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-018SxxxSSP* 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.

Model List

Output Current	Input Voltage Range(1)	Output Voltage Range	Max. Output Power	Efficiency (2)	Power Factor (2)	Model Number
350 mA	90 ~ 264 Vac	25~51 Vdc	18 W	86%	0.95	LWC-018S035SSP(3)
500 mA	90 ~ 264 Vac	18~36 Vdc	18 W	85%	0.95	LWC-018S050SSP(3)(4)
700 mA	90 ~ 264 Vac	13~26 Vdc	18 W	84%	0.95	LWC-018S070SSP(3)(4)
1050 mA	90 ~ 264 Vac	8~17 Vdc	18 W	83%	0.95	LWC-018S105SSP(3)(4)

Notes: (1) Certified input voltage range: 100-240Vac.
(2) Measured in 220 Vac input at 100% 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	-	-	0.22 A	Measured at 100% load and 120 Vac input
Inrush Current(I^2t)	-	-	0.128 A^2s	At 220Vac input, 25 ℃ cold start, duration=240 μs, 10%Ipk-10%Ipk. See Inrush Current Waveform for the Details.
Power Factor	0.90	-	-	At 100Vac-220Vac, 50-60Hz, 70%load-100%load (12.6~18W)
THD	-	-	20%	

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-10%Io	-	10%Io	
Output Current Ripple	-	30%Io	50%Io	At 100% load condition
Output Current Overshoot / Undershoot	-	-	10%Io	At 100% load condition
No Load Output Voltage: I_O = 350 mA I_O = 500 mA I_O = 700 mA I_O = 1050 mA	 - - - -	 - - - -	 59 V 42 V 33 V 24 V	
Line Regulation	-	-	±5%	Measured at 100% load
Load Regulation	-	-	±5%	
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 loset	-	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% 83% 82% 81%	 85% 84% 83% 82%	 - - - -	Measured at 100% 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% 84% 83% 82%	 86% 85% 84% 83%	 - - - -	Measured at 100% 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	-	433,900 Hours	-	Measured at 120Vac input, 80%load and 25℃ ambient temperature (MIL-HDBK-217F)
Lifetime	-	77,800 Hours	-	Measured at 120Vac input, 80%load and 60℃ 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) Millimeters (L × W × H)	 4.72 × 1.65 × 1.20 120 × 42 × 30.5			

General Specifications (Continued)

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

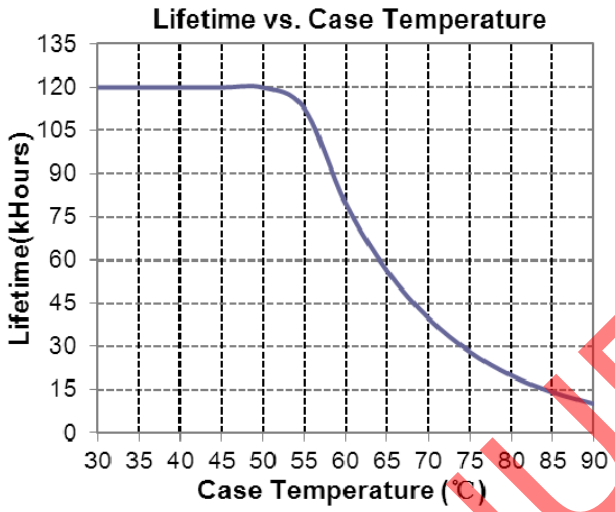
Note: All specifications are tested by YW-PWH01 and typical at 25°C unless otherwise stated.

Safety & EMC Compliance

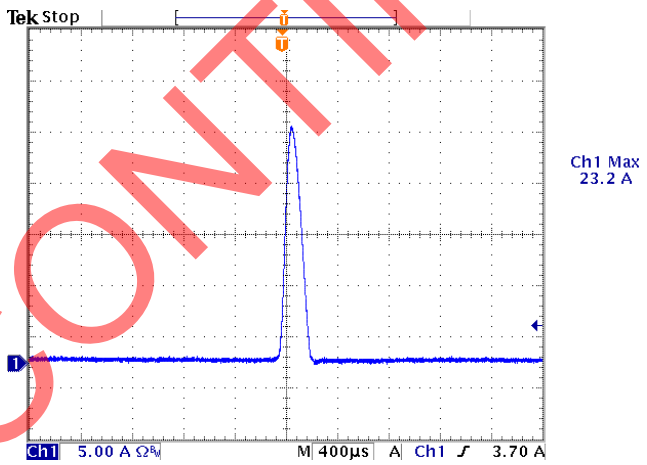
Safety Category	Standard
UL/CUL	UL8750, UL 1310, CAN/CSA-C22.2 No. 250.13, CAN/CSA-C22.2 No. 223-M91
TUV & CE	EN 61347-1, EN61347-2-13
CB	IEC 61347-1, IEC 61347-2-13
KS	KS C 7655
EMI Standards	**Notes**
EN 55015(1)	Conducted emission Test &Radiated emission Test
EN 61000-3-2	Harmonic current emissions
EN 61000-3-3	Voltage Fluctuations & Flicker
FCC Part 15(1)	ANSI C63.4 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
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 1 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

