

Features

- 0 -10V Dimmable (Compatible with Passive Dimmers)
- Constant Current Output
- High Efficiency
- Active Power Factor Correction
- All-Round Protection: OLP, SCP and Open Lamp Protection
- EN61347, UL8750 Safety Certifications Approved
- Class2 Output



Description

The LUC-012SxxxDSM (SSM) series operate from a 90 ~ 305 Vac input range. They are designed to be highly efficient and reliable. Features include open lamp, short circuit and over load protections.

Model List

Output Current	Input Voltage Range	Output Voltage Range	Max. Output Power	Efficiency (1)	Power Factor (1)	Model Number
350 mA	90 ~ 305 Vac	17~ 34 Vdc	12 W	82 %	0.95	LUC-012S035DSM(SSM)
500 mA	90 ~ 305 Vac	12~ 24 Vdc	12 W	81 %	0.95	LUC-012S050DSM(SSM)
700 mA	90 ~ 305 Vac	9 ~ 17 Vdc	12 W	81 %	0.95	LUC-012S070DSM(SSM)

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

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	90Vac	-	305Vac	
Input Frequency	47 Hz	-	63 Hz	
Leakage Current	-	-	0.5 mA	At 277Vac, 60Hz input
Input AC Current	-	-	0.18 A	Measured at full load and 120 Vac input
Inrush Current	-	-	20 A	At 277Vac input Ta=25°C cold start, duration = 150μs

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%	-	5%	
Output Current Ripple			30%Io	Full load condition
Startup Overshoot Current	-	-	10%	Full load condition
Line Regulation	-	-	1%	/
Load Regulation	-	-	3%	/

Specifications are subject to change without notice.

Output Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
Turn-on Delay Time	-	0.8 s	1 s	Measured at 120Vac input
Dimming Range (Io)	10%		100%	

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

Protection Functions

Parameter	Min.	Typ.	Max.	Notes
No Load Voltage	Vomax	110% Vomax	120% Vomax	Vomax is the maximum operation output voltage
Short Circuit Protection	Hiccup. The power supply shall be self-recovery when the fault condition is removed.			

General Specifications

Parameter	Min.	Typ.	Max.	Notes
Efficiency Io = 350 mA Io = 500 mA Io = 700 mA	81% 80% 80%	82% 81% 81%	- - -	Measured at full load and 277 Vac input
Efficiency Io = 350 mA Io = 500 mA Io = 700 mA	79% 78% 78%	80% 79% 79%	- - -	Measured at full load and 120 Vac input
Power Factor Io = 350 mA Io = 500 mA Io = 700 mA	0.88 0.88 0.88	0.90 0.90 0.90	- - -	Measured at maximum output voltage and 277Vac input
Power Factor Io = 350 mA Io = 500 mA Io = 700 mA	0.96 0.96 0.96	0.98 0.98 0.98	- - -	Measured at maximum output voltage and 120 Vac input
No Load Power Dissipation	-	-	3W	
MTBF	200,000 Hours			Measured at 120Vac input, 80%load and 25°C ambient temperature (MIL-HDBK-217F)
Life Time	50,000 Hours			Measured at 120Vac 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)	3.29 × 1.64 × 0.98 83.5 × 41.5 × 25			
Net Weight		170 g		

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

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Environmental Specifications

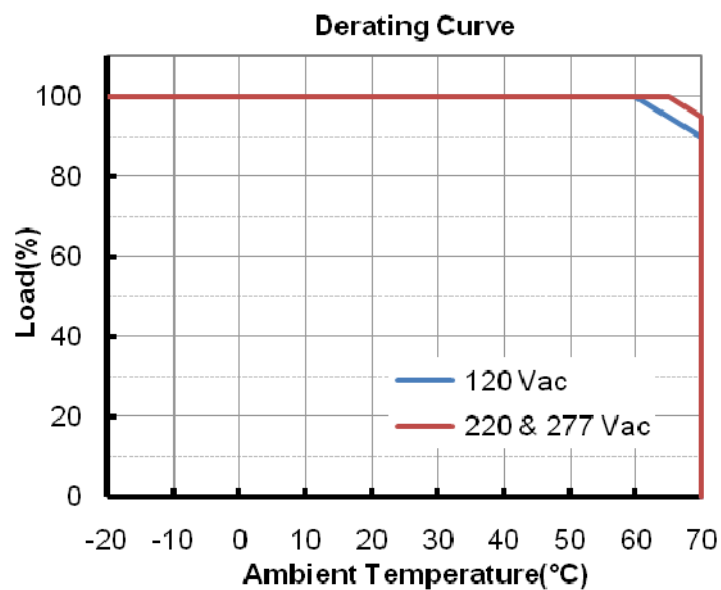
Parameter	Min.	Typ.	Max.	Notes
Operating Temperature	-20 °C	-	+70 °C	Humidity: 10% RH to 90% RH See Derating Curve for more details
Storage Temperature	-30 °C	-	+85 °C	Humidity: 5% RH to 90% RH

