Features

- Ultra High Efficiency (Up to 91.0%)
- Six Channels Output
- Active Power Factor Correction (0.99 Typical)
- Constant Current Output
- Lightning Protection
- All-Around Protection: SCP, OTP, OVP
- IP67
- SELV
- 5 years warranty

Description

The *EUC-240HxxxDV(SV)* series is a 240W, six-channel, constant-current LED driver that operates from 90-305 Vac input with excellent power factor. It is created for flood, tunnel and street 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, short circuit, and over temperature

Models

Output Current (1)	Input Voltage Range(2)	Output Voltage Range	Max. Output Power	Typical Efficiency (3)	Power Factor		Model Number (4)
					120Vac	220Vac	
350 mA	90~305 Vac	57~103Vdc	216 W	91.0%	0.99	0.95	EUC-240H035DV(SV)(5)
700 mA	90~305 Vac	29~57.0Vdc	240 W	91.0%	0.99	0.95	EUC-240H070DV(SV)(5)
1050 mA	90~305 Vac	19~38.0Vdc	240 W	90.5%	0.99	0.95	EUC-240H105DV(SV)(5)
1400 mA	90~305 Vac	15~28.5Vdc	240 W	90.0%	0.99	0.95	EUC-240H140DV(SV)(5)

Notes: (1) The output current is adjustable at factory from 50% to 100%.
(2) Certificated input Voltage range100-240Vac
(3) Measured at 100% load and 220 Vac input
(4) A suffix –xxxx may be added to denote variations or modifications to the base product, where x can be any alphanumeric character or blank.
(5) SELV

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	90 Vac	-	305 Vac	
Input Frequency	47 Hz	-	63 Hz	
Leakage Current	-	-	1 mA	At 277Vac 60Hz input
Input AC Current	-	-	2.9 A	Measured at 100% load and 100 Vac input.
	-	-	1.3 A	Measured at 100% load and 220 Vac input.

Input Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
Inrush Current	-	-	75 A	At 220Vac input, 25℃ cold start, duration=1.2 ms, 10%Ipk-10%Ipk.
Inrush Current(I^2t)	-	-	2 A^2s	
Power Factor	0.90	-	-	At 100-277Vac, 50-60Hz,75% -100% load
THD	-	-	20%	

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output channel	-	6	-	
Output Current Tolerance	-5%	-	5%	
No-load Output Voltage I_O=350 mA I_O=700 mA I_O=1050 mA I_O=1400 mA	 - - - -	 114 V 62 V 41 V 32 V	 119 V 67 V 46 V 37 V	
Output Current Ripple (pk-pk)	-	10% I_O	15% I_O	
Output Current Overshoot / Undershoot	-	8%	10%	At 100% load condition.
Line Regulation	-	-	±1%	
Load Regulation	-	-	±5%	
Turn-on Delay Time	-	1.0 s	2.0 s	Measured at 120Vac input. 75% -100%load
	-	0.5 s	1.5 s	Measured at 220Vac input. 75% -100%load
Temperature coefficient	-	0.03%/°C	-	Case temperature = 0~Tc max

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

Protection Functions

Parameter	Min.	Typ.	Max.	Notes
Over Temperature Protection	-	110 °C	-	When OTP occurs, the output current decreases down to the half of the normal output current. The output shall be auto recovery when case temperature becomes normal.
Short Circuit Protection	Single, dual, triple or four channel short does not affect the normal work of other channels. The driver recovers after short is removed and AC input recycled. Five or six channel short latches the driver and it recovers after the short is removed.			

General Specifications

Parameter	Min.	Typ.	Max.	Notes
Efficiency I_O=350 mA I_O=700 mA I_O=1050 mA I_O=1400 mA	 87.0% 87.0% 86.0% 85.0%	 88.0% 88.0% 87.0% 86.0%	 - - - -	Measured at 100% load, 120Vac input, 25℃ ambient temperature, after the unit is thermally stabilized. It will be about 1% lower, if measured immediately after startup.
Efficiency I_O=350 mA I_O=700 mA I_O=1050 mA I_O=1400 mA	 90.0% 90.0% 89.5% 89.0%	 91.0% 91.0% 90.5% 90.0%	 - - - -	Measured at 100% load, 220Vac input, 25℃ ambient temperature, after the unit is thermally stabilized. It will be about 1% lower, if measured immediately after startup.
Efficiency I_O=350 mA I_O=700 mA I_O=1050 mA I_O=1400 mA	 90.0% 90.0% 89.5% 89.0%	 91.0% 91.0% 90.5% 90.0%	 - - - -	Measured at 100% load, 277Vac input, 25℃ ambient temperature, after the unit is thermally stabilized. It will be about 1% lower, if measured immediately after startup.
MTBF	-	201,400 Hours	-	Measured at 220Vac input, 80%Load and 25°C ambient temperature (MIL-HDBK-217F)
Lifetime	-	101,000 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 ℃	-	+90℃	
Operating Case Temperature for Warranty Tc_w	-40 ℃	-	+70 ℃	Case temperature for 5 years warranty
Storage Temperature	-40 ℃	-	+85 ℃	Humidity: 5% RH to 100% RH
Dimensions Inches (L × W × H) Millimeters (L × W × H)	 8.27× 3.9 × 1.5 210 ×100 × 38			With mounting ear 9.49× 3.9 × 1.5 241×100 × 38
Net Weight	-	1600 g	-	

