Features

- Support Customized Output Current
- Constant Current Output
- High Efficiency (Up to 86%)
- Active Power Factor Correction
- All-Around Protection: OLP, SCP and Open Lamp Protection
- SELV

Description

The *LWC-024SxxxSSE* series operates from a 90 ~ 264 Vac input range. They are designed to be highly efficient and reliable. Features include open lamp, short circuit and over load protections.

Models

Output Current	Input Voltage Range(1)	Output Voltage Range	Max. Output Power	Efficiency (2)	Power Factor (2)	Model Number
350 mA	90 ~ 264 Vac	36 ~ 72 Vdc	25 W	86%	0.95	LWC-024S035SSE
500 mA	90 ~ 264 Vac	25 ~ 50 Vdc	25 W	86%	0.95	LWC-024S050SSE(3)
700 mA	90 ~ 264 Vac	18 ~ 36 Vdc	25 W	85%	0.95	LWC-024S070SSE(3)(4)
1050 mA	90 ~ 264 Vac	12 ~ 24 Vdc	25 W	84%	0.95	LWC-024S105SSE(3)(4)

Notes: (1) Certified input voltage range: 100-240Vac.
(2) Measured in 220 Vac input at full load.
(3) UL Class 2 (US).
(4) CUL Class 2 (Canada).

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	90 Vac	-	264 Vac	
Input Frequency	47 Hz	-	63 Hz	
Leakage Current	-	-	0.5 mA	At 220Vac, 50Hz input
Input AC Current	-	-	0.32 A	Measured at full load and 120 Vac input
Inrush Current	-	-	40 A	At 220Vac input, 25℃ cold start, duration =240 μs, 10%Ipk-10%Ipk.
Inrush Current(I^2t)	-	-	0.128 A^2s	
Power Factor	0.90	-	-	At 100-220Vac, 70% -100%load (16.8~24W)
THD	-	-	20%	

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-10%Io	-	10%Io	
Output Current Ripple	-	30%Io	50%Io	At full load condition
Output Current Overshoot / Undershoot	-	-	10%Io	At full load condition
No Load Output Voltage: I_O = 350 mA I_O = 500 mA I_O = 700 mA I_O = 1050 mA	 - - - -	 - - - -	 86 V 57 V 43 V 29 V	
Line Regulation	-	-	±5%	Measured at full load
Load Regulation	-	-	±5%	Measured at full load
Turn-on Delay Time	-	0.8 s	1.0 s	Measured at 120Vac input, 70%load-100%load
	-	0.4 s	0.6 s	Measured at 220Vac input, 70%load-100%load
Temperature coefficient of Ioset	-	-	0.03%/°C	Case temperature = 0°C ~Tc max

Note: All specifications are tested by YW-PWH01 and typical at 25°C unless otherwise stated.

General Specifications

Parameter	Min.	Typ.	Max.	Notes
Efficiency at 120 Vac input: I_O = 350 mA I_O = 500 mA I_O = 700 mA I_O = 1050 mA	 84% 84% 83% 82%	 85% 85% 84% 83%	 - - - -	Measured at full load and steady-state temperature in 25°C ambient; (Efficiency will be about 1.0% lower if measured immediately after startup.)
Efficiency at 220 Vac input: I_O = 350 mA I_O = 500 mA I_O = 700 mA I_O = 1050 mA	 85% 85% 84% 83%	 86% 86% 85% 84%	 - - - -	Measured at full load and steady-state temperature in 25°C ambient; (Efficiency will be about 1.0% lower if measured immediately after startup.)
No Load Power Dissipation	-	-	1 W	
MTBF	-	399,800 Hours	-	Measured at 120Vac input, 80%load and 25℃ ambient temperature (MIL-HDBK-217F)
Lifetime	-	71,100 Hours	-	Measured at 120Vac input, 80%load; Case temperature=60℃ @ Tc point. See lifetime vs. Tc curve for the details
Operating Case Temperature for safety Tc_s	-20 °C	-	+85 °C	
Operating Case Temperature for Warranty Tc_w	-20 °C	-	+65 °C	Humidity: 10% RH to 100% RH.
Storage Temperature	-30 °C	-	+85 °C	Humidity: 5% RH to 100% RH

General Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
Dimensions Inches (L × W × H) Millimeters (L × W × H)		5.30 × 1.64 × 1.18 134.5 × 41.5 × 30		
Net Weight	-	170 g	-	

