

Autec's L4WCP720SXXXXSeries offers digital programmable drivers with wide-range adjustable output current, together with 12V/100mA auxiliary output (optional) for smart lighting.

The output current of this series is programmable up to 12.2/13.33/17.14/20A, and designed for 0(0.05)-10V/PWM/Rset/Clock/ DMX ultra-deep dimming applications.



Applications

- Outdoor & indoor LED lights
- LED lights with flexible current settings
- Parking lights and architecture decoration lights
- LED horticulture lights
- LED fishing lights



Specifications

Input Voltage	Output Power	Output Voltage	Output Current	Efficiency	Max. Case Temperature	Max. Input Current	Max. Input Power	THD	Power Factor
108~305Vac	720W	24V ... 58.8V	12.2A ... 20A	95.5%	90°C	7.8A	820W	<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 0.5%, compatible with DMX
- > 70,000 hours lifetime at 75°C Tcase
- > 7 years warranty at 75°C Tcase
- Min. operating temperature @ -40°C
- 12V/100mA auxiliary output (optional)
- Constant current & constant voltage output
- Output current & output voltage programmable
- Compatible with 0(0.05)-10V, PWM, external resistor, clock, DMX dimming
- Universal input voltage: 108~305Vac
- Safety according to UL8750 & EN61347-2-13
- Surge voltage rating: L-N 5.5kV, L/N-Earth 11kV
- EMC according to FCC Part 15 Class A
- Lightning, OVP, SCP, OTP & Open Circuit Protection

Enclosure

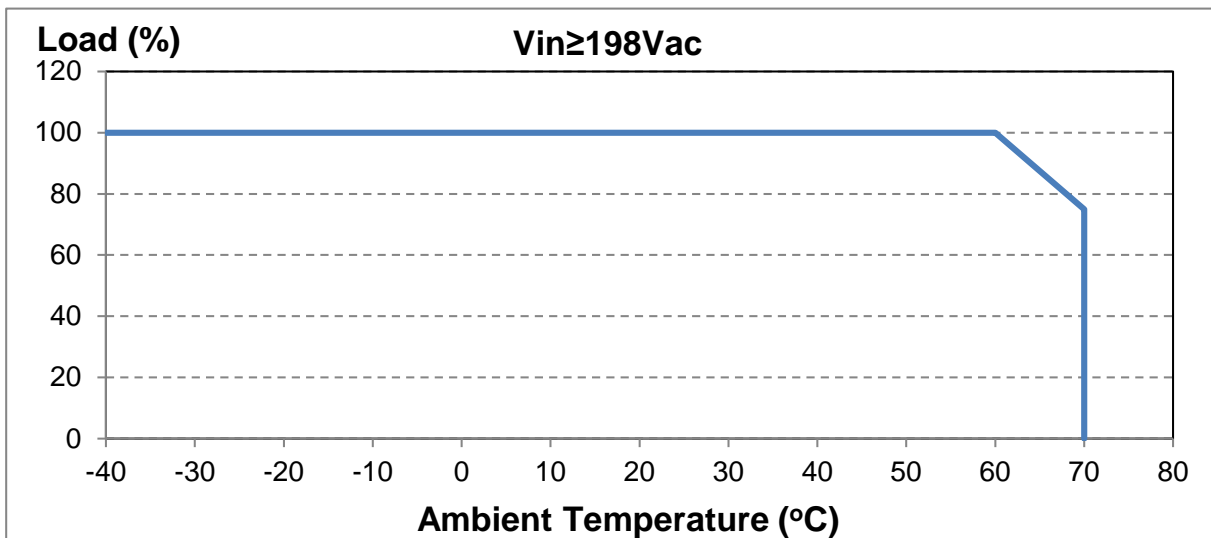
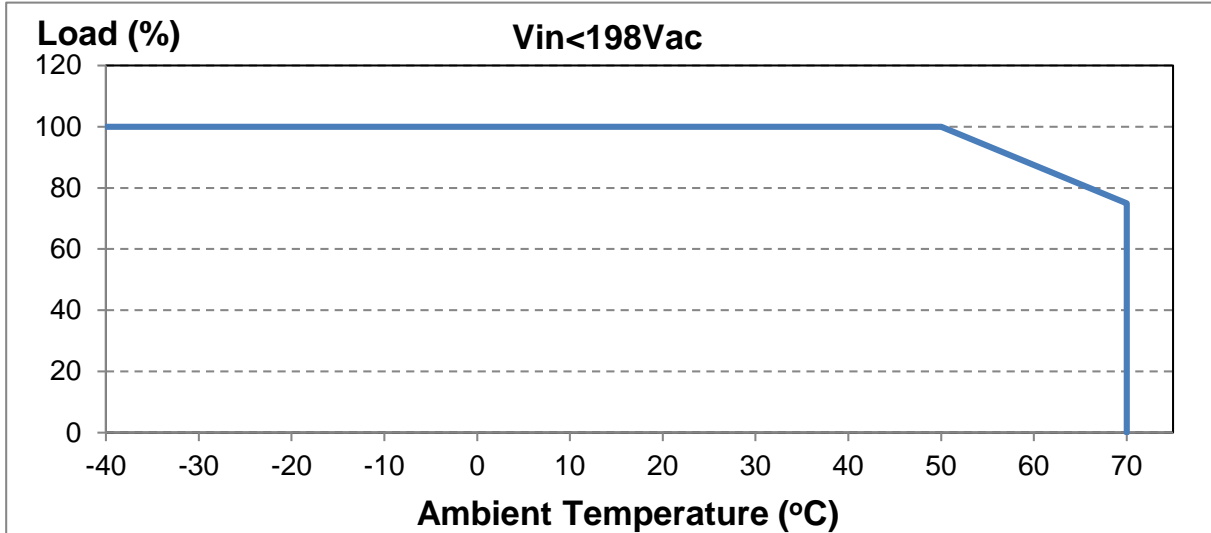
	mm (inch)
Case Length	280 (11.02)
Case Width	123 (4.84)
Case Height	54 (2.13)
Mounting Length	290 (11.42)
Overall Length	304 (11.97)

