

## 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-018SxxxSSE 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	25~51Vdc	18 W	86%	0.95	LWC-018S035SSE <sup>(3)</sup>
500 mA	90 ~ 264 Vac	18~36Vdc	18 W	85%	0.95	LWC-018S050SSE <sup>(3)(4)</sup>
700 mA	90 ~ 264 Vac	13~26Vdc	18 W	84%	0.95	LWC-018S070SSE <sup>(3)(4)</sup>
1050 mA	90 ~ 264 Vac	8~17Vdc	18 W	83%	0.95	LWC-018S105SSE <sup>(3)(4)</sup>

**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	-	-	0.22 A	Measured at full load and 120 Vac input
Inrush Current(I <sup>2</sup> t)	-	-	0.128 A <sup>2</sup> s	At 220Vac input, 25°C cold start, duration=240 μs, 10%Ipk-10%Ipk. See Inrush Current Waveform for the Details.
Power Factor	0.90	-	-	At 100-220Vac, 70% -100%load
THD	-	-	20%	(12.6~18W)

## 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	-	-	59 V	
Io = 500 mA	-	-	42 V	
Io = 700 mA	-	-	33 V	
Io = 1050 mA	-	-	24 V	
Line Regulation	-	-	±5%	Measured at full 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 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: Io = 350 mA	84%	85%	-	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 = 500 mA	83%	84%	-	
Io = 700 mA	82%	83%	-	
Io = 1050 mA	81%	82%	-	
Efficiency at 220 Vac input: Io = 350 mA	85%	86%	-	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 = 500 mA	84%	85%	-	
Io = 700 mA	83%	84%	-	
Io = 1050 mA	82%	83%	-	
No Load Power Dissipation	-	-	1 W	
MTBF	-	433,900 Hours	-	Measured at 120Vac input, 80%load and 25°C ambient temperature (MIL-HDBK-217F)
Lifetime	-	77,800 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 90% RH; No Condensation
Storage Temperature	-30 °C	-	+85 °C	Humidity: 5% RH to 90% RH

## General Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
Dimensions Inches (L × W × H) Millimeters (L × W × H)		5.30 × 1.63 × 1.18 134.5 × 41.5 × 30		
Net Weight	-	170 g	-	

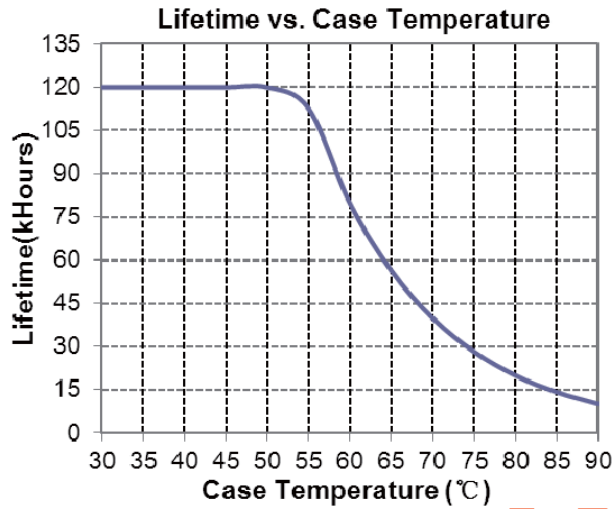
**Note:** All specifications are tested by YW-PWH01 and typical at 25°C unless otherwise stated.

## Safety & EMC Compliance

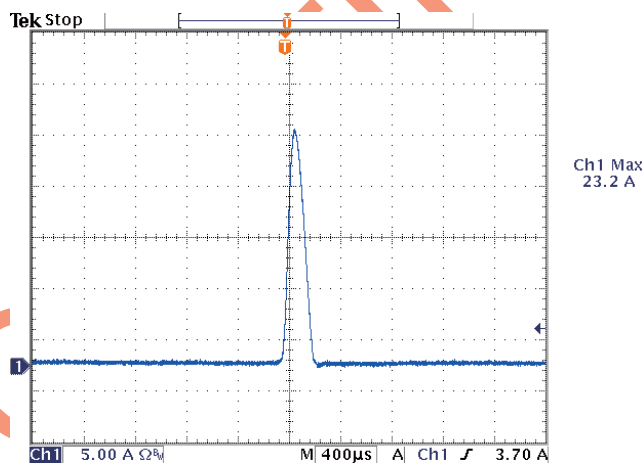
Safety Category	Standard
UL/CUL	UL 8750, UL1310, CAN/CSA-C22.2 No. 250.13-12, CAN/CSA-C22.2 No. 223-M91
CE	EN 61347-1, EN61347-2-13
KS	KS C 7655
EMI Standards	Notes
EN 55015 <sup>(1)</sup>	Conducted Emission Test & Radiated Emission Test
EN 61000-3-2	Harmonic Current Emissions Class C
EN 61000-3-3	Voltage Fluctuations & Flicker
FCC Part 15 <sup>(1)</sup>	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.

