

Features

- Trailing Edge AC Dimmable
- Constant Current Output
- High Efficiency (Up to 86%)
- Active Power Factor Correction (Up to 0.95)
- All-Around Protection: OVP, SCP and OLP



Description

The LUC-040S060RSP series operates from a 90 ~ 305 Vac input range. It is designed to be highly efficient and reliable. Features include dimming control with trailing edge, open lamp, short circuit protections.

Models

Output Current	Input Voltage Range(1)	Output Voltage Range	Max. Output Power	Efficiency (2)	Power Factor (2)	Model Number
600 mA	90 ~ 305 Vac	28-57 Vdc	34.2 W	86%	0.95	LUC-040S060RSP

Notes: (1) Certified input voltage range: 100-277Vac.

(2) Measured in 220 Vac input with full conduction angle at full load.

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	90 V	-	305 V	
Input Frequency	47 Hz	-	63 Hz	
Leakage Current	-	-	0.5 mA	At 277Vac, 60Hz input.
Input AC Current	-	-	0.44 A	Measured at full load and 100 Vac input.
Inrush Current	-	-	60 A	At 220Vac input, 25°C cold start, duration=100 us, 10%lpk-10%lpk.
Inrush Current(I ² t)	-	-	0.12 A ² s	
Power Factor	0.90	-	-	At 100Vac-240Vac, 75%load-100%load (30~40W)
THD	-	-	20%	

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%lo	-	5%lo	Full load condition
Output Current Ripple (pk-pk)	-	80%lo	100%lo	At 220Vac input and Full load
Startup Overshoot Current	-	-	10%lo	Full load condition
No Load Output Voltage	-	-	72 V	

Output Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
Line Regulation	-	-	±3%	
Load Regulation	-	-	±3%	
Turn-on Delay Time	-	0.40 s	0.75 s	Measured at 120Vac input, 75%load-100%load
	-	0.30 s	0.50 s	Measured at 220Vac input, 75%load-100%load
Dimming Range	0%lo	-	100%lo	Input voltage from 90Vac to 132Vac
No Dimming	-	100%lo	-	Input voltage from 132Vac to 305Vac
Temperature Coefficient	-	-	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:	84%	85%	-	Measured at full load with full conduction angle and steady-state temperature in 25°C ambient.
Efficiency at 220 Vac input:	85%	86%	-	Measured at full load with full conduction angle and steady-state temperature in 25°C ambient.
No Load Power Dissipation	-	-	3 W	
MTBF	-	405,000 Hours	-	Measured at 120Vac input, 80%load and 25°C ambient temperature (MIL-HDBK-217F)
Lifetime	-	86,600 Hours	-	Measured at 120Vac input, 80%load, Case temperature = 60°C @ Tc point. See life time vs. Tc curve for more details
Operating Case Temperature for Safety Tc_s	-10 °C	-	+90 °C	
Operating Case Temperature for Warranty Tc_w	-10 °C	-	+70 °C	Humidity: 10% RH to 90% RH
Storage Temperature	-20 °C	-	+85 °C	Humidity: 5% RH to 90% RH
Dimensions Inches (L x W x H) Millimeters (L x W x H)	3.74 x 2.76 x 1.26 95 x 70 x 32			
Net Weight	-	250 g	-	

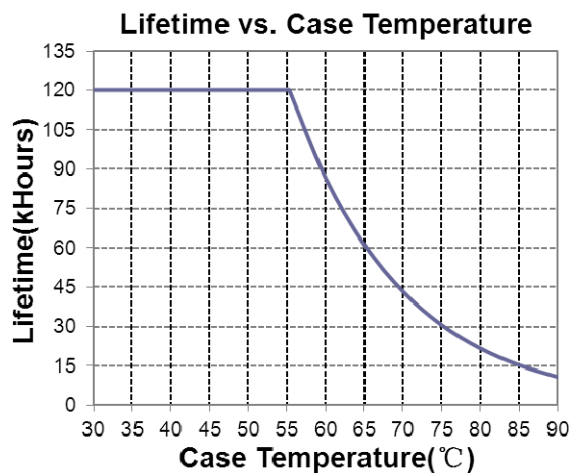
Note: All specifications are tested by YW-PWH01 and typical at 25°C unless otherwise stated.