Electrical Specifications

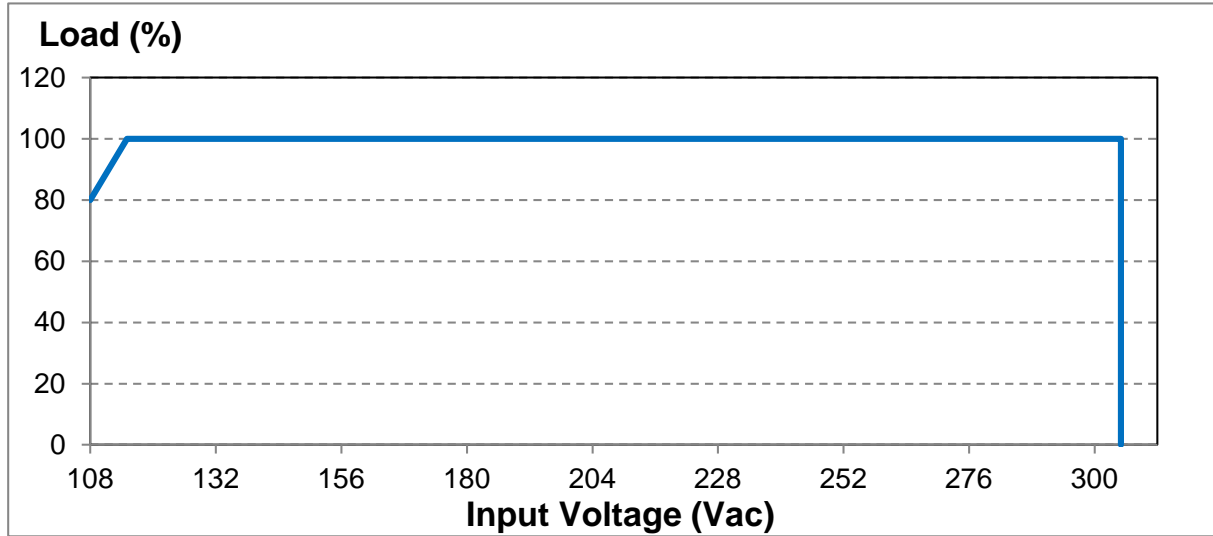
Model	L4WCP720S2000ST	L4WCP720S1714ST	L4WCP720S1333ST	L4WCP720S1220ST
Output Voltage	24-36V	32-48V	36-54V	40-58.8V
Output Current	20A	17.14A	13.33A	12.2A
Output AUX Power Voltage (Optional)	12V	12V	12V	12V
Output AUX Power Current (Optional)	0-100mA	0-100mA	0-100mA	0-100mA
Dimming	0(0.05)-10V, PWM, External Resistor, Clock, DMX			
Current Programmable	Yes			
Output Power	720W	720W	720W	720W
Max. Current Ripple	±5%	±5%	±5%	±5%
Max. Voltage Ripple	250mVp-p	250mVp-p	350mVp-p	350mVp-p
Voltage Range	108-305Vac	108-305Vac	108-305Vac	108-305Vac
Frequency Range	47-63Hz	47-63Hz	47-63Hz	47-63Hz
Max. Input Current	7.8A	7.8A	7.8A	7.8A
Max. Input Power	820W	820W	820W	820W
Power Factor	>0.95 @ 120Vac & 80-100% full load, >0.90 @ 277Vac & 80-100% full load			
Efficiency	95.5%	95.5%	96.0%	96.0%
Max. Open Circuit Voltage	39V	51V	61.8V	61.8V
THD	<20% @ 120Vac & 80-100% full load, <20% @ 277Vac & 80-100% full load			
Protections	OVP, OTP, OCP, SCP			
Environmental Protection	UL Dry & Damp & Wet			
Working Temperature	-40-+70°C			
Max. Case Temperature	90°C			
Surge Protection	L-N 5.5kV, L/N-Earth 11kV			
Agency Approbations	UL8750			
Electromagnetic Compliance	Per Title 47 CFR Part 15 Class A			
Ansi Surge Type	1.2/50µs Combination Wave (w/t 2Ω)			
Isolation (Primary to Secondary)	3750Vac / 10mA _{Max} / 60seconds			
Isolation (Primary to Earth)	1875Vac / 10mA _{Max} / 60seconds			
Isolation (Secondary to Earth)	500Vac / 10mA _{Max} / 60seconds			
Case Type	Metal			
Dimension	280x123x54 mm (11.02x4.84x2.13 inch)			
Mounting Length	290 mm (11.42inch)			
Overall Length	304 mm (11.97 inch)			
Weight	3.56 kg (7.85 lb)			
Life Time	>70,000 hours @ full load, 75°C Tcase			

