

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-024SxxxSSP series operates from a 90 ~ 264 Vac input range. They are designed to be highly efficient and reliable. Features include over load, short circuit and open lamp 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-024S035SSP
500 mA	90 ~ 264 Vac	25~50 Vdc	25 W	86%	0.95	LWC-024S050SSP ⁽³⁾
700 mA	90 ~ 264 Vac	18~36 Vdc	25 W	85%	0.95	LWC-024S070SSP ⁽³⁾⁽⁴⁾
1050 mA	90 ~ 264 Vac	12~24 Vdc	25 W	84%	0.95	LWC-024S105SSP ⁽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°C cold start, duration =240 μs, 10%Ipk-10%Ipk.
Inrush Current(I ² t)	-	-	0.128 A ² s	
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:				
Io = 350 mA	-	-	86 V	
Io = 500 mA	-	-	57 V	
Io = 700 mA	-	-	43 V	
Io = 1050 mA	-	-	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:				Measured at full load and steady-state temperature in 25°C ambient; (Efficiency will be about 1.0% lower if measured immediately after startup.)
Io = 350 mA	84%	85%	-	
Io = 500 mA	84%	85%	-	
Io = 700 mA	83%	84%	-	
Io = 1050 mA	82%	83%	-	
Efficiency at 220 Vac input:				Measured at full load and steady-state temperature in 25°C ambient; (Efficiency will be about 1.0% lower if measured immediately after startup.)
Io = 350 mA	85%	86%	-	
Io = 500 mA	85%	86%	-	
Io = 700 mA	84%	85%	-	
Io = 1050 mA	83%	84%	-	
No Load Power Dissipation	-	-	1 W	
MTBF	-	399,800 Hours	-	Measured at 120Vac input, 80%load and 25°C ambient temperature (MIL-HDBK-217F)
Life Time	-	71,100 Hours	-	Measured at 120Vac input, 80%load and 60°C case temperature; 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
Dimensions				
Inches (L × W × H)	4.73 × 1.65 × 1.20			
Millimeters (L × W × H)	120 × 42 × 30.5			

General Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
Net Weight	-	200 g	-	

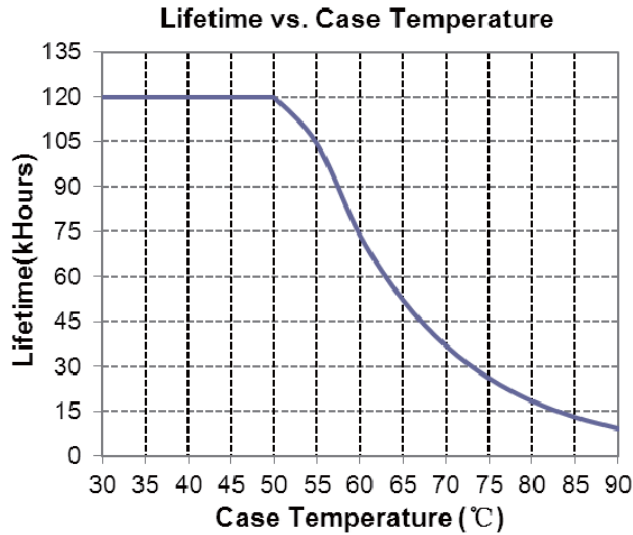
Note: All specifications are tested by YW-PWH01 and typical at 25°C unless otherwise stated.

Safety & EMC Compliance

Safety Category	Standard
UL/CUL	UL8750, UL1310, UL1012, CAN/CSA-C22.2 No. 223-M91, CSA C22.2 No. 107.1-01
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
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.