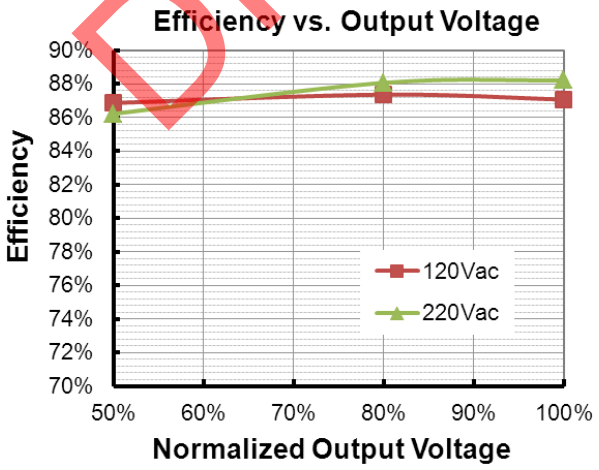


Inrush Current Waveform

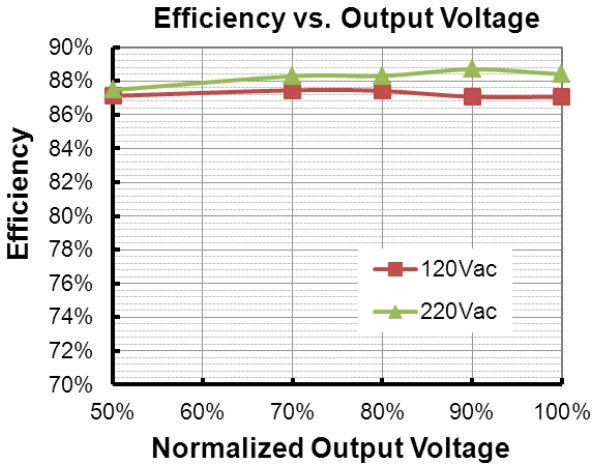


Efficiency vs. Load

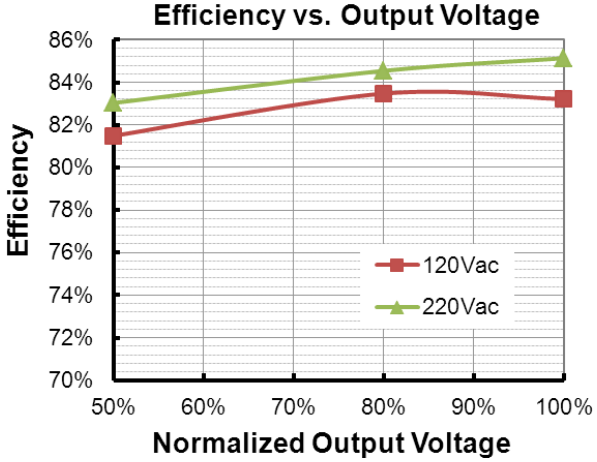
LWC-018S035SSP



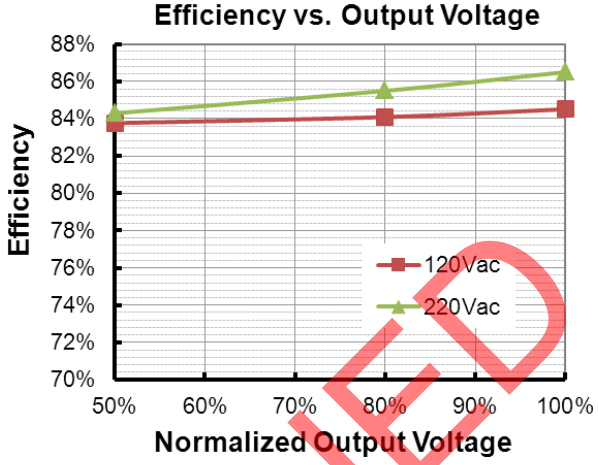
LWC-018S050SSP



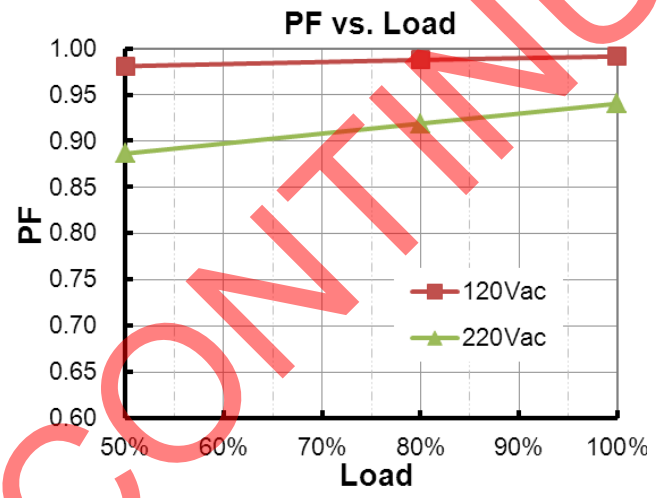
LWC-018S070SSP



LWC-018S105SSP



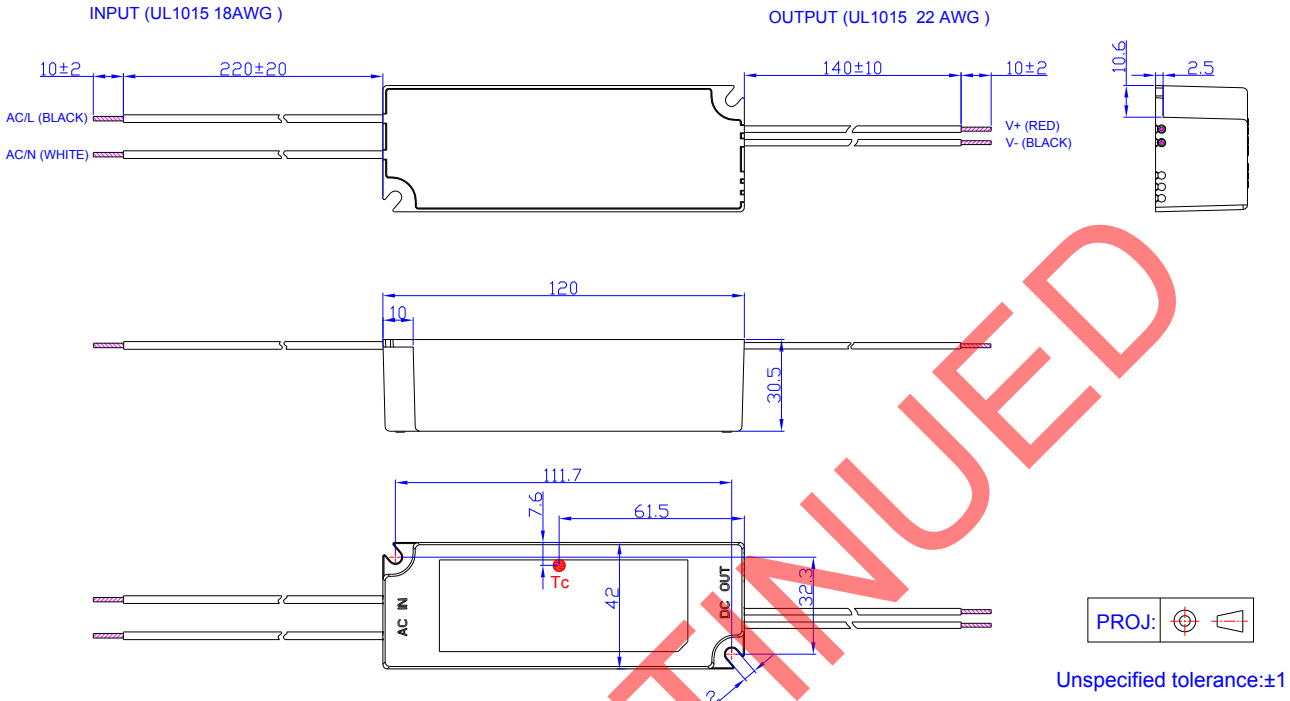
Power Factor



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

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
2011-09-28	A	Release	/	/
2011-10-10	B	Derating Curve, Life time Curve	/	Update
2011-12-21	C	Dimensions- Inches	/	Corrected
2011-12-21	D	Typ. PF at 220V	0.94	0.95
2011-12-27	E	PF Curve	/	Changed
2012-7-17	F	Max Case Temperature	/	Updated
2012-8-1	G	Derating Curve	/	Updated
		EMI Standards EN 55015/J55015(H20)	/	Updated
		Net weight	180 g	230 g
2012-8-30	H	Inrush Current(I^2t)	/	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	I	Output Voltage Range(350mA)	26~51Vdc	25~51Vdc
		Output Voltage Range(1050mA)	9~17Vdc	8~17Vdc
		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	/	Deleted
		CQC Certificate	/	CCC Certificate
		KS Certificate	/	Added
		KC Certificate	/	Added
		PSE Certificate	/	Deleted
		Derating Curve	/	Deleted
		Inrush Current Waveform	/	Added
		Note of EMI Standard	/	Added

Revision History (Continued)

Change Date	Rev.	Description of Change		
		Item	From	To
2016-12-13	I	Other model of efficiency curve except 350mA	/	Added
		Efficiency Curve of 350mA	/	Updated
		PF Curve	/	Updated
2019-08-20	J	KC Logo	/	Deleted
		CCC Logo	/	Deleted
		Input Specifications(PF/THD)	50-60Hz	Added
		Safety &EMC Compliance	UL/CUL	Updated
		Safety &EMC Compliance	TUV	Added
		Safety &EMC Compliance	CB	Added
		Safety &EMC Compliance	KS	Updated
		Safety &EMC Compliance	EN 61000-3-2	Updated
		Safety &EMC Compliance	FCC	Updated
		Safety &EMC Compliance	EMS Standards	Updated
		RoHS Compliance	/	Updated