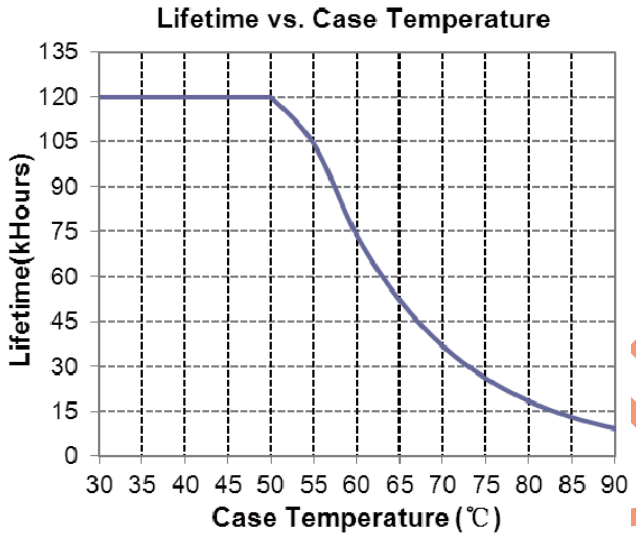
Note: All specifications are tested by YW-PWH01 and typical at 25°C unless otherwise stated.

Safety & EMC Compliance

Safety Category	Standard
UL/CUL	UL 8750,UL1310,CAN/CSA-C22.2 No. 250.13-12,CAN/CSA-C22.2 No. 223-M91
CE	EN 61347-1, EN61347-2-13
KS	KS C 7655
EMI Standards	**Notes**
EN 55015(1)	Conducted Emission Test & Radiated Emission Test
EN 61000-3-2	Harmonic Current Emissions Class C
EN 61000-3-3	Voltage Fluctuations & Flicker
FCC Part 15(1)	ANSI C63.4:2009 Class B
	This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: [1] this device may not cause harmful interference, and [2] this device must accept any interference received, including interference that may cause undesired operation.
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

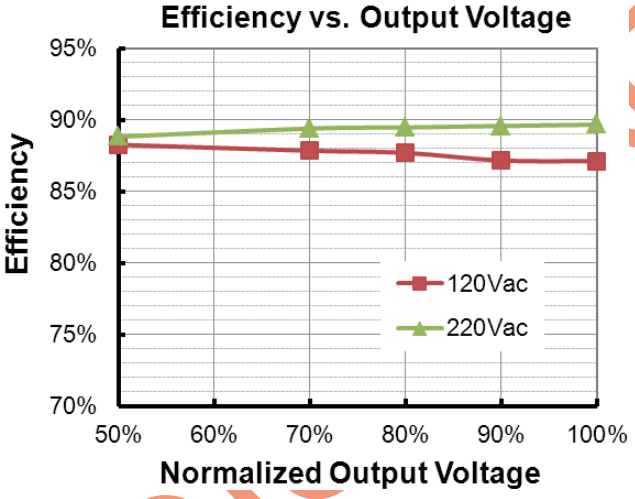
Note: (1) This LED driver meets the EMI specifications above, but EMI performance of a luminaire that contains it depends also on the other devices connected to the driver and on the fixture itself.

