

Autec's L4HCP120 series offers digital programmable drivers with wide-range adjustable output current and up to 660Vac unparallelled input capability,.

The output current of this series is programmable up to 0.7A/1.05/1.4/2.1/2.8A and designed for 0(0.1)-10V/PWM/Rset dimming applications.



Applications

- Outdoor LED lights
- Street lights, high bay and low bay lights, LED panels



Specifications

Input Voltage	Output Power	Output Voltage	Output Current	Efficiency	Max. Case Temperature	Max. Input Current	Max. Input Power	THD	Power Factor
305~660Vac	120W	30V ... 170V	2.8A ... 0.7A	90%	90°C	0.5A	135W	<20%	>0.95

* Based on 25°C ambient temperature, rated input voltage, and full load.

** Refer to Page 2 for detailed specifications for this series of LED drivers.

Features

- Ultra-deep dimming down to 1%,
- > 70,000 hours lifetime at 75°C Tcase
- Min. operating temperature @ -40°C
- Constant current & constant voltage output
- Output current programmable
- Compatible with 0(0.1)-10V, PWM, external resistor
- Safety according to UL8750, & EN61347-2-13
- Surge voltage rating: L-N 4kV, L/N-GND 6kV
- EMC according to FCC Part 15 Class B
- Lightning, OVP, SCP, OTP & Open Circuit Protection

Enclosure

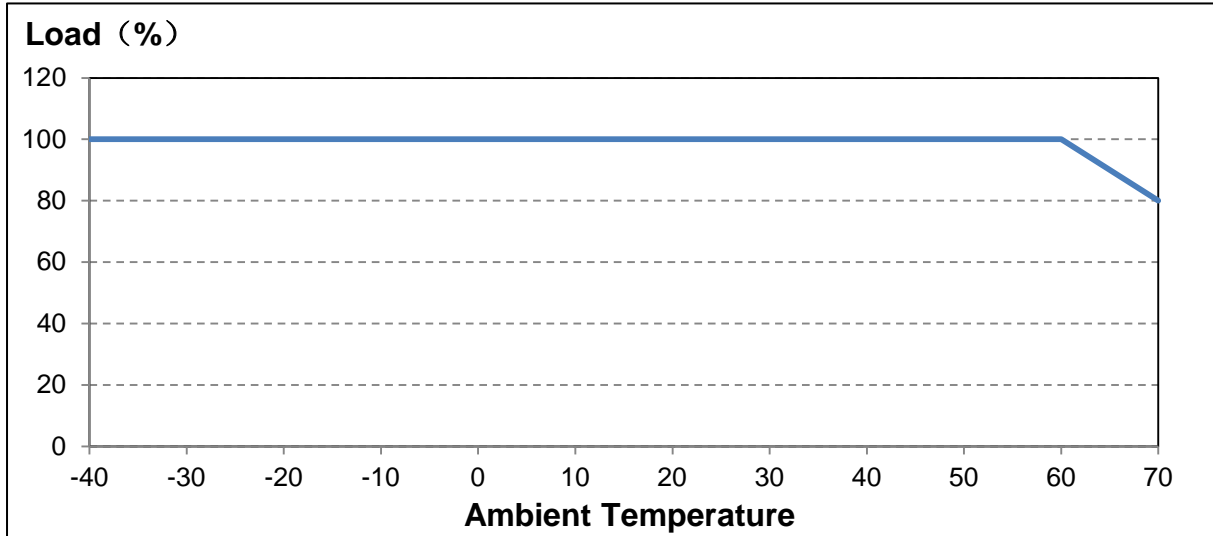
	mm (inch)
Case Length	138 (5.43)
Case Width	68 (2.68)
Case Height	42.5 (1.67)
Mounting Length	151 (5.95)
Overall Length	161 (6.34)

