Updated	
2012-7-17	E	Max Case Temperature	/		Updated	
2012-8-14	F	Efficiency of 54V Model @220 Vac	/		0.5% Lower	
		Efficiency of 36V Model	/		0.5% Lower	
		OCP	Typ 1.3Io	Max 1.7Io	Typ 1.4Io	Max 1.8Io
		Min PF	/		Added	
		Max THD	/		Added	
		Temperature coefficient	/		Added	
		Life time Curve	/		Updated	
		MTBF, life time Typical	/		Added	
		EN61000-4-5	line to line 2 Kv, line to earth 4 Kv		line to line 4 Kv, line to earth 6 Kv	
		Inrush Current(I^2t)	/		Added	
2012-12-06	G	No Load Power Dissipation	2 W		3 W	
2012-12-28	H	Derating Curve	/		Updated	
		Efficiency Curve of all models	/		Added	
		PF Curve of all models	/		Added	
		THD Curve of 24V Model	/		Added	
2013-11-26	I	Input Specifications--Load Range of PF & THD	75%load-100%load		100%load	
2015-09-11	M	Format	/		Update	

Revision History (Continued)

Change Date	Rev.	Description of Change		
		Item	From	To
2015-09-11	M	External Grounding Screw Solution	/	/
		Features	/	Update
		Description	/	Update
		Models	EUV-200S042SV	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	/	Deleted
		Safety & EMC Compliance	/	Updated
		Protection Functions	/	Updated
		Mechanical Outline	/	Updated
2016-03-31	N	KS	/	Addedd
		Models	/	Updated
		General Specifications	With mounting ear	Added
		General Specifications	Net Weight	Updated
		Safety & EMC Compliance	/	Updated
2017-11-14	O	CCC	/	Added
		Features	5 years warranty	Added
		Models	Notes(3)	Updated
		Input Specifications	Leakage Current	Updated
		PF/THD	Notes	Updated
		Turn-on Delay Time	Notes	Updated
		Temperature coefficient	Max 0.05%/°C	Typ 0.05%/°C
		General Specifications	Operating Case Temperature for Safety Tc_s	Updated
		General Specifications	Operating Case Temperature for Warranty Tc_w	Updated
		Mechanical Outline	/	Updated
2019-03-12	P	CCC	/	Updated
		ENEC	/	Added
		Description	/	Updated

Revision History (Continued)

Change Date	Rev.	Description of Change		
		Item	From	To
2019-03-12	P	Models	Notes(3)	Updated
		General Specifications - Net Weight	1080g	1150g
		Safety & EMC Compliance	/	Updated
2020-01-06	Q	KCC Logo	/	Added
		Independent Logo	/	Added
		Features	4kV line-line, 6kV line-earth	DM 4kV, CM 6kV
		Features	Waterproof (IP67)	IP67
		Features	Suitable for Independent Use	Deleted
		Safety &EMC Compliance	CB	Added
		Safety &EMC Compliance	EN 55015/GB 17743(1)	EN 55015/GB 17743/KN 15(1)
		Safety &EMC Compliance	EN 61000-4-5	Updated
		Derating Curve	/	Deleted
		RoHS Compliance	/	Updated
		Format	Page footer	Updated
2020-03-09	R	BIS Logo	/	Added
		Models	Notes(4)(6)	Added
		Safety &EMC Compliance	BIS	Added
		Mechanical Outline	EUV-200S024/048SV-3000	Added
2021-07-16	S	Mechanical Outline	/	Updated