Safety & EMC Compliance

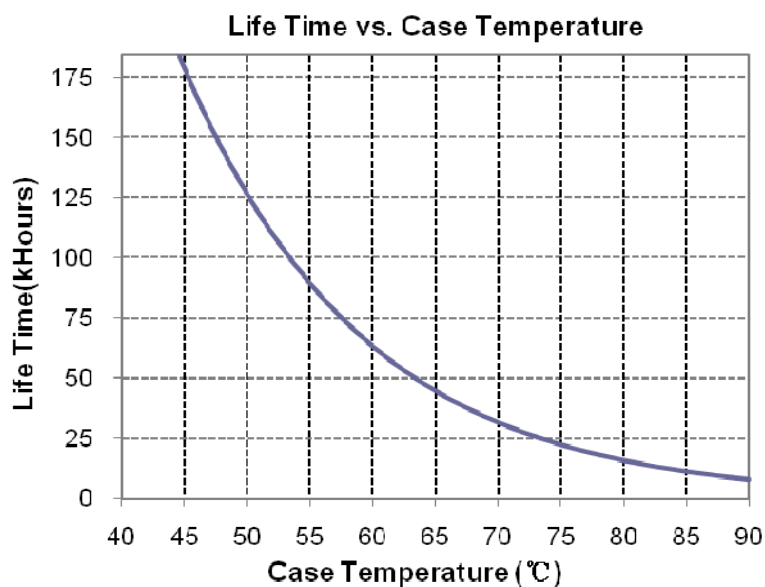
Safety Category	Standard
CE	EN 61347-1, EN61347-2-13
UL/cUL	UL8750, UL1310, UL1012, CAN/CSA-C22.2 No. 223-M91, CSA C22.2 No. 107.1-01
EMI Standards	Notes
EN 55015/CISPR15	Conducted Emission Test & Radiated Emission
EN 61000-3-2	Harmonic Current Emissions Class C
EN 61000-3-3	Voltage Fluctuations & Flicker
FCC Part 15	Class B
EMS Standards	Notes
EN 61000-4-2	Electrostatic Discharge (ESD): 8 kV air discharge, 4 kV contact discharge Level 3, Criteria A
EN 61000-4-3	Radio-Frequency Electromagnetic Field Susceptibility Test-RS Level 3, Criteria A
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 1 kV
EN 61000-4-6	Conducted Radio Frequency Disturbances Test-CS Level 3, Criteria A
EN 61000-4-8	Power Frequency Magnetic Field Test 3A/m , Criteria A
EN 61000-4-11	Voltage Dips Criteria B
EN 61547	Electromagnetic Immunity Requirements Applies to Lighting Equipment

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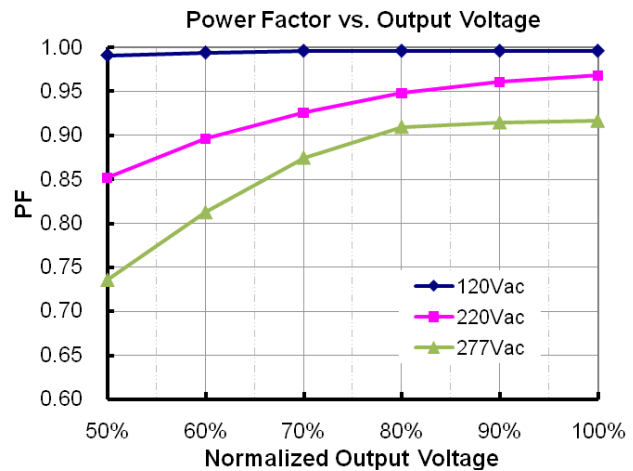
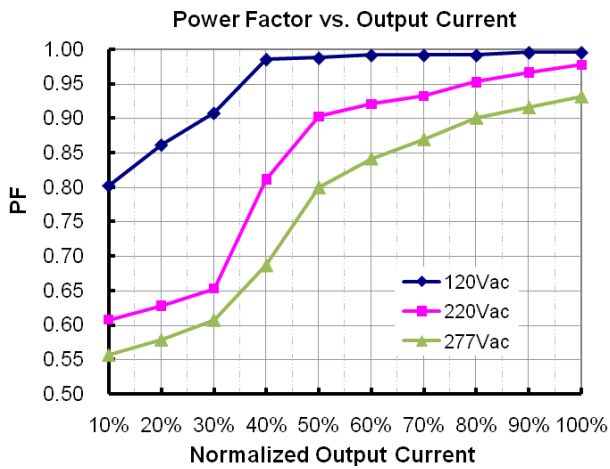
Derating Curve