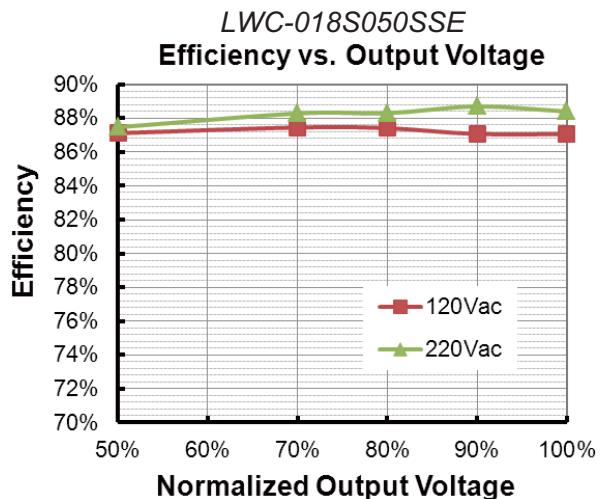
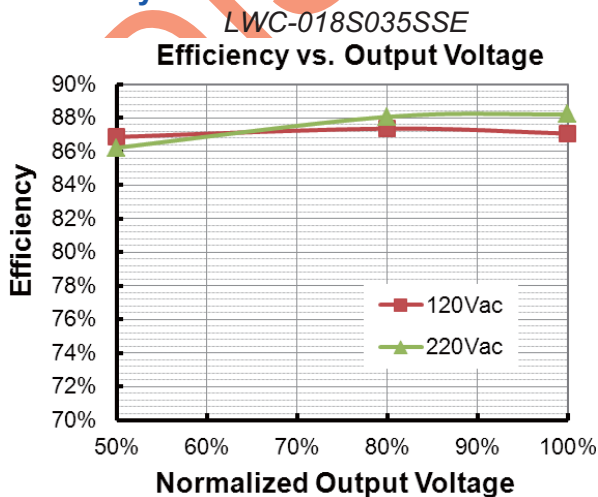
## Lifetime vs. Case Temperature Curve

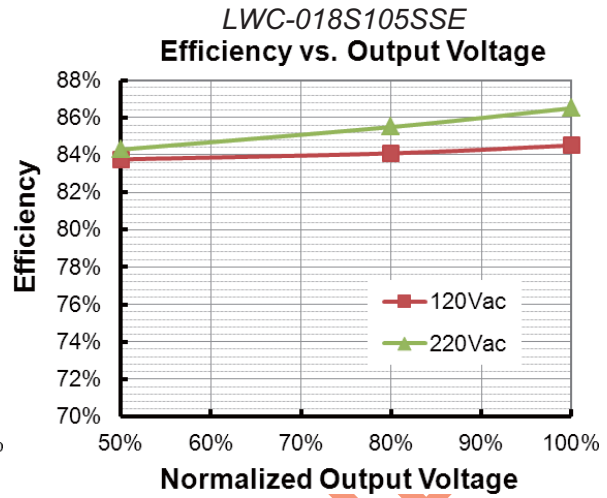
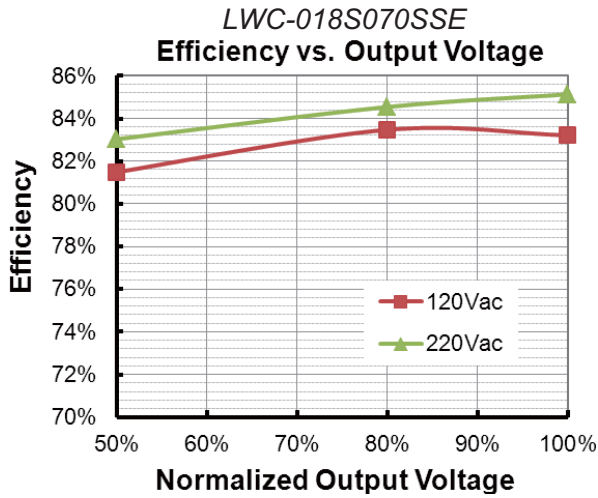