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

Safety & EMC Compliance

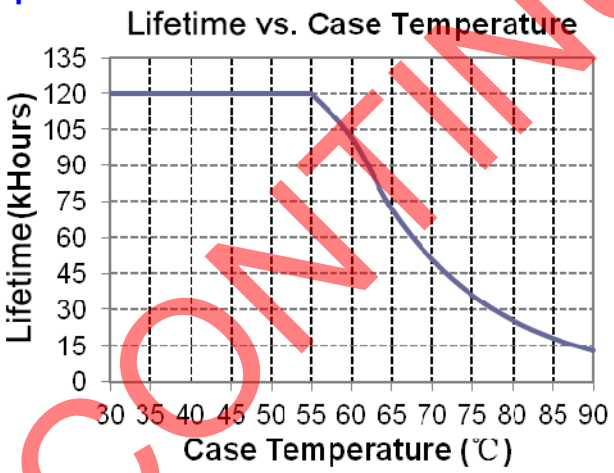
Safety Category	Standard
TUV & CE	EN 61347-1, EN61347-2-13
CB	IEC 61347-1, IEC 61347-2-13
KS	KS C 7655
EMI Standards	**Notes**
EN 55015(1)	Conducted emission Test & Radiated emission Test
EN 61000-3-2	Harmonic current emissions
EN 61000-3-3	Voltage fluctuations & flicker
EMS Standards	**Notes**
EN 61000-4-2	Electrostatic Discharge (ESD): 15 kV air discharge, 8 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
EN 61000-4-5	Surge Immunity Test: AC Power Line: Differential Mode 4 kV, Common Mode 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

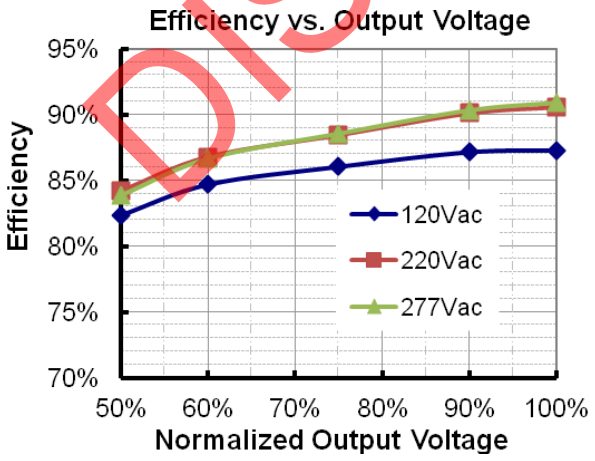
Note: (1) This LED driver meets the EMI specifications above, but EMI performance of a luminaire that contains it depends also on the other devices connected to the driver and on the fixture itself.