Lifetime vs. Case Temperature

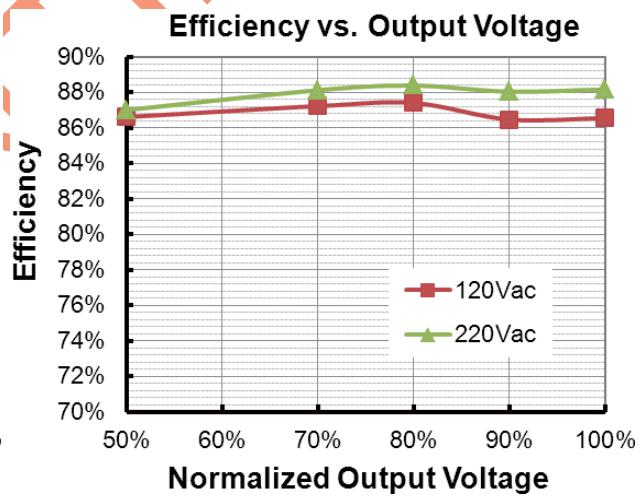


Efficiency vs. Load

LWC-024S035SSE



LWC-024S050SSE



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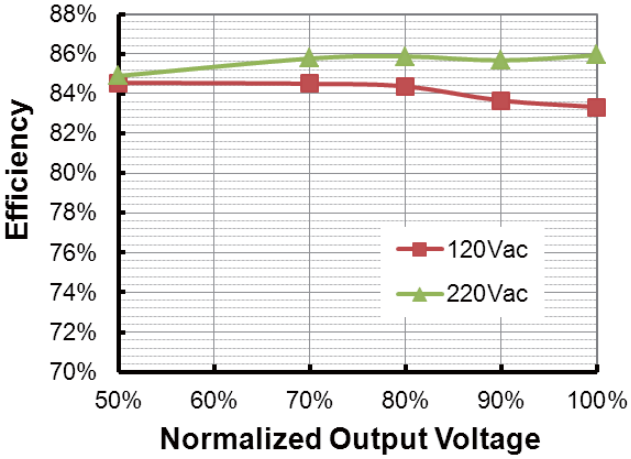
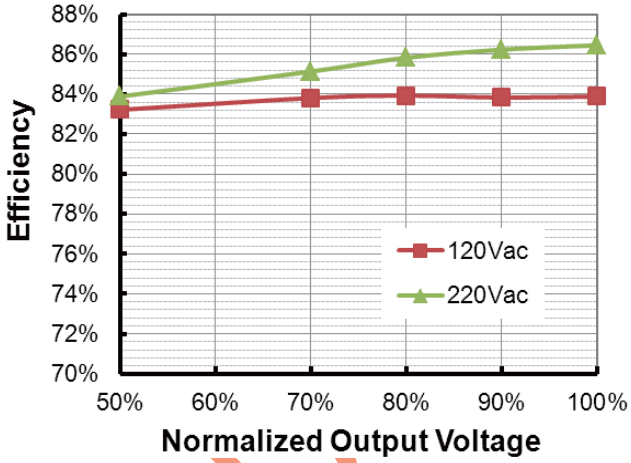
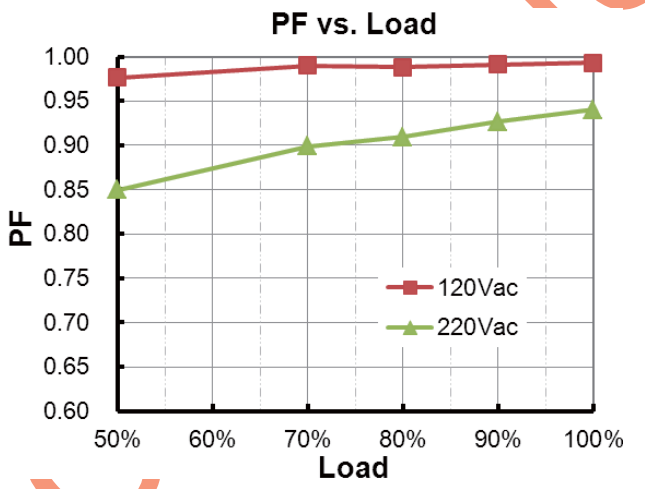
LWC-024S070SSE