## Inrush Current Waveform

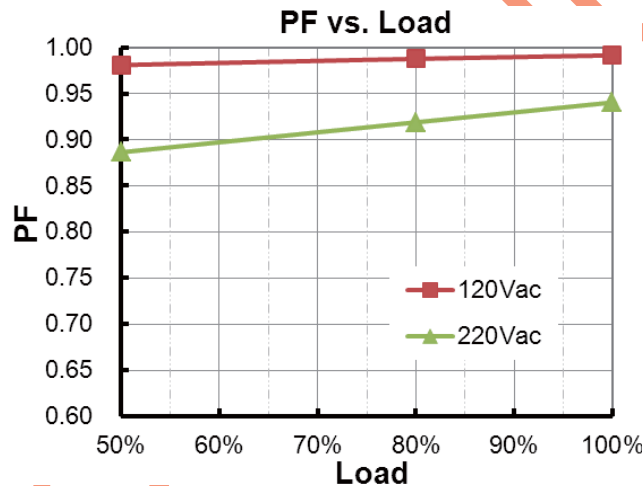


## Efficiency vs. Load





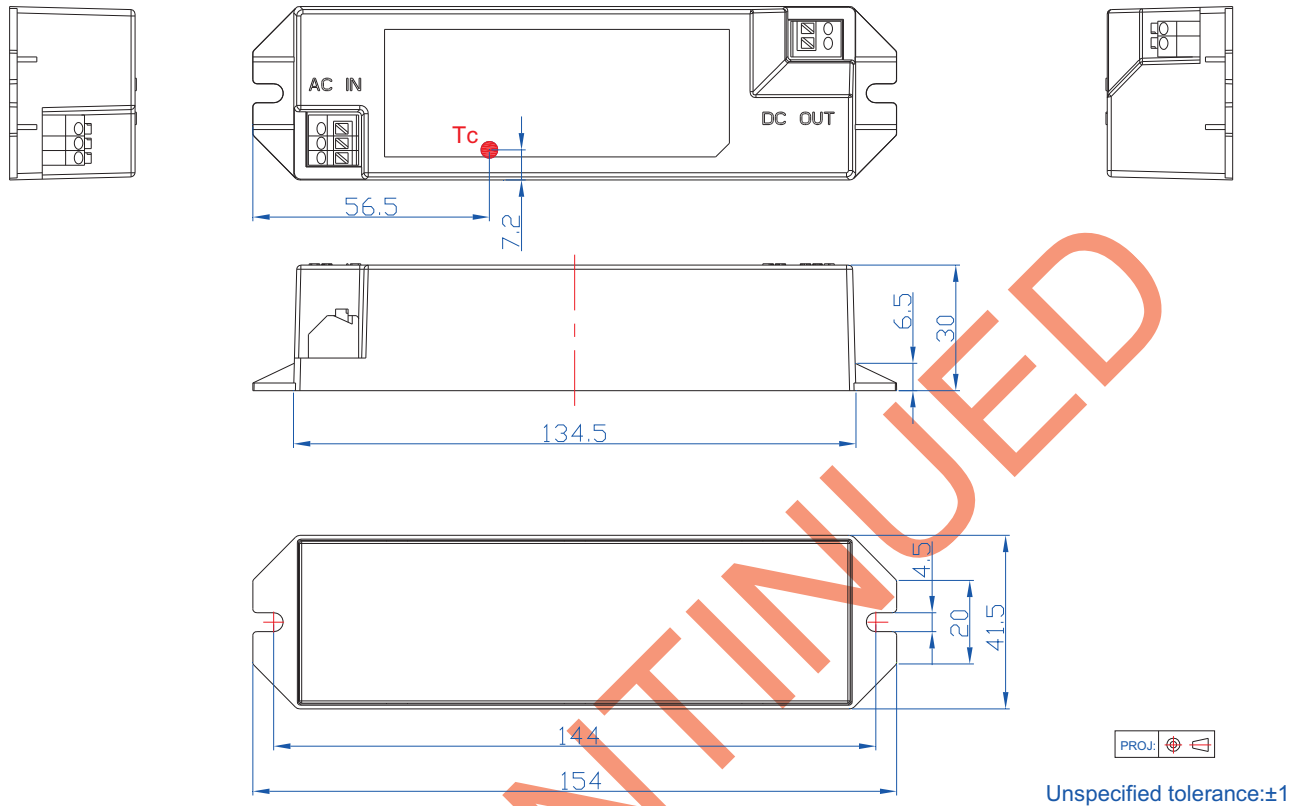
## Power Factor



## 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



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

## 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
2011-09-28	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
2012-6-15	F	Output Voltage of LWC-018S035SSE corrected	25~51 Vdc	26~51 Vdc
		Input AC Current corrected	0.32 A	0.22 A
		Dimensions corrected	/	/
2012-7-17	G	Max Case Temperature	/	Updated
2012-8-1	H	Derating Curve	/	Updated
2012-8-30	I	Inrush Current(I <sup>2</sup> t)	/	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
2016-12-15	K	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
		Environmental Specifications	/	Deleted
		CQC Certificate	/	CCC Certificate
		KS Certificate	/	Added
		KC Certificate	/	Added
		PSE Certificate	/	Deleted
Derating Curve	/	Deleted		
PF Curve except 1050mA	/	Deleted		
Inrush Current Waveform	/	Added		

Change Date	Rev.	Description of Change		
		Item	From	To
2016-12-15	K	Note of EMI Standard	/	Added
2019-08-20	L	CCC Logo	/	Deleted
		KC Logo	/	Deleted
		Safety & EMC Compliance	KS	Updated

DISCONTINUED