Lifetime vs. Case Temperature Curve

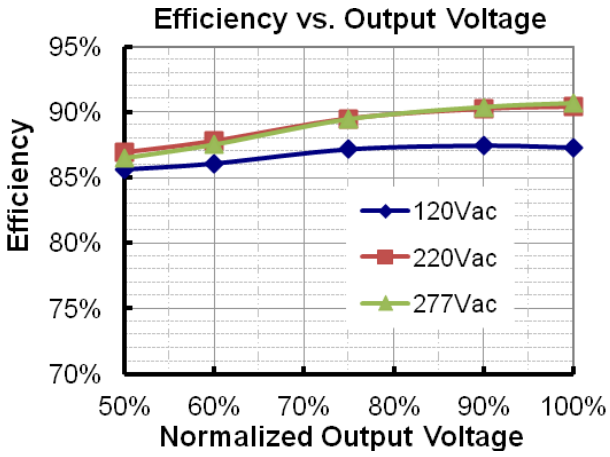


Efficiency vs. Load

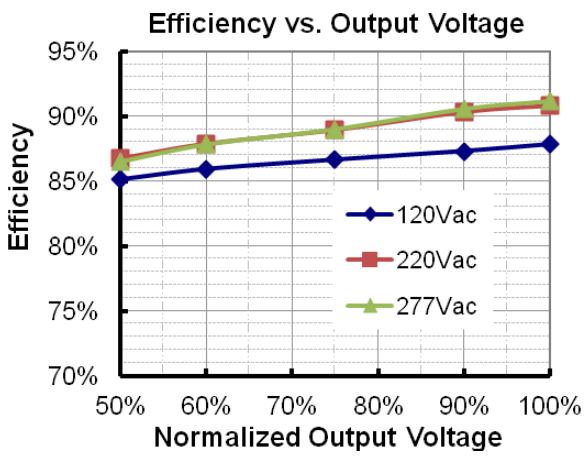
EUC-240H035DV(SV)



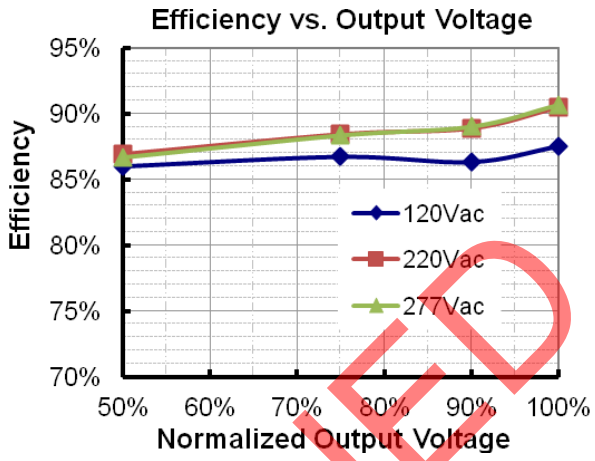
EUC-240H070DV(SV)



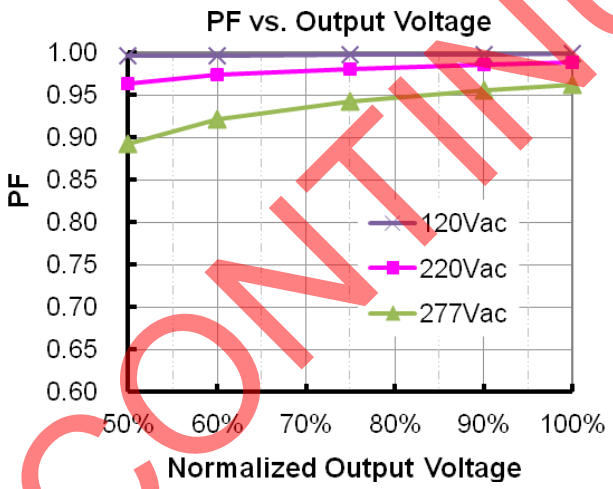
EUC-240H105DV(SV)



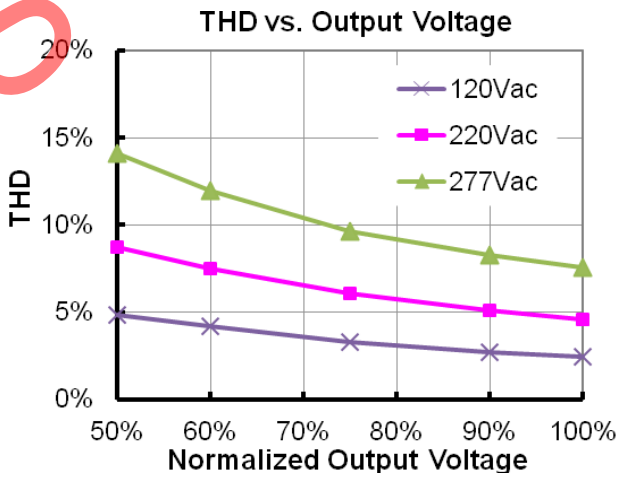
EUC-240H140DV(SV)