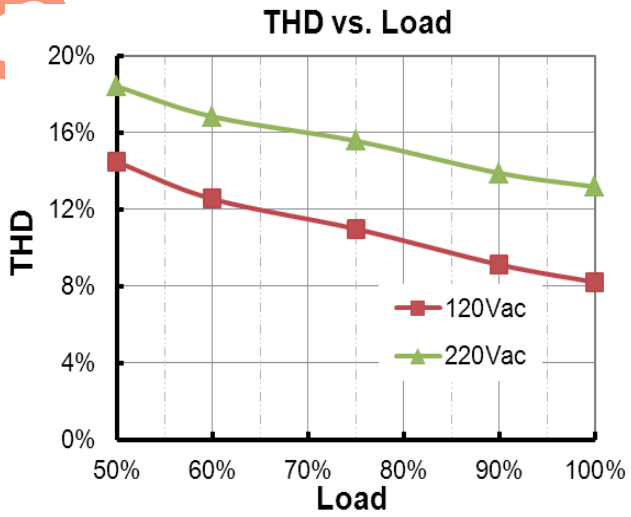
LWC-024S105SSE



Power Factor



Total Harmonic Distortion



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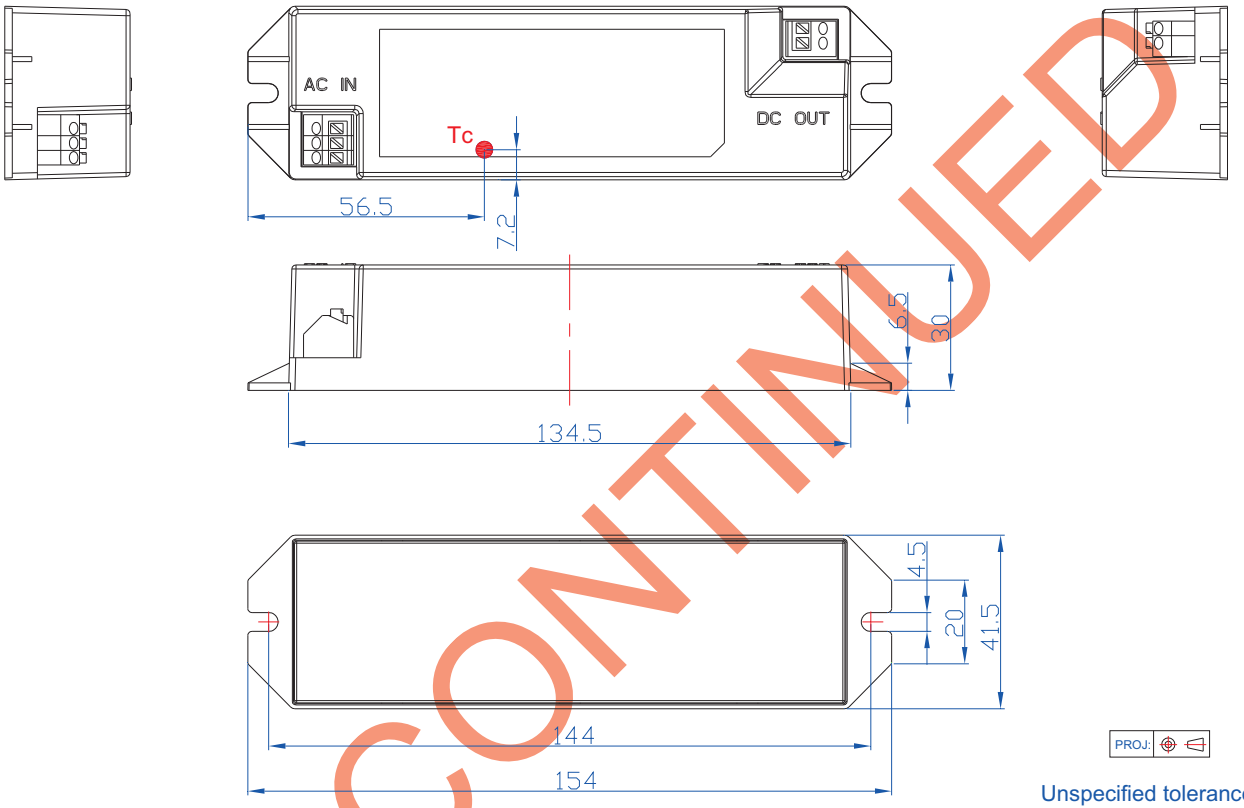
Protection Functions

Parameter	Notes
Short Circuit Protection	Auto Recovery. 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.

Mechanical Outline



Unspecified tolerance:±1

Note: Input/output wires: Solid copper wires; strip wire 6mm min; 22-16AWG, ⩾300V

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
2011-9-29	A	Release	/	/
2011-10-10	B	Derating Curve, Life time Curve	/	Update
2011-12-15	C	Photo	/	Changed
2011-12-21	D	Typ. PF at 220V	0.92	0.95
2011-12-27	E	PF Curve	/	Changed
2012-3-20	F	Operating Temperature	-20°C ~60°C	-20°C ~70°C
		LWC-024S070SSE cUL Class 2 added	/	/
2012-7-17	G	Max Case Temperature	/	Updated
2012-8-2	H	Derating Curve	/	Updated
		EMI Standards EN 55015/J55015(H20)	/	Updated
2012-8-30	I	Inrush Current(I^2t)	/	Added
		Power Factor Min	/	Added
		THD Max	/	Added
		Temperature coefficient	/	Added
		Typical life time and MTBF	/	Added
2013-01-11	J	Other model of efficiency curve except 350mA	/	Added
		Other model of PF curve except 350mA	/	Added
2016-12-13	K	Output Voltage Range(500mA)	24~48Vdc	25~50Vdc
		Max. Output Power(500mA)	24W	25W
		Max. Output Power(350 mA 700 mA 1050 mA)	25.2W	25W
		No Load Output Voltage	/	Updated
		Turn-on Delay Time at 220Vac input, 70%load-100%load	/	Added
		Warranty Tc_w	/	Added
		Environmental Specifications	/	Deleted
		CQC Certificate	/	CCC Certificate
		KS Certificate	/	Added
		PSE Certificate	/	Deleted
		Derating Curve	/	Deleted

Revision History (Continued)

Change Date	Rev.	Description of Change		
		Item	From	To
2016-12-13	K	PF Curve except 1050mA	/	Deleted
		THD Curve	/	Added
		Note of EMI Standard	/	Added
2019-08-20	L	CCC	/	Deleted
		Safety & EMC Compliance	KS	Updated