Electrical Specifications

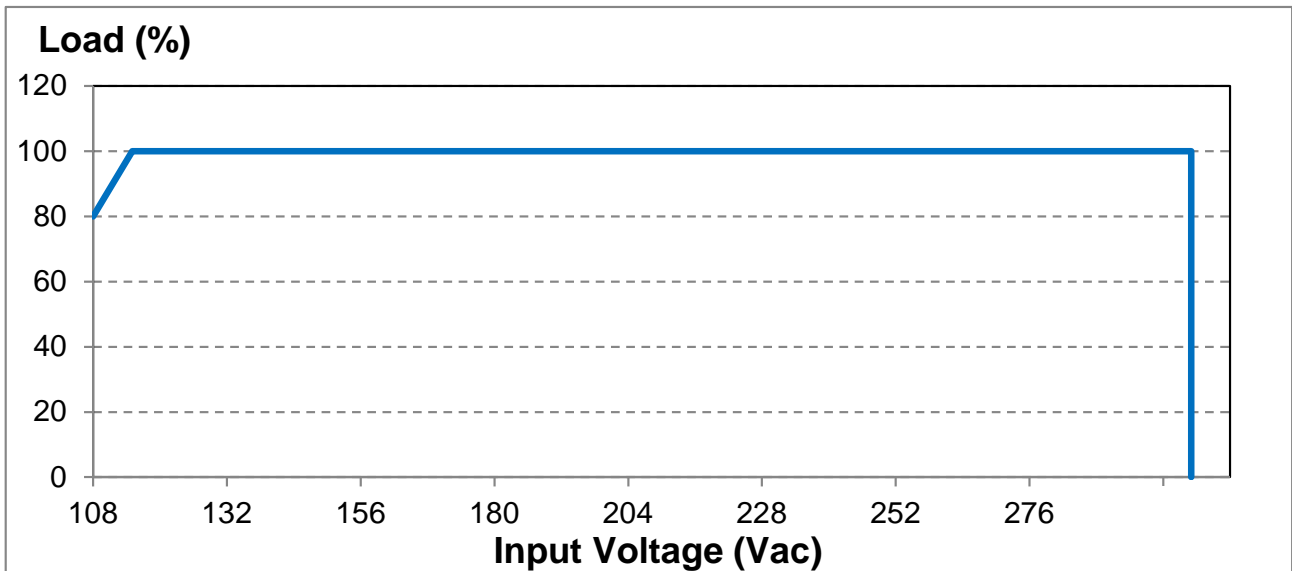
Model	L4HCP120S070ST	L4HCP120S105ST	L4HCP120S140ST	L4HCP120S210ST	L4HCP120S280ST
Output Voltage	85-170V	55-110V	45-90V	29-58V	21-43V
Output Current	0.7A	1.05A	1.4A	2.1A	2.8A
Dimming	0-10V, PWM, External Resistor, Clock				
Output Power	120W	120W	120W	120W	120W
Max. Current Ripple	280mA	420mA	600mA	800mA	1150mA
Max. Voltage Ripple	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
Voltage Range	305-660Vac	305-660Vac	305-660Vac	305-660Vac	305-660Vac
Frequency Range	47-63Hz	47-63Hz	47-63Hz	47-63Hz	47-63Hz
Max. Input Current	0.5A	0.5A	0.5A	0.5A	0.5A
Max. Input Power	135W	135W	135W	135W	135W
Power Factor	>0.95 @ 115Vac & 80-100% full load, >0.90 @ 277Vac & 80-100% full load				
Efficiency	90%	90%	90%	89%	89%
Max. Open Circuit Voltage	200V	130V	110V	65V	55V
THD	<20% @ 120Vac & 80-100% full load, <20% @ 277Vac & 80-100% full load				
Protections	OVP, OTP, OCP, SCP				
Environmental Protection	UL Dry & Damp & Wet, and Type TL				
Working Temperature	-40-+70°C				
Max. Case Temperature	90°C				
Surge Protection	L-N 4kV, L/N-Earth 6kV				
Agency Approbations	UL8750				
Electromagnetic Compliance	Per Title 47 CFR Part 15 Class B				
Ansi Surge Type	1.2/50µs Combination Wave (w/t 2Ω)				
Isolation	Primary to Secondary: 3750Vac / 10mAmax / 60seconds				
Dimension	138x68x42.5 mm (5.43x2.68x1.67 inch)				
Mounting Length	151 mm (5.95 inch)				
Overall Length	161 mm (6.34 inch)				
Weight	1.0 kg (1.11 lb)				
Life Time	>70,000 hours @ full load, 75°C Tcase				

* Unless otherwise noted, the data are based on 25°C ambient temperature, 480Vac input voltage, and full load.

Derating Curve

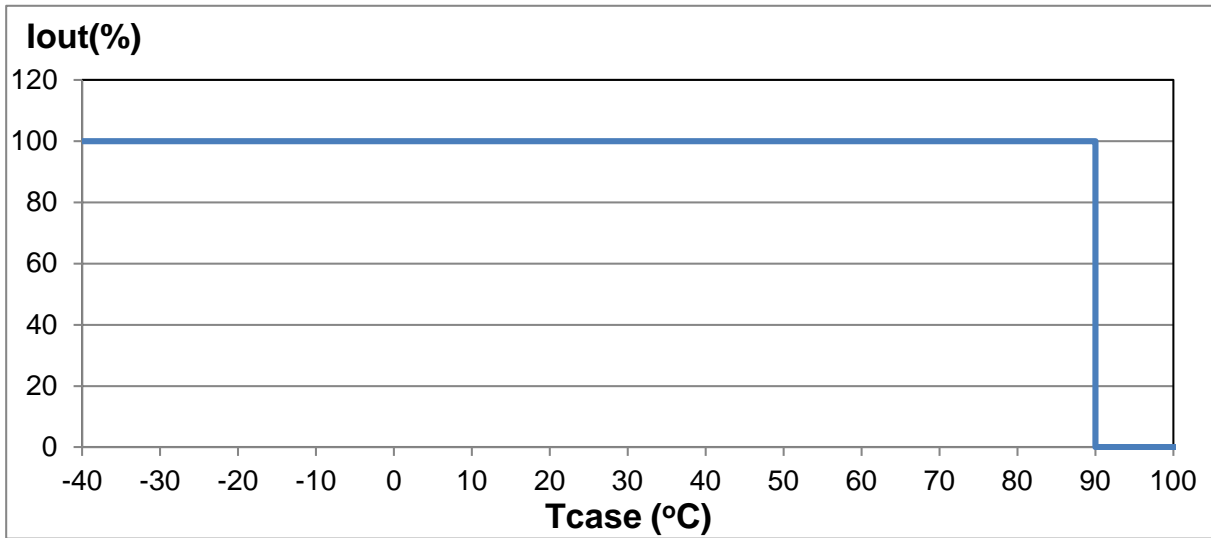


Static Characteristics

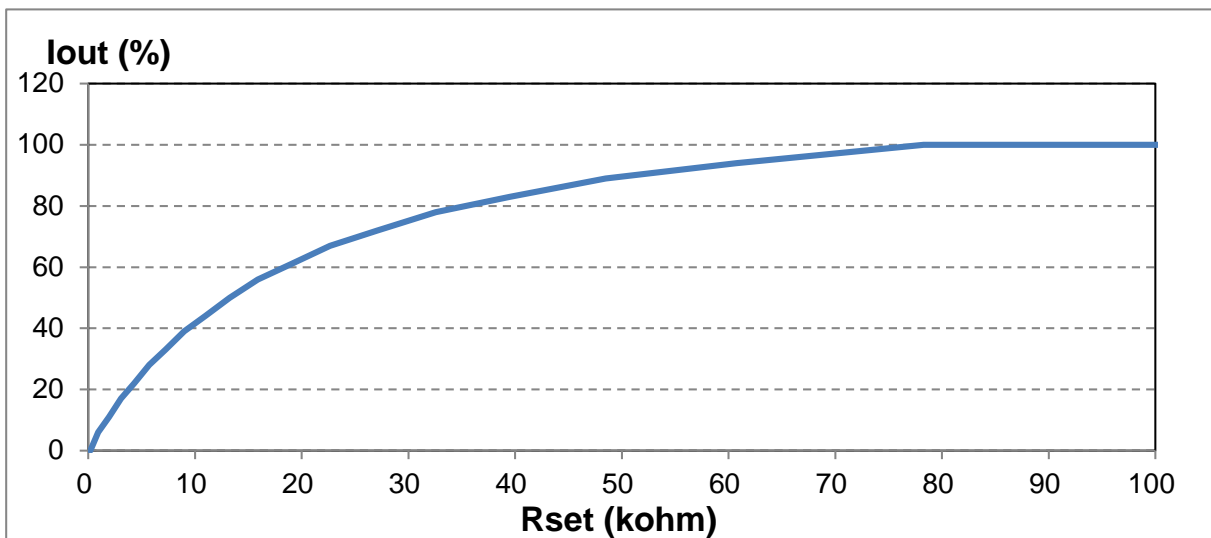


Electrical Specifications

Output Current VS. Case Temperature (with $\pm 5^{\circ}\text{C}$ Tolerance)

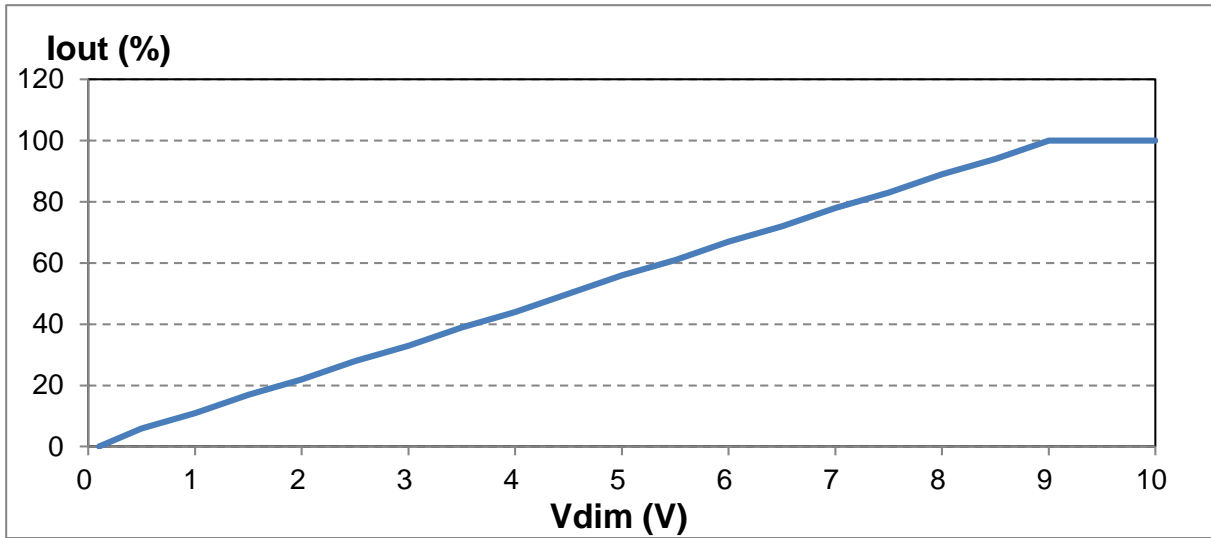


Output Current vs. External Setting Resistor

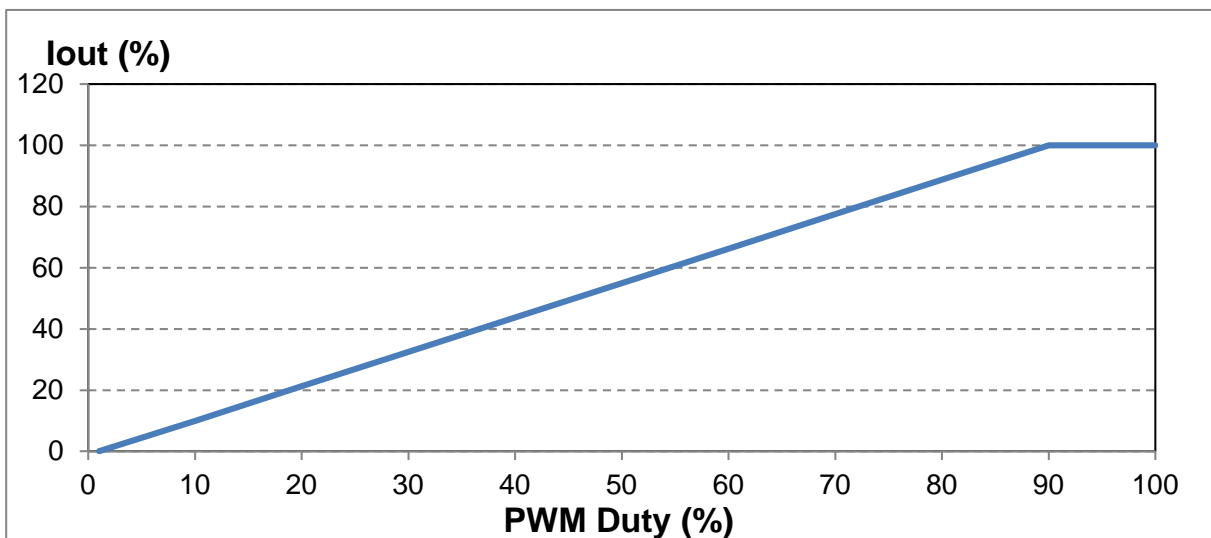


Electrical Specifications

Output Current vs. 0(0.1)-10V Dimming Control Voltage

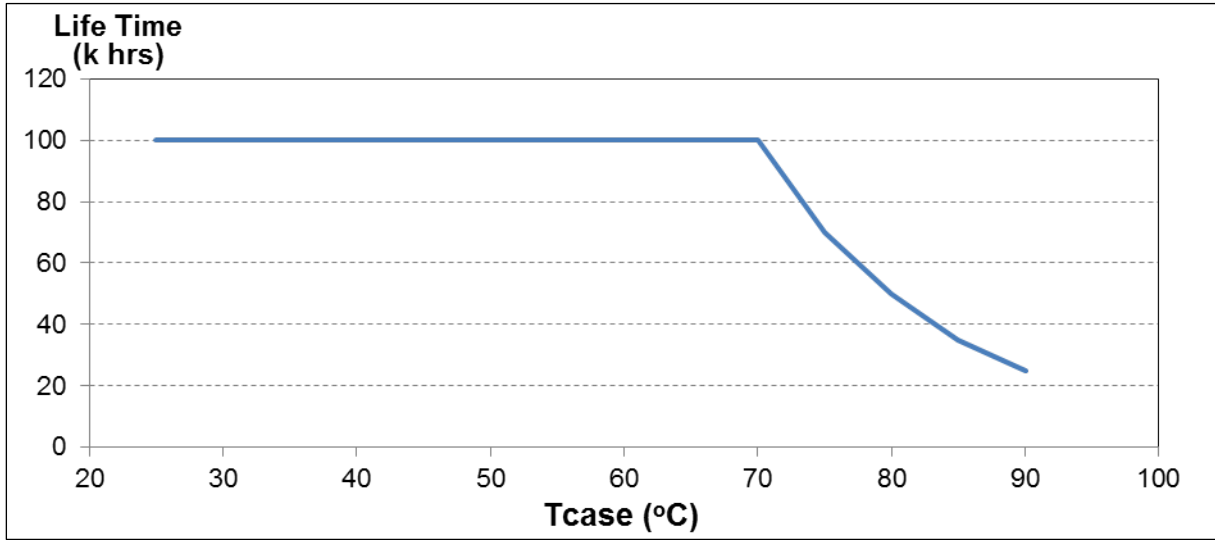


Output Current vs. PWM Dimming Duty Cycle



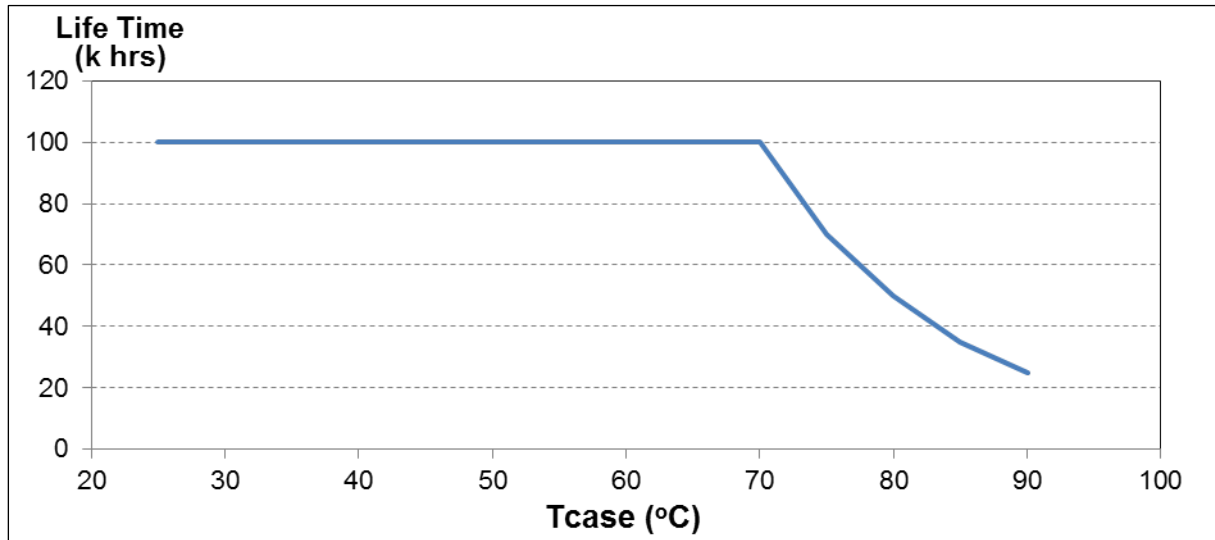
Performance Characteristics

Life Time vs. Case Temperature



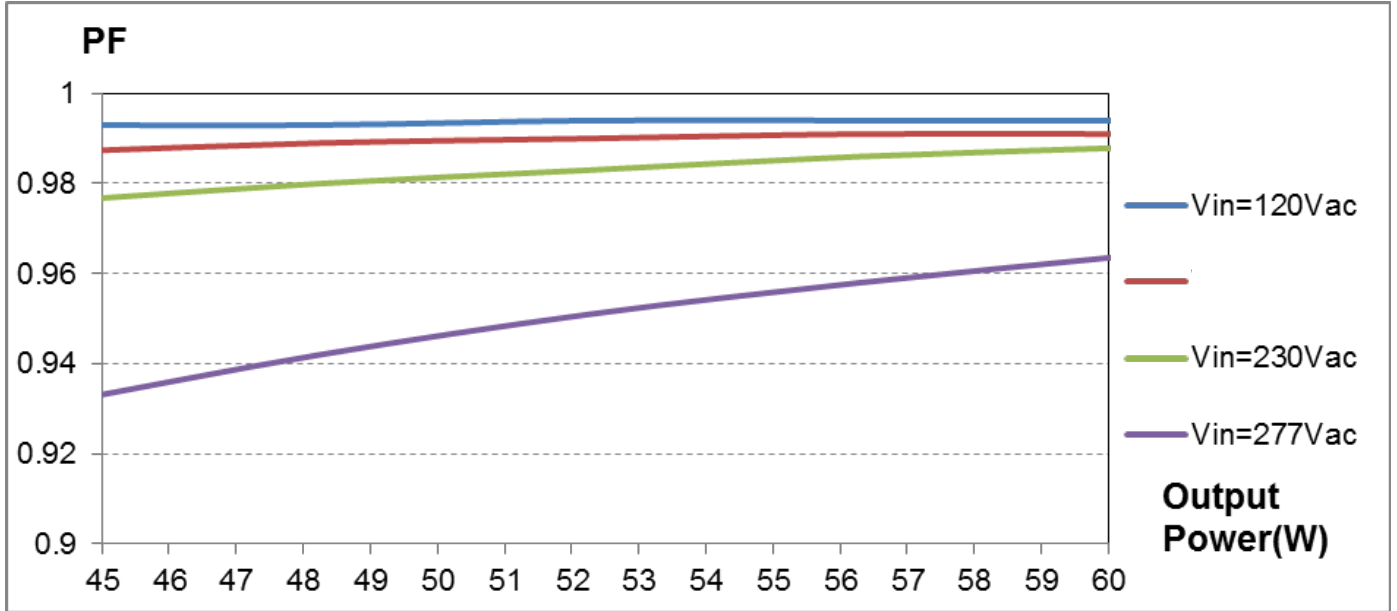
Performance Characteristics

Life Time VS. Case Temperature

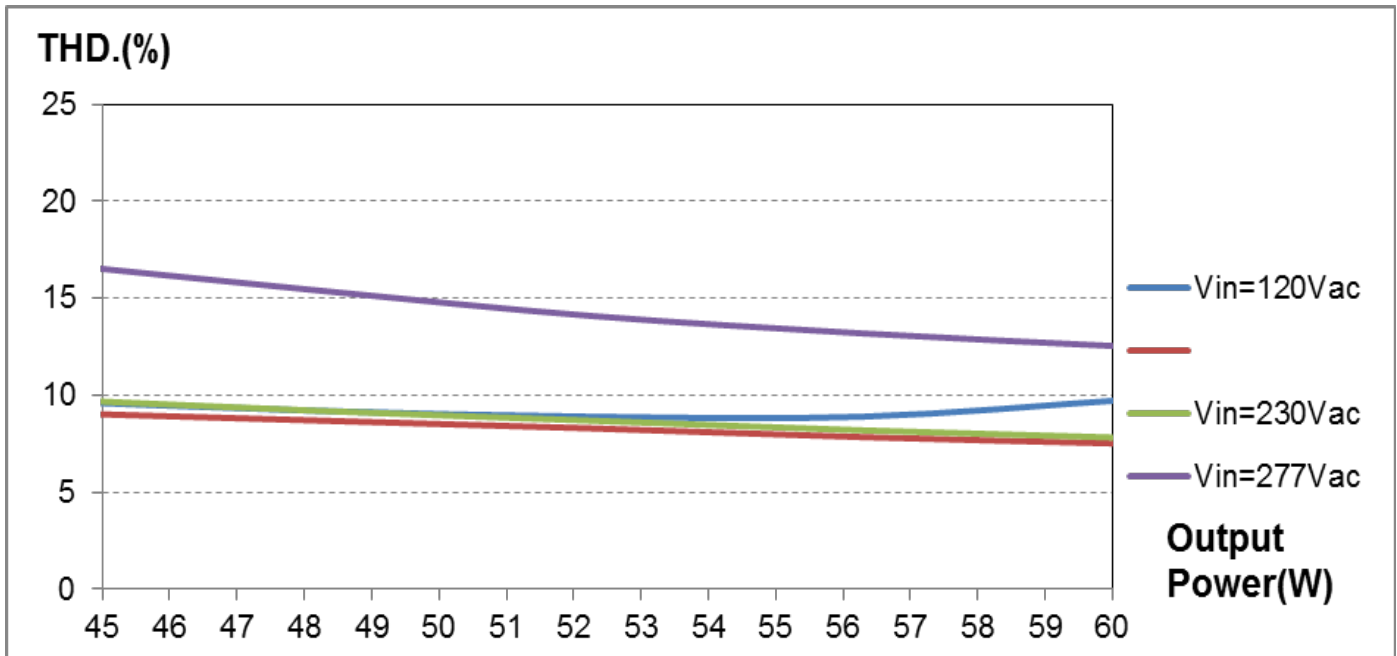


Performance Characteristics

Power Factor VS. Output Power(@ 25°C)

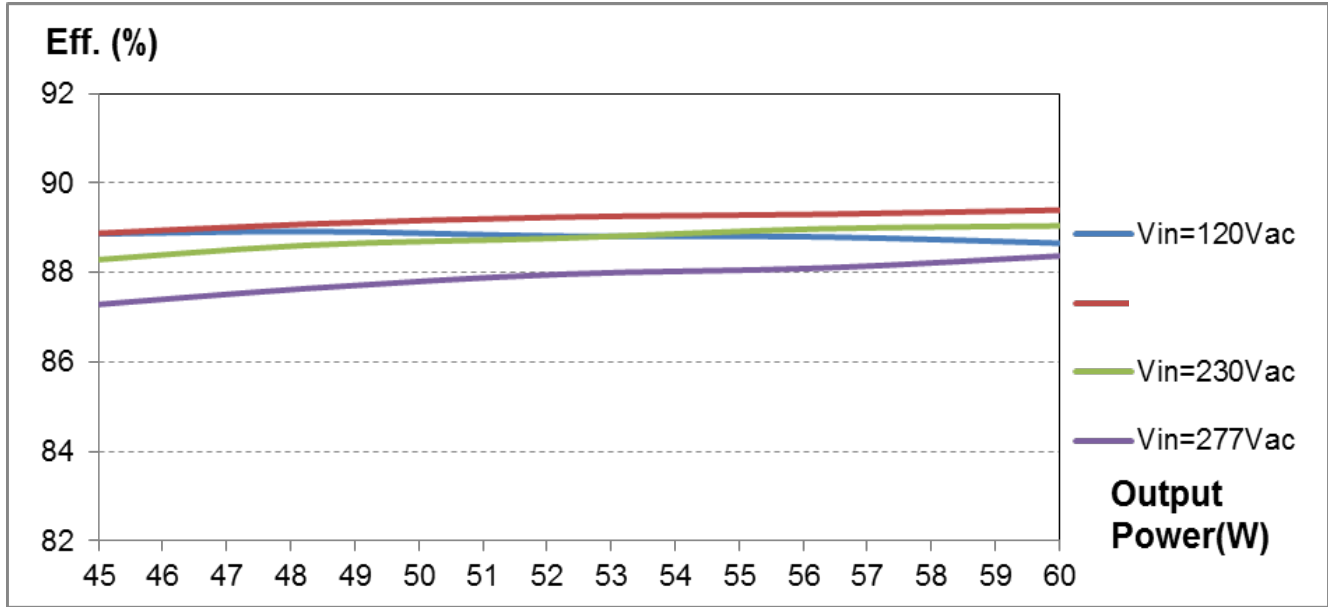


THD VS. Output Power(@ 25°C)

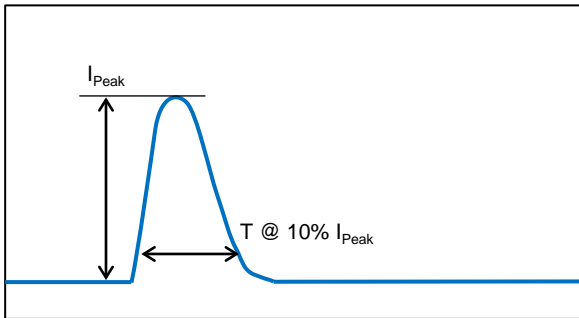


Performance Characteristics

Efficiency VS. Output Power (@ 25°C) (Tested with L4HCP120S280ST)

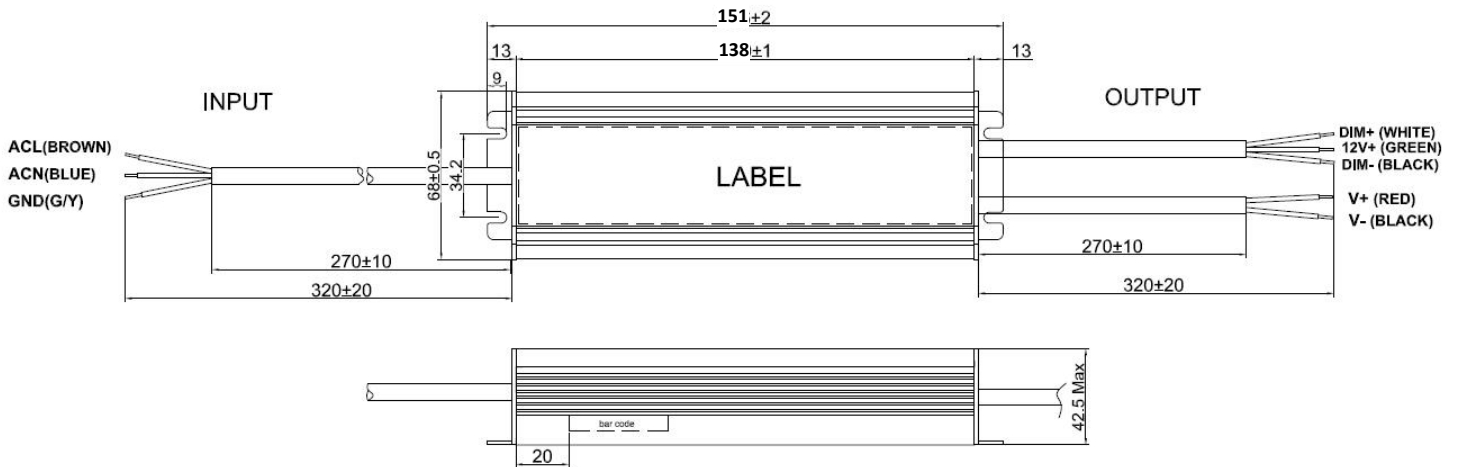


Inrush Current



V _{in}	I _{peak}	T
216 Vac	6.48 A	173 us
240 Vac	6.96 A	173 us
460 Vac	15.00 A	179 us
610 Vac	18.40 A	189 us

Mechanical Specification



- NOTES : 1. OUTLINE DIMENSION : 256L*68W*42.5H
 2. IF CASE BY NCT PROCESS, THE TOLERANCE OF ALL DIMENSIONS MUST BE ENLARGED ±0.2mm FOR CPK INSPECTION.
 3. INPUT AND OUTPUT CONNECTOR & PIN ASSIGNMENT.

INPUT WIRE 1	3	UL SJTW 18AWG*3C	GREEN/YELLOW	GND
	2		BLUE	N
	1		BROWN	L
	WIRE NUM	WIRE SPEC	COLOR	RATING
DIMMING WIRE	3	UL SJTW 18AWG*3C	GREEN	12V+
	2		BLACK	DIM-
	1		WHITE	DIM+
	WIRE NUM	WIRE SPEC	COLOR	RATING
OUTPUT WIRE	2	UL SJTW 18AWG*2C	BLACK	LED-
	1		RED	LED+
	WIRE NUM		WIRE SPEC	COLOR

4. THE GREEN DIMMING WIRE IS OPTIONAL FOR 12V AUXILIARY POWER.

Revision History

Date	Rev.	Description of Change		
		Item	From	To
2017-02-07	A	Datasheets Release	/	/