* Unless otherwise noted, the data are based on 25°C ambient temperature, 230Vac input voltage, and full load.

Derating Curve

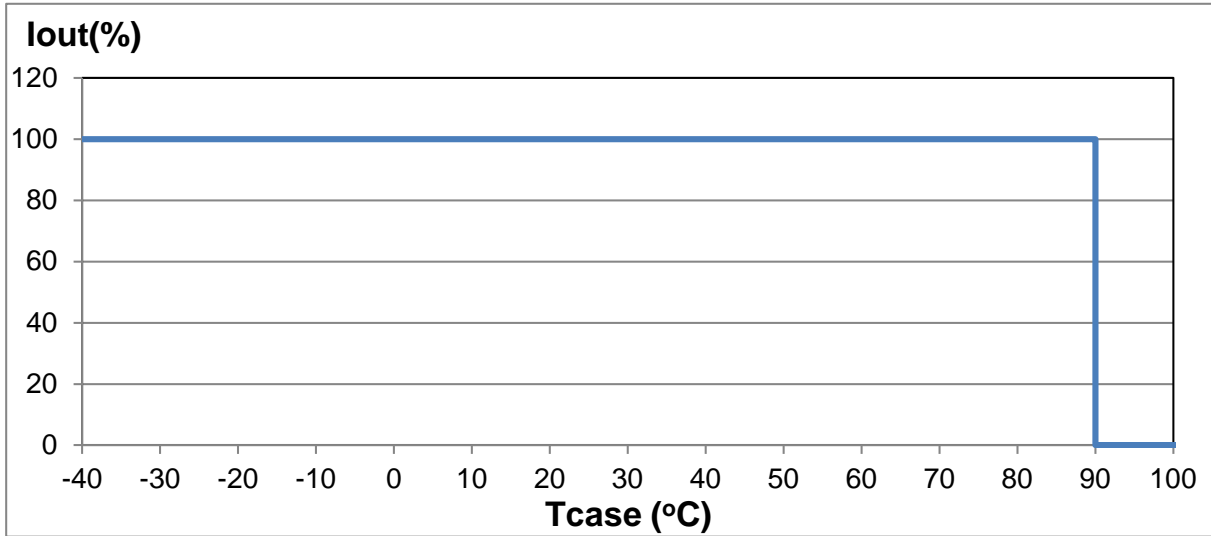


Static Characteristics

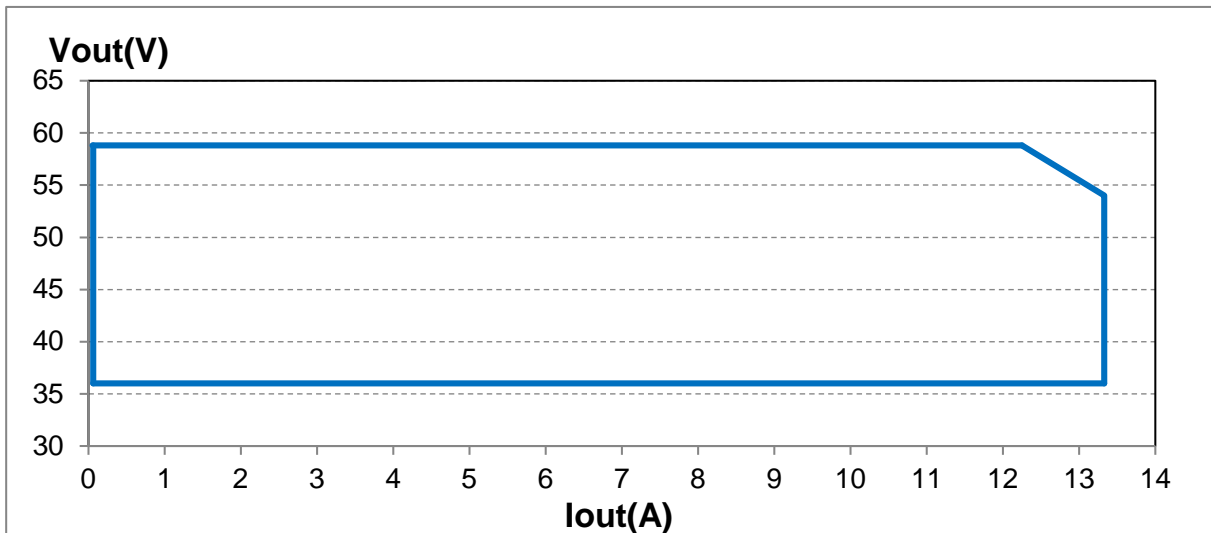