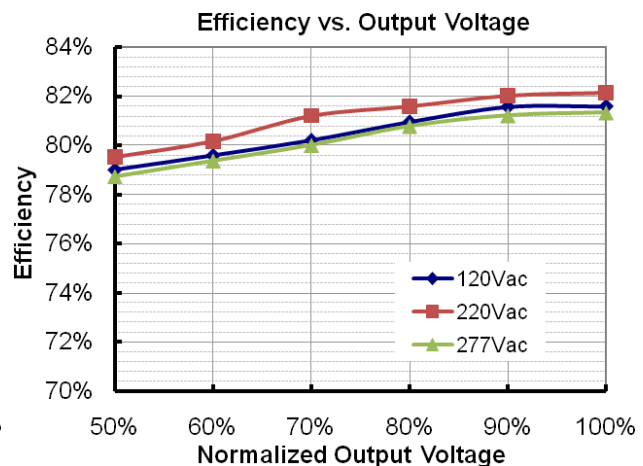
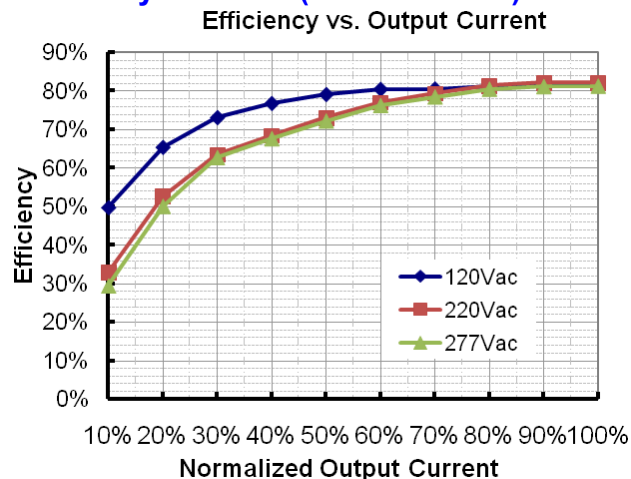
Life vs. Case Temperature Curve



Power Factor Characteristic

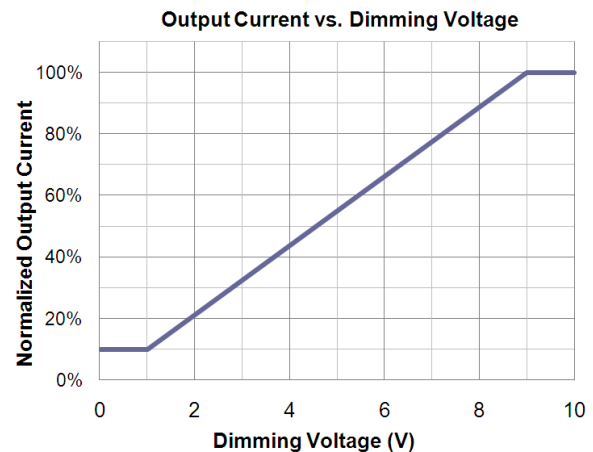
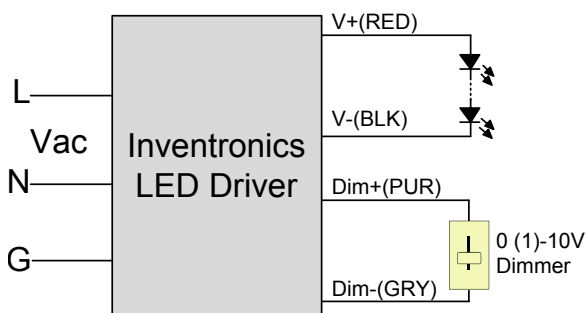


Efficiency vs. Load (350mA model)



Dimming Control (On secondary side)