Safety & EMC Compliance

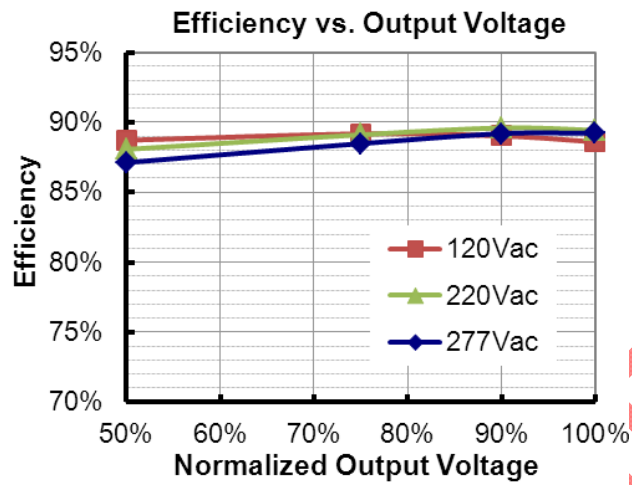
Safety Category	Standard
UL/CUL	UL8750, UL1012, CSA C22.2 No. 107.1-01
KS	KS C 7655: 2011
EMI Standards	Notes
EN 55015 ⁽¹⁾ /CISPR15	Conducted Emission Test & Radiated Emission Test
EN 61000-3-2	Harmonic Current Emissions Class C
EN 61000-3-3	Voltage Fluctuations & Flicker
FCC Part 15 ⁽¹⁾	ANSI C63.4:2009 Class B
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: 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
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.