Power Factor Characteristics



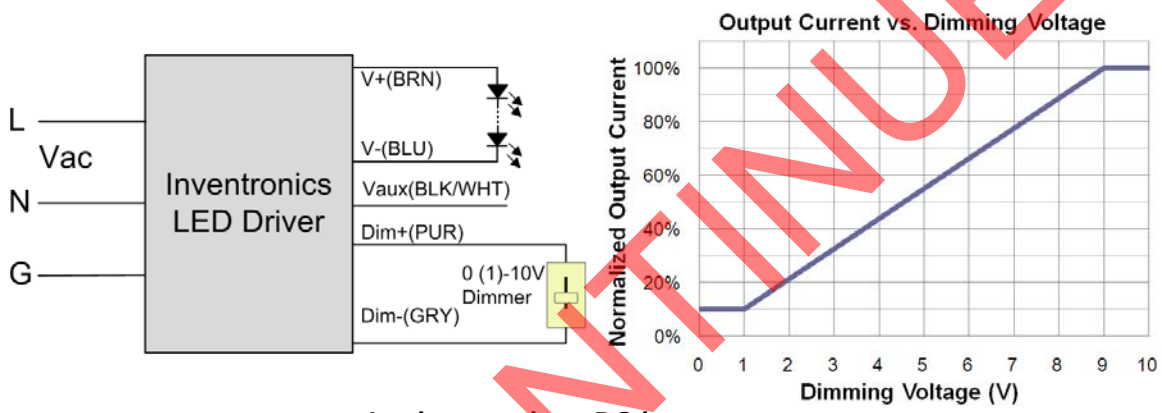
Total Harmonic Distortion



Dimming Control (On secondary side)

Parameter	Min.	Typ.	Max.	Notes
12V output voltage (Vaux)	10.8 V	12 V	13.2 V	
12V Output source current	0 mA	-	20 mA	
Absolute Maximum voltage on the 1~10V input pin	-20 V	-	20 V	
Source current on 1~10V input pin	0 uA	-	200 uA	

The dimmer control may be operated from either a potentiometer or from an input signal of 1 – 10 Vdc. Two recommended implementations are provided below.



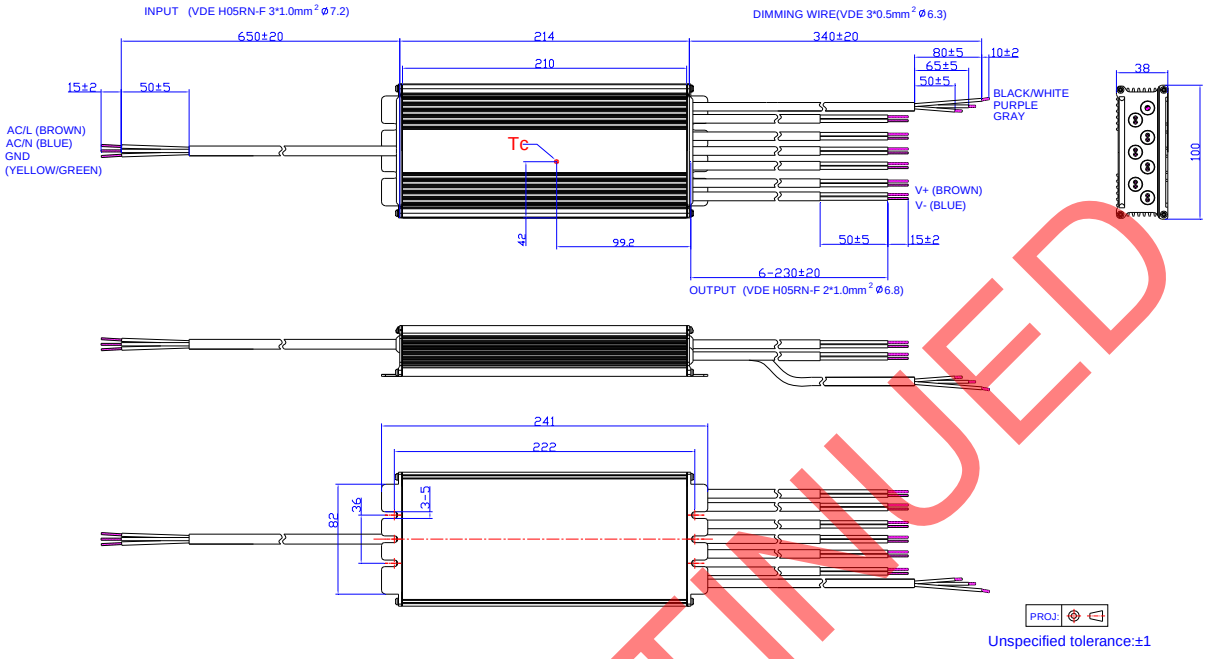
Implementation: DC input

Notes:

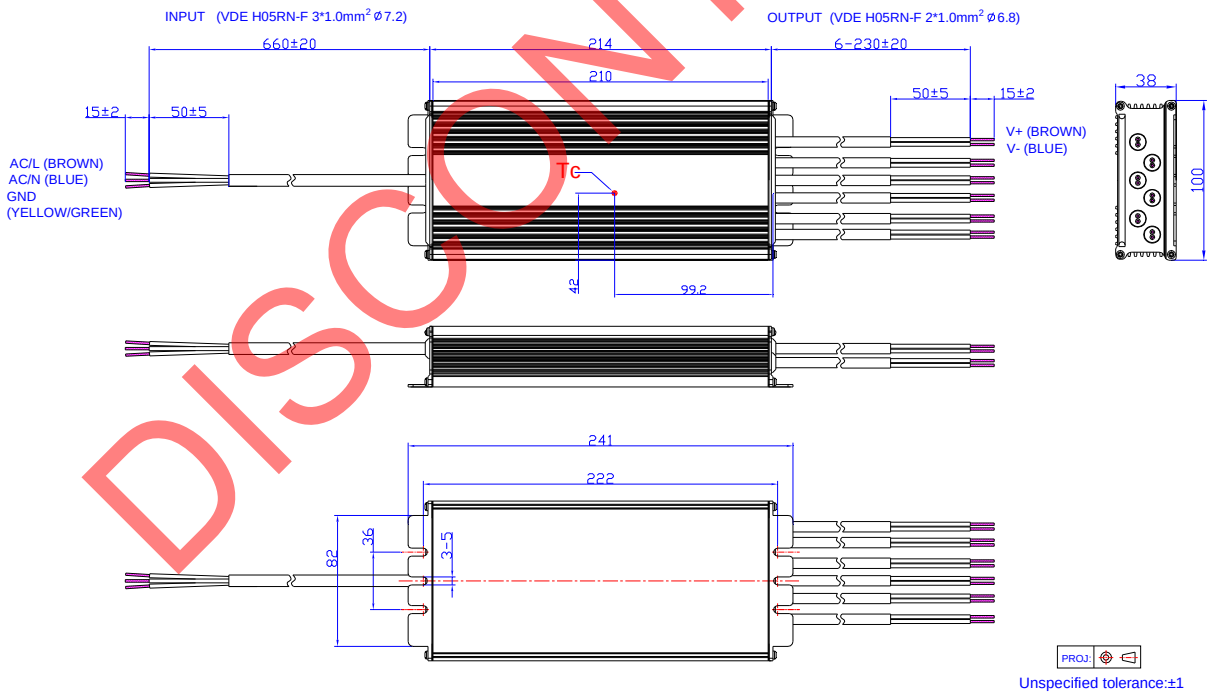
1. Io is actual output current and Ir is rated current without dimming control.
2. For the driver to operate properly, the load voltage must be maintained above the minimum voltage threshold (approx. 50% of the max. output voltage for any given model).
3. If the output voltage is maintained above 50% of the maximum output voltage, the dimming control may be operated over the entire 1-10V range with output current varying from 10% to 100% of Ir.
4. The dimming signal is allowed to be less than 1V, however, when it for 0-1V, the output current is 10%Io.
5. Do not connect the GND of dimming to the output; otherwise, the LED driver cannot work normally.
6. If 0-10V dimming is not used, Dim + can be either open or connected to Vaux.

Mechanical Outline

EUC-240HxxxDV



EUC-240HxxxSV



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
2013-05-09	A	Datasheets Release	/	/
2013-11-14	B	Life time	76,700 hours	101,000 hours
		Life time curve	/	Updated
2019-09-20	C	CQC Logo	/	Deleted
		PSE Logo	/	Deleted
		TUV Logo	/	Updated
		KS Logo	/	Added
		Features	Waterproof (IP67)	IP67
		Features	5 Years Warranty	Added
		Description	/	Updated
		Input Specifications(Power Factor/THD)	50-60Hz	Added
		General Specifications	Operating Case Temperature for Safety Tc_s	Updated
		General Specifications	Operating Case Temperature for Warranty Tc_w	Added
		General Specifications	Storage Temperature	Added
		General Specifications	With mounting ear	Added
		Environmental Specifications	/	Deleted
		Safety &EMC Compliance	TUV	Added
		Safety &EMC Compliance	CB	Added
		Safety &EMC Compliance	KS	Added
		Safety &EMC Compliance	EN 61000-4-5	Updated
		Safety &EMC Compliance	Note	Added
		Derating Curve	/	Deleted
		Mechanical Outline	/	Updated
		RoHS Compliance	/	Updated