Electrical Specifications

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

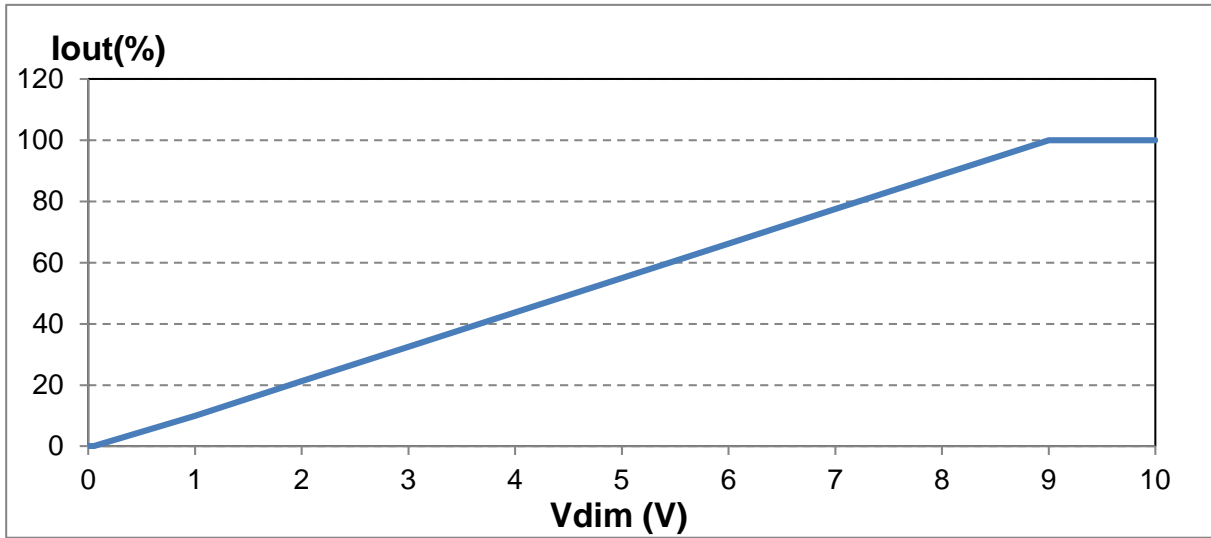


I-V Programming Area: Output Voltage vs. Output Current (Example with L4WCP720S1330ST)

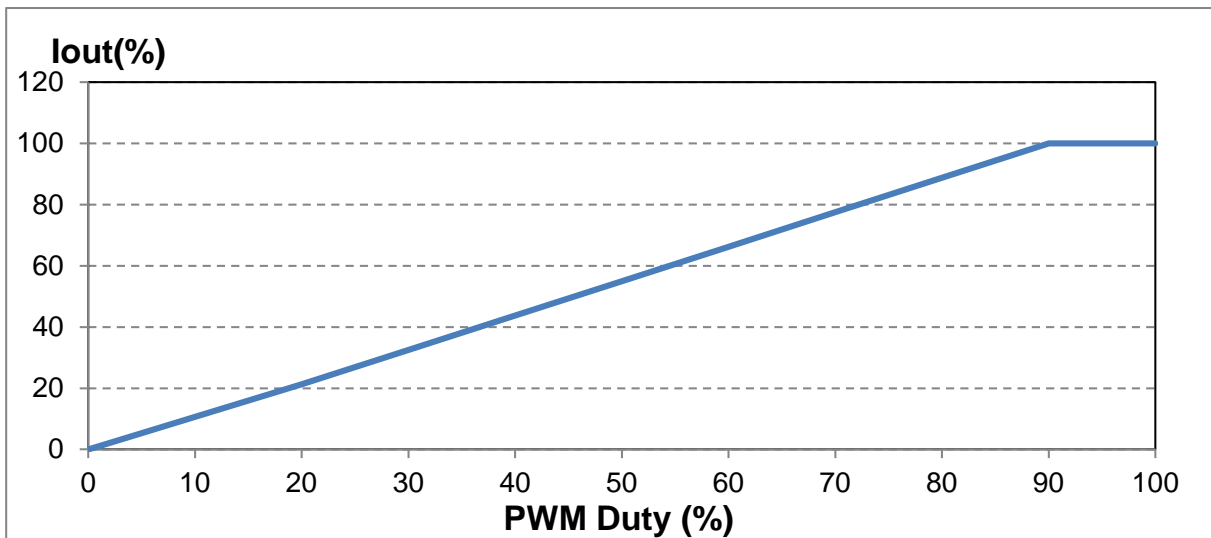


Electrical Specifications

Output Current vs. 0(0.05V)-10V Dimming Control Voltage

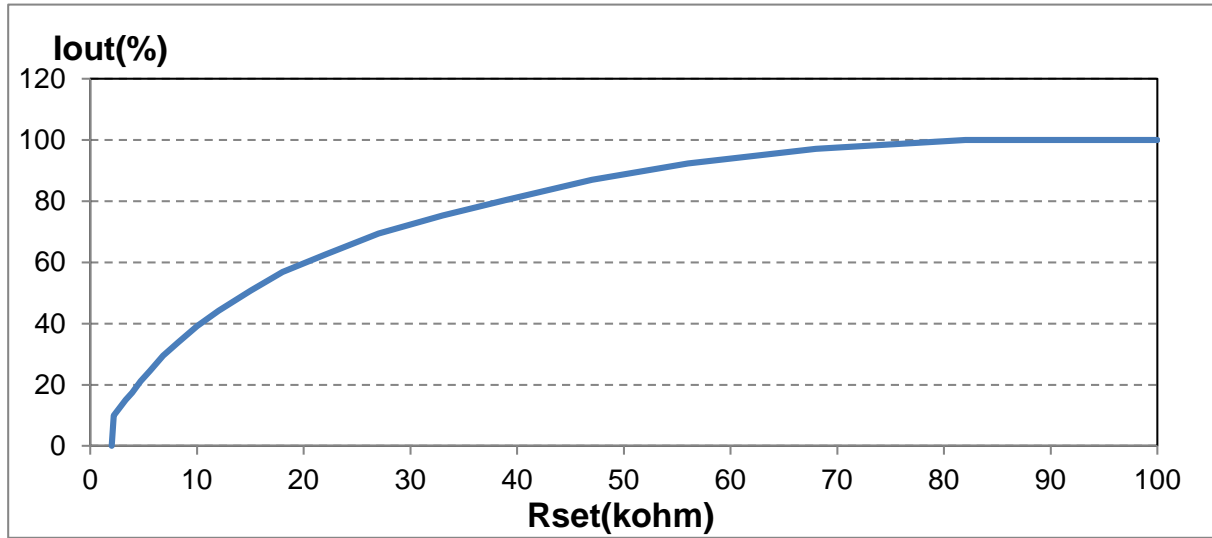


Output Current vs. PWM Dimming Duty Cycle



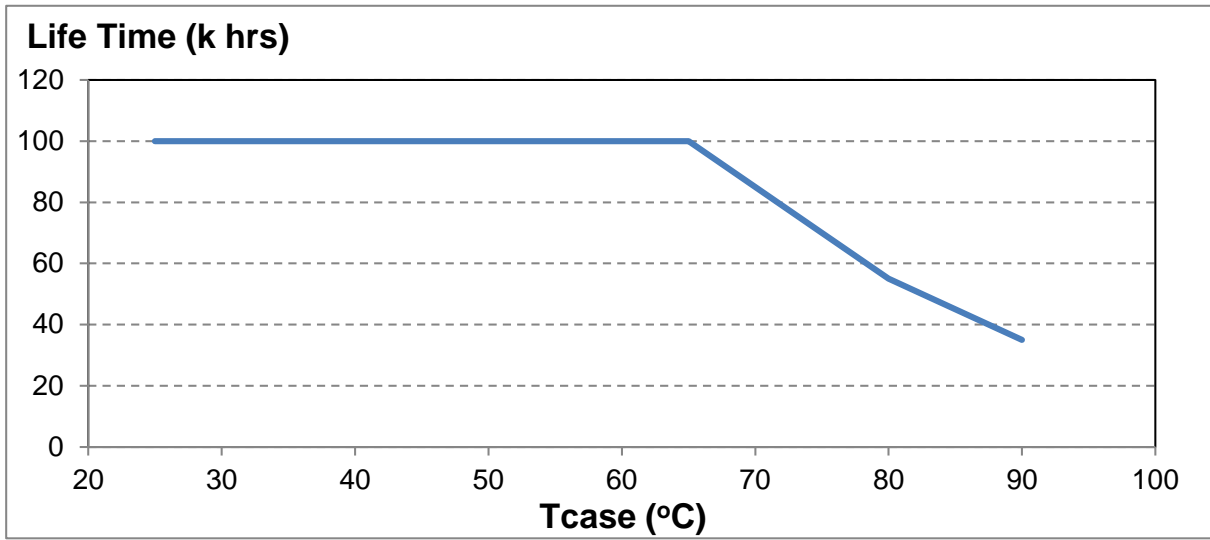
Electrical Specifications

Output Current vs. External Setting Resistor



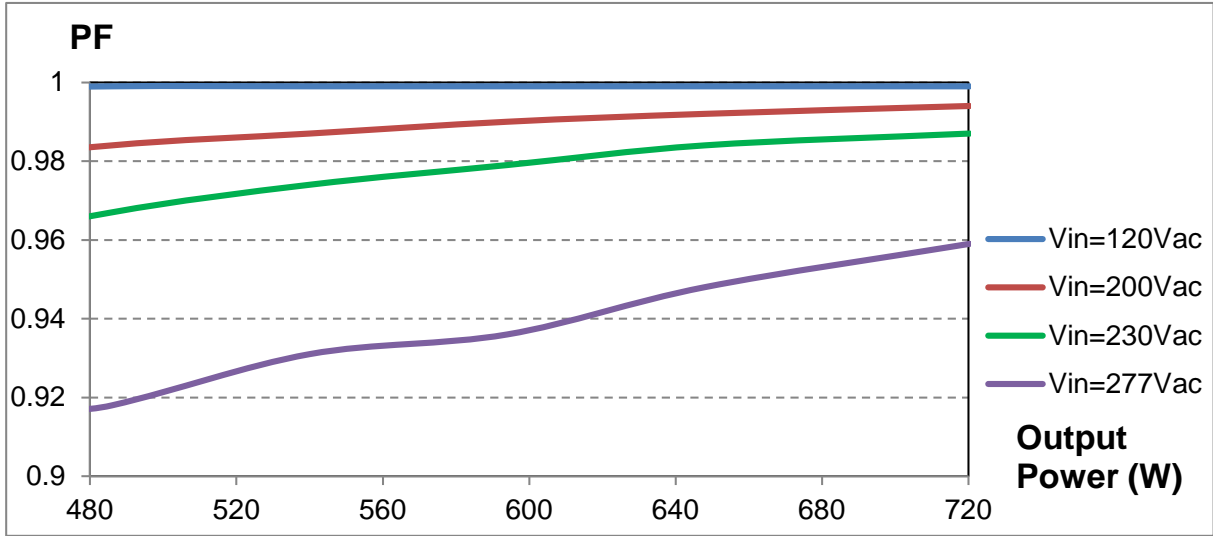
Performance Characteristics

Life Time vs. Case Temperature

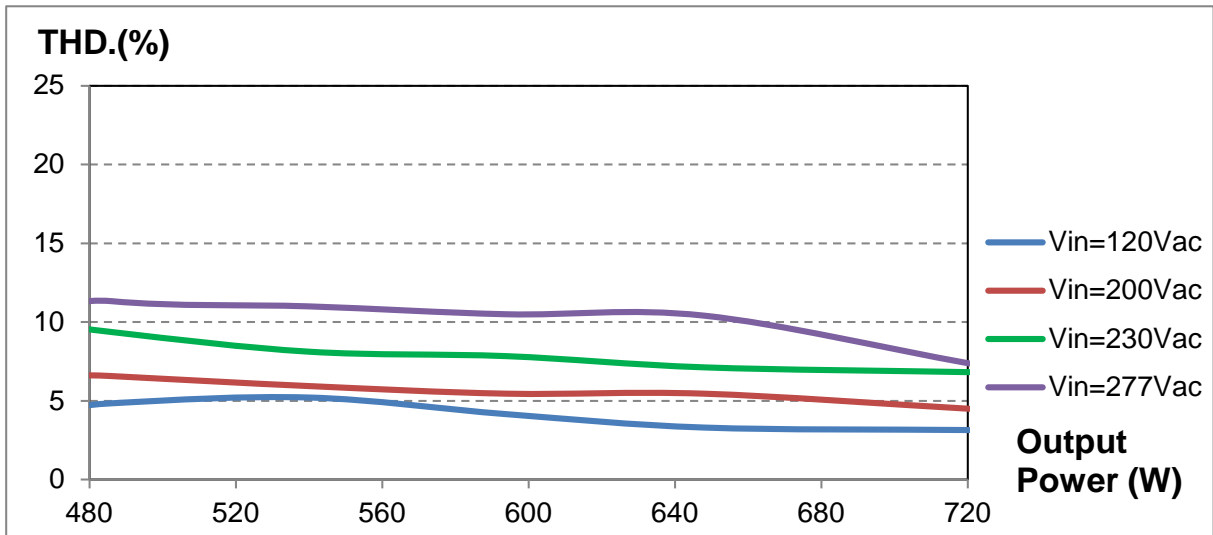


Performance Characteristics

Power Factor vs. Output Power (@ 25°C)

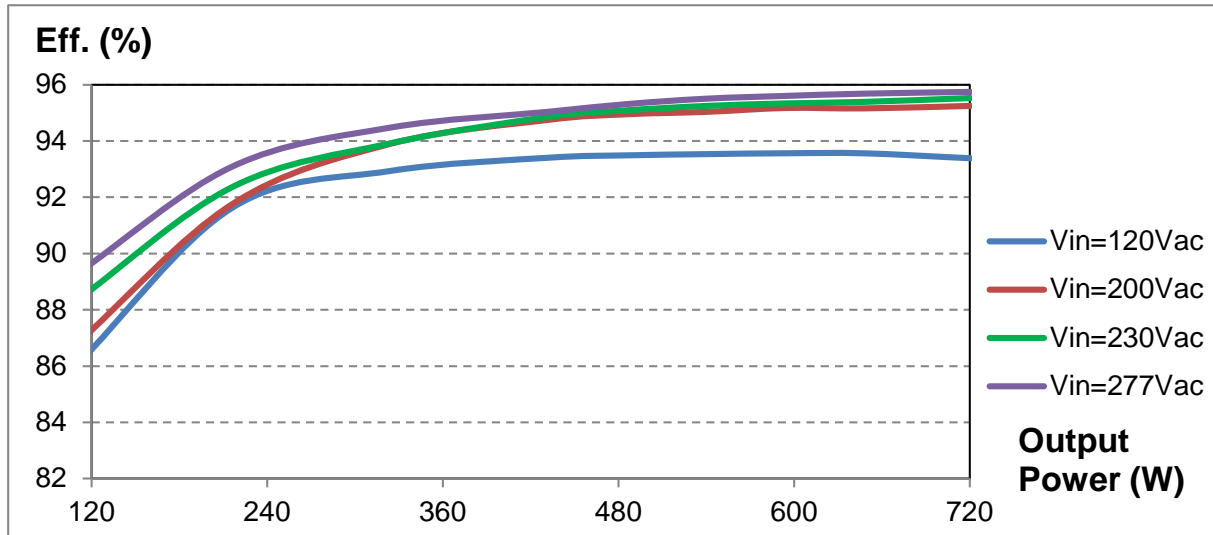


THD vs. Output Power (@ 25°C)

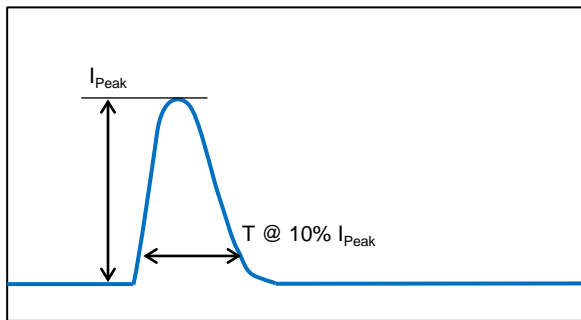


Performance Characteristics (Tested with L4WCP720S1330ST)

Efficiency vs. Output Power (@ 25°C)

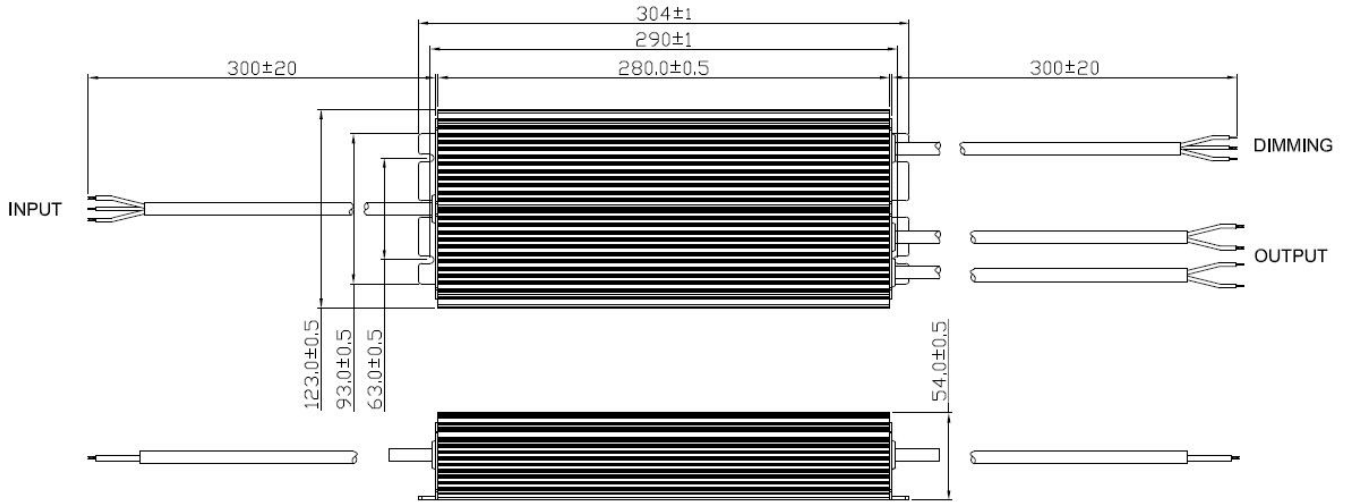


Inrush Current



V_{in}	I_{peak}	T
108 Vac	20.30 A	860 us
115 Vac	23.08 A	890 us
230 Vac	56.04 A	1205 us
305 Vac	61.2 A	1570 us

Mechanical Specification



- NOTES : 1. OUTLINE DIMENSION : 304L*123W*54H
 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 14AWG*2C	BLACK	LED-
	1		RED	LED+
	WIRE NUM	WIRE SPEC	COLOR	RATING

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	/	/