L4WCP120 Series

120W, 108-305Vac Input, Programmable Constant Current LED Driver

RoHS Compliant

Features

- Power Rating: 120W
- Input Voltage: 108-305Vac
- Constant voltage and constant current design
- Output current (84mA-5000mA)
- Digital programming with external module and software
- Efficiency up to 90%
- Compatible with 0(0.05)-10V, PWM, external resistor, clock, DMX dimming
- Lightning, OVP, SCP, OTP & Open Circuit Protection
- IP67
- 7-year warranty
- Surge Protection: L-N 4kV, L/N-Earth 4kVPower

*Product images are for illustrative purposes only and may vary from actual design.

Application

- Cost-effective outdoor and Indoor LED Lights
- LED lights with flexible current settings
- Street lights, high bay and low bay lights, LED panels

Model List*(See part number scheme for model number details)

Model Number	Input Voltage Range	Output Power	Output Voltage	Output Current Min.	Output Current Max.	Efficiency	Certification
L4WCP120S500ST	108~305Vac	120W	12-30V	500mA	5000mA	90%	UL/cUL
L4WCP120S330ST	108~305Vac	120W	23-45V	330mA	3300mA	90%	UL/cUL
L4WCP120S250ST	108~305Vac	120W	29-58.8V	250mA	2500mA	90%	UL/cUL
L4WCP120S168ST	108~305Vac	120W	35-86V	168mA	1680mA	90%	UL/cUL
L4WCP120S126ST	108~305Vac	120W	47-114V	126mA	1260mA	90%	UL/cUL
L4WCP120S084ST	108~305Vac	120W	72-170V	84mA	840mA	90%	UL/cUL

Technical Data

Input voltage range	108-305Vac
Frequency	47-63Hz
Power factor	> 0.97 @115Vac & 80~100% full load, > 0.90 @277Vac & 80~100% full load
Output voltage	12-170V
Output power	120W
Dimming	0(0.05)~10V, PWM, External Resistor, DMX
Max. Current Ripple	500mA, 350mA, 250mA 180mA, 150mA, 100mA

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■ Technical Data(cont.)

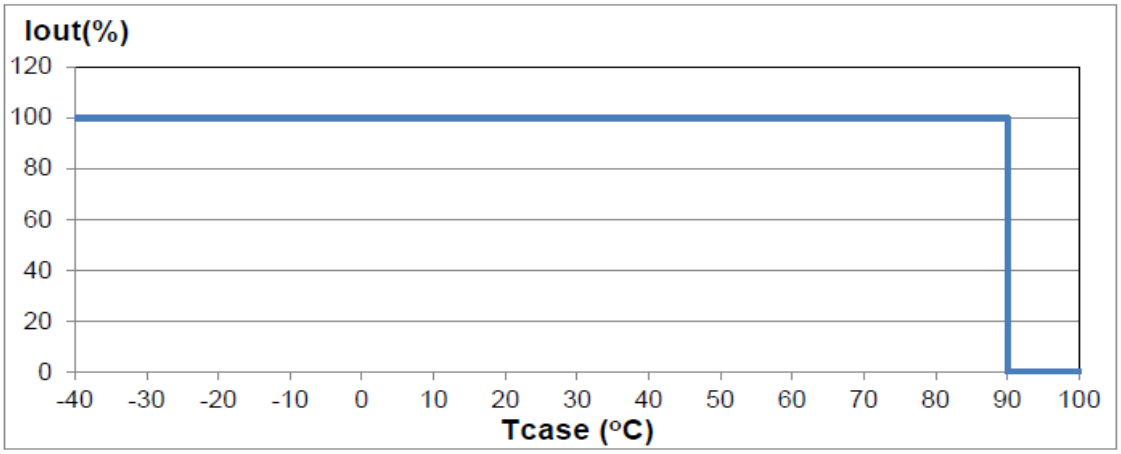
Max. Voltage ripple	±0.5%
Max input current	1.6A
Max input Power	140W
Efficiency	90%
Output AUX Power Voltage (optional)	12V
Output AUX Power Current (optional)	0-20mA
Max. open circuit voltage	50V, 63V, 73V, 100V, 148V, 200V
THD	< 20% @120- 277Vac & 80~100% full load
Protection	OVP, SCP, OTP, and Open Circuit Protection
Environmental Protection	UL Dry &Damp and wet
Working Temperature	-40~+70˚C
Max Case Temperature	90˚C
Surge Protection	L-N 4kV, L/N-Earth 4kV
ANSI Surge Type	1.2/50μs Combination Wave (w/t 2Ω)
Isolation (primary to Secondary)	3750Vac/10maMax/60 seconds
Dimension	227x49x40.5 mm (8.94x1.93x1.59 inch)
Mounting Length	240mm (9.45 inch)
Overall Length	253 mm (9.96 inch)
Weight	0.92 kg (2.03 lb)
Lifetime	>70,000 hours @ full load, 75˚C Tcase
Packing	0.92 kg; 18 units/carton; 27 cartons/pallet

■ Safeties

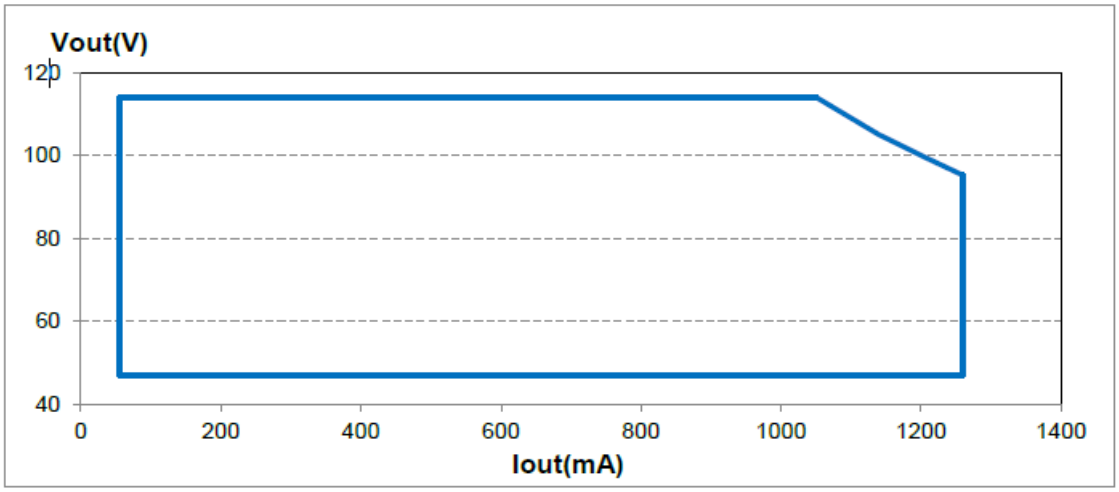
Safeties	UL8750
Electromagnetic Compliance	Per Title 47 CFR Part 15 Class B

■ Electrical Specifications*(L4WCP120S126ST @25˚C)

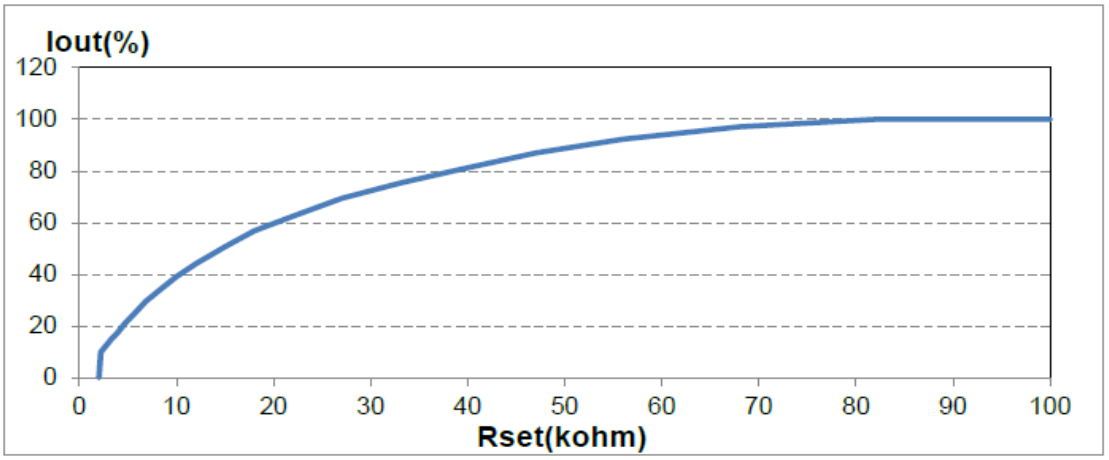
Output Current vs. Case Temperature (with ±5˚C Tolerance)



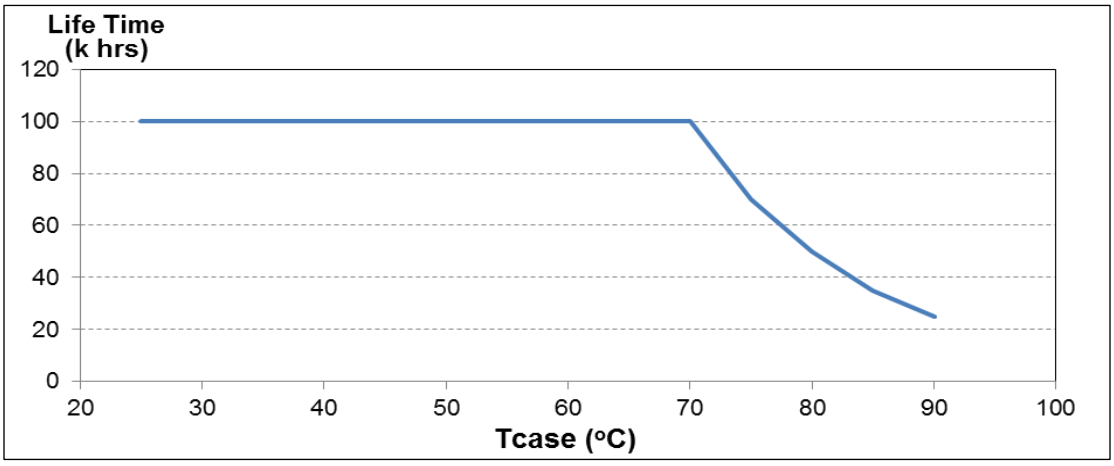
I-V Programming Area: Output Voltage vs. Output Current