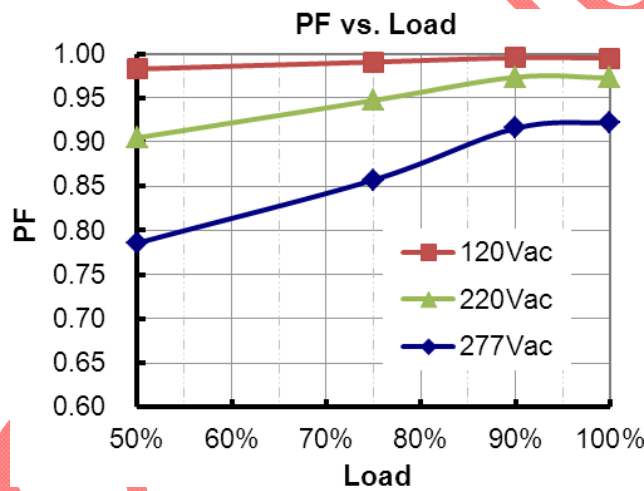
Lifetime vs. Case Temperature



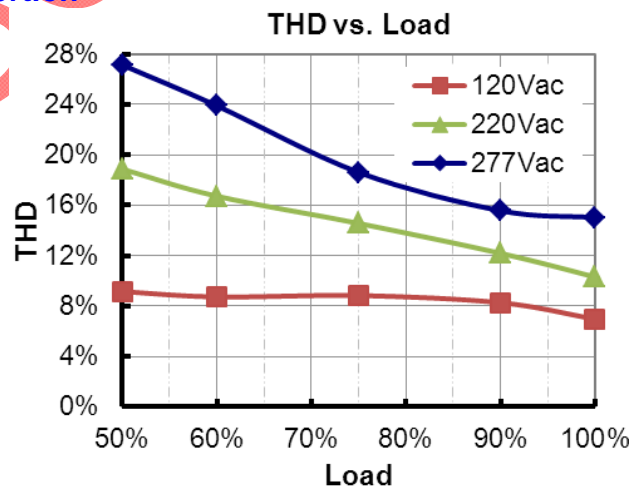
Efficiency vs. Load



Power Factor



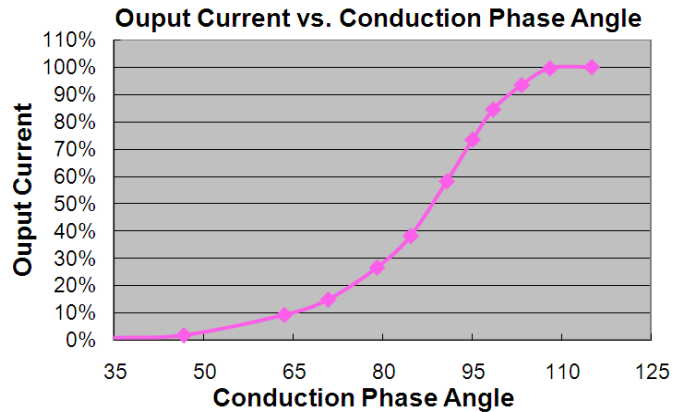
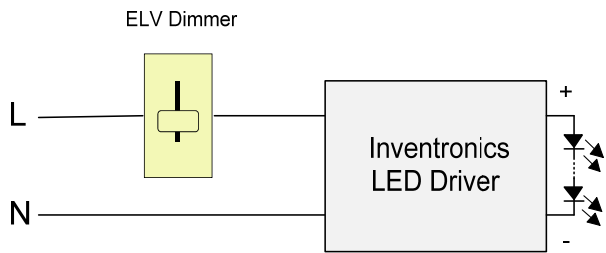
Total Harmonic Distortion



Protection Functions

Parameter	Min.	Typ.	Max.	Notes
Short Circuit Protection	Auto recovery mode. The power supply shall return to normal operation after the fault condition is removed.			

Dimming Control

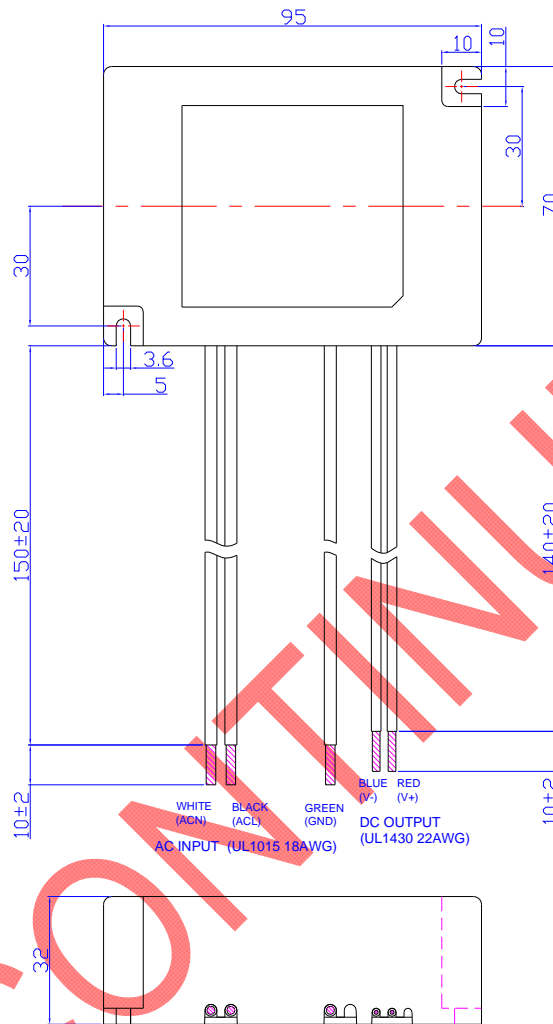


Implementation: Dimming with ELV Dimmer

Parameter	Min.	Typ.	Max.	Notes
Dimming Range	0%Io	-	100%Io	Measured at 120 Vac input.
Dimming Range	100%Io	-	100%Io	Input voltage from 132 Vac to 305 Vac
Conduction Angle	30°	-	180°	Measured at 120 Vac input.

DISCONTINUED

Mechanical Outline



PROJ: Unspecified tolerance:±1

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
2013-01-30	A	Datasheet Release	/	/
2017-01-06	B	Turn-on Delay Time at 120Vac	Max.=1.0 s	Max.=0.75 s
		Turn-on Delay Time at 220Vac	/	Added
		Operating Case Temperature for Warranty Tc_w	/	Added
		Environmental Specifications	/	Deleted
		Lifetime	68,600Hours	86,600Hours
		Net Weight	230 g	250 g
		KS Certificate	/	Added
		Note of EMI Standard	/	Added
		Derating Curve	/	Deleted
Mechanical Outline – Output Wire	UL1015 2*AWG#22	UL1430 22AWG		

DISCONTINUED