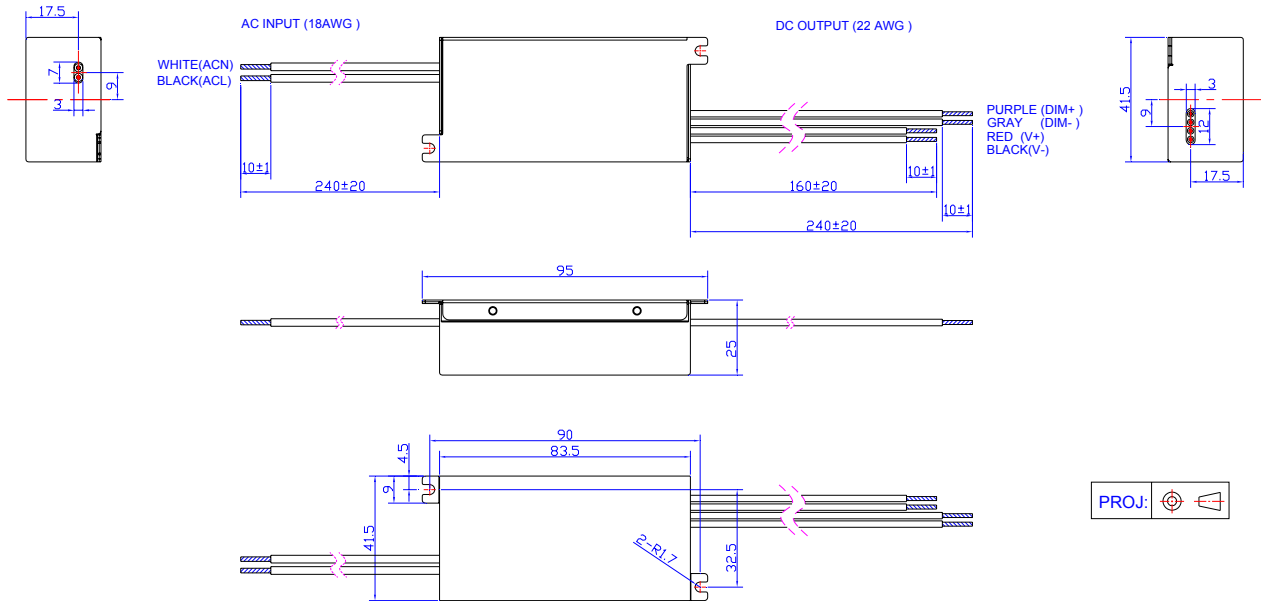
Parameter	Min.	Typ.	Max.	Notes
Absolute Maximum Voltage on the 0~10V Wire	-2 V	-	15 V	
0~10V Wire Current Sourcing Capability	100 uA	150uA	200 uA	



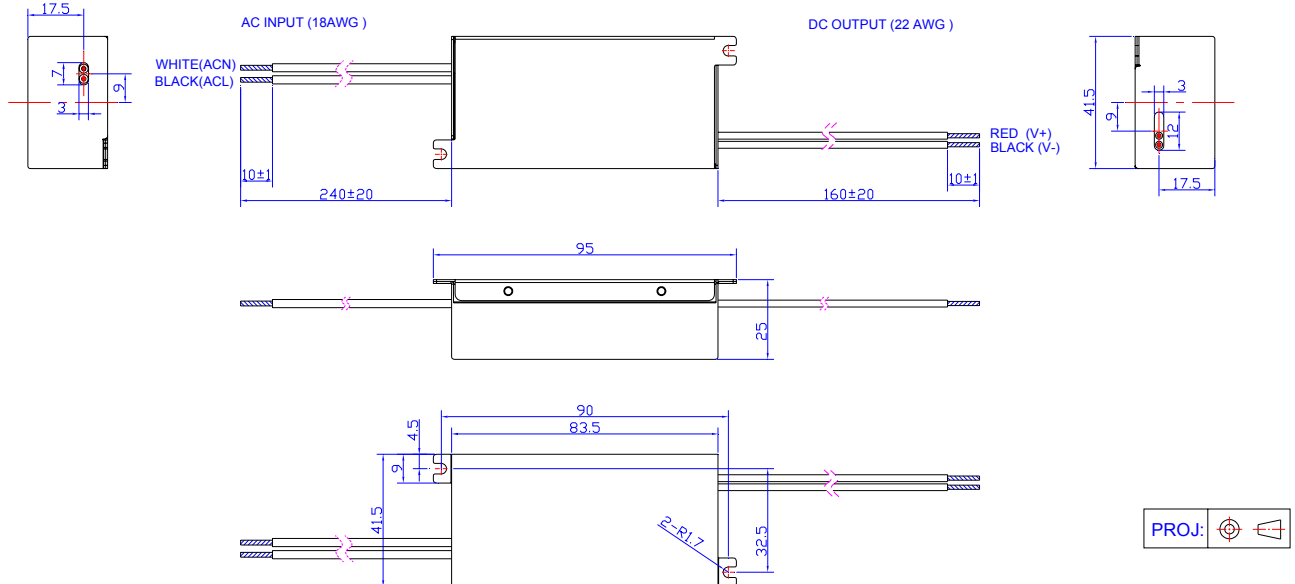
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Mechanical Outline

LUC-012SxxxDSM



LUC-012xxxSSM



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.

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Revision History

Change Date	Rev.	Description of Change		
		Item	From	To
2011-9-29	A	Release	/	/
2011-10-11	B	Derating Curve, Life time, PF, EFF Curve	/	Update
2011-12-27	C	Derating Curve	/	Update
2012-6-14	D	Startup Overshoot Current	20%	10%

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