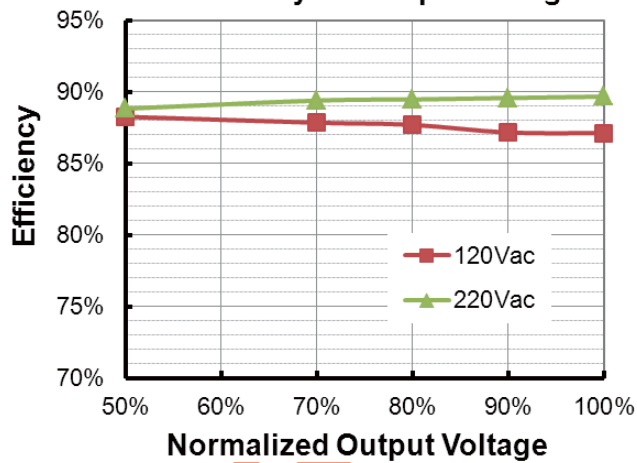
Lifetime vs. Case Temperature



Efficiency vs. Load

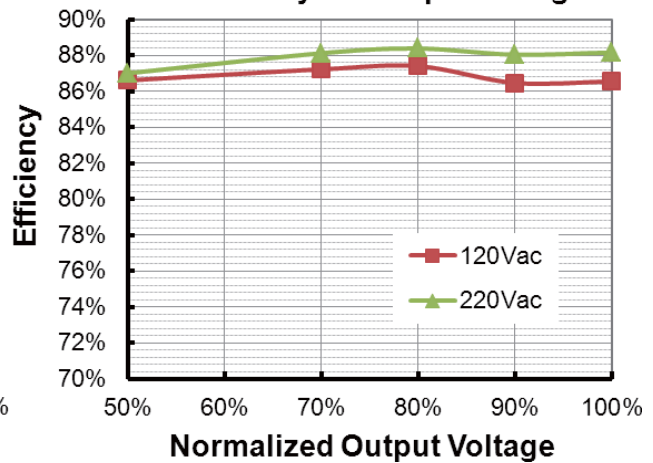
LWC-024S035SSP

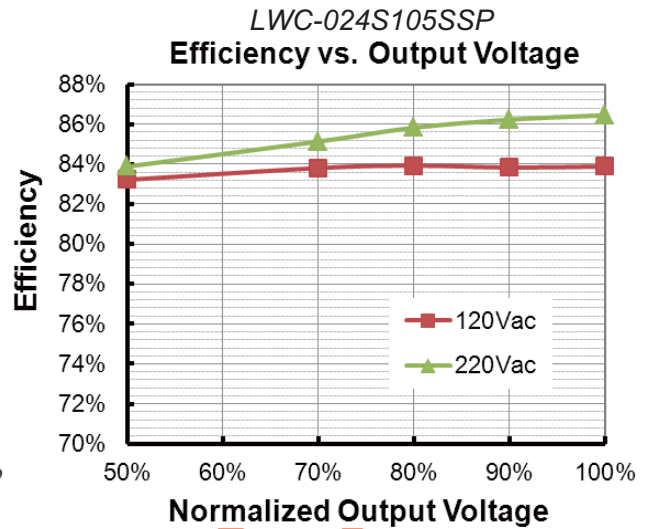
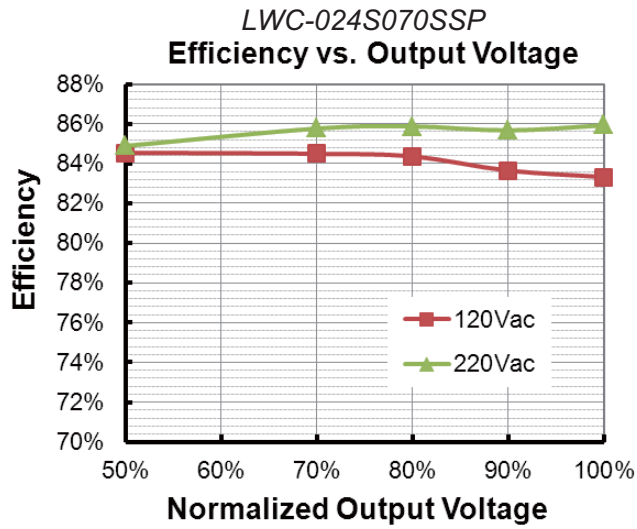
Efficiency vs. Output Voltage



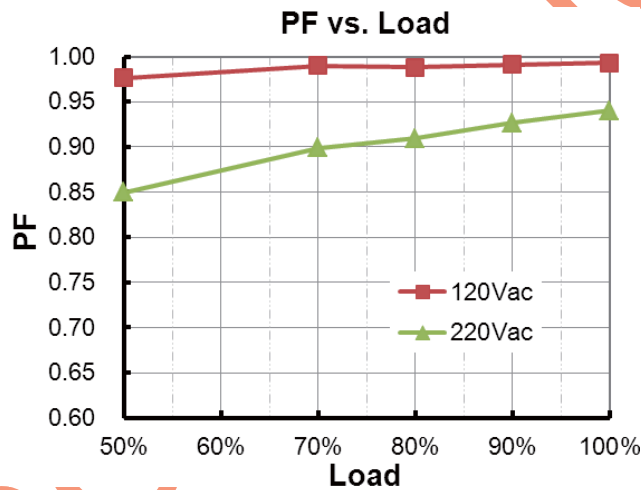
LWC-024S050SSP

Efficiency vs. Output Voltage

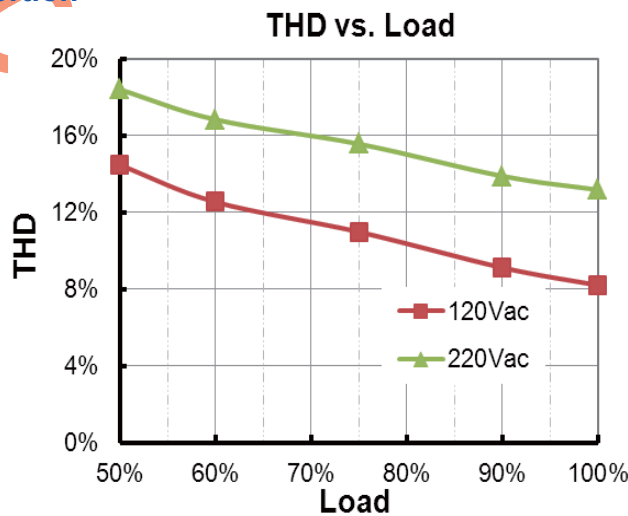




Power Factor



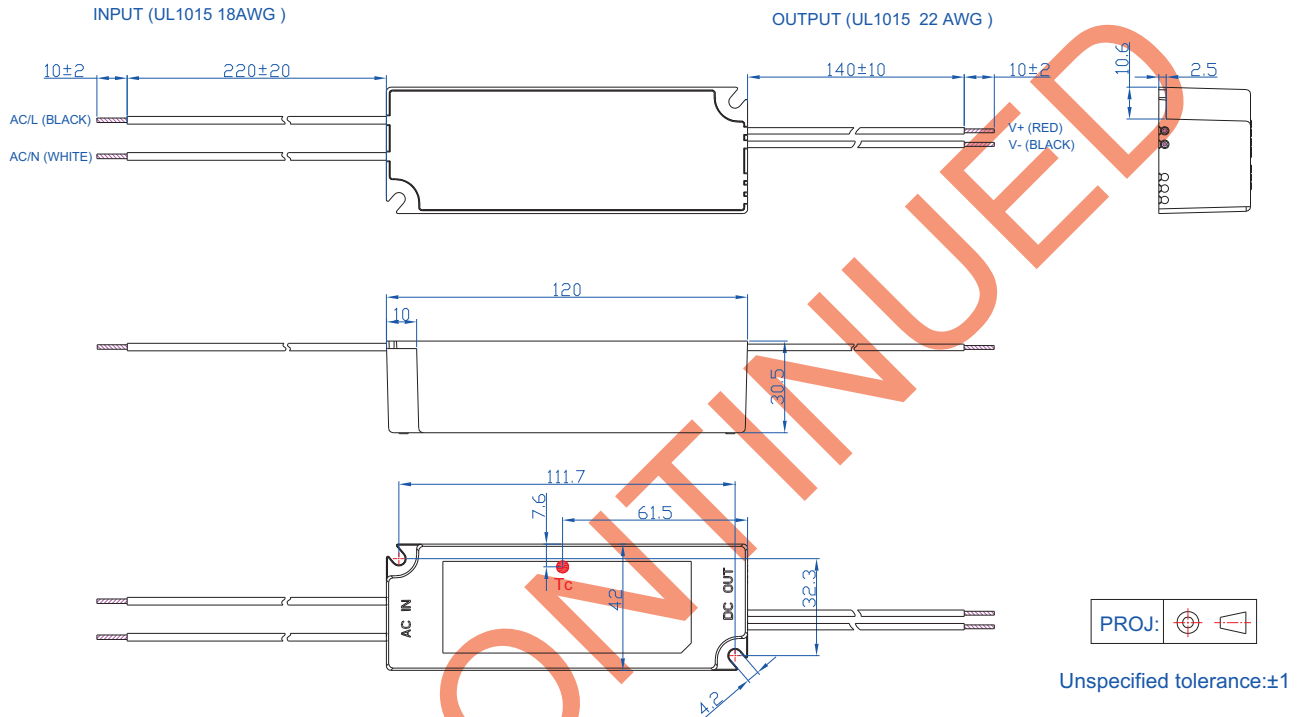
Total Harmonic Distortion



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



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.

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
2011-12-20	C	Dimensions –inch	/	Corrected
2011-12-21	D	Typ.PF at 220V	0.92	0.95
2011-12-27	E	PF Curve	/	Changed
2012-03-20	F	Operating Temperature	-20°C~60°C	-20°C~70°C
		LWC-024S070SSP CUL Class 2 added	/	/
2012-7-19	G	Max Case Temperature	/	Added
2012-8-2	H	Derating Curve	/	Updated
		EMI Standards EN 55015/J55015(H20)	/	Updated
		Net Weight	180 g	230 g
2012-8-30	I	Inrush Current(I ² t)	/	Added
		Power Factor Min	/	Added
		THD Max	/	Added
		Temperature coefficient	/	Added
		Net Weight	230 g	180 g
		Typical life time and MTBF	/	Added
2016-12-13	J	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
		Net Weight	180 g	200 g
		Environmental Specifications	/	Delated
		CQC Certificate	/	CCC Certificate
KS Certificate	/	Added		

Revision History (Continued)

Change Date	Rev.	Description of Change		
		Item	From	To
2016-12-13	J	PSE Certificate	/	Deleted
		Derating Curve	/	Deleted
		Other model of efficiency curve except 350mA	/	Added
		Efficiency Curve of 350mA model	/	Updated
		PF curve	/	Updated
		THD Curve	/	Added
		Note of EMI Standard	/	Added
2019-08-20	K	CCC	/	Deleted
		Safety & EMC Compliance	KS	Updated

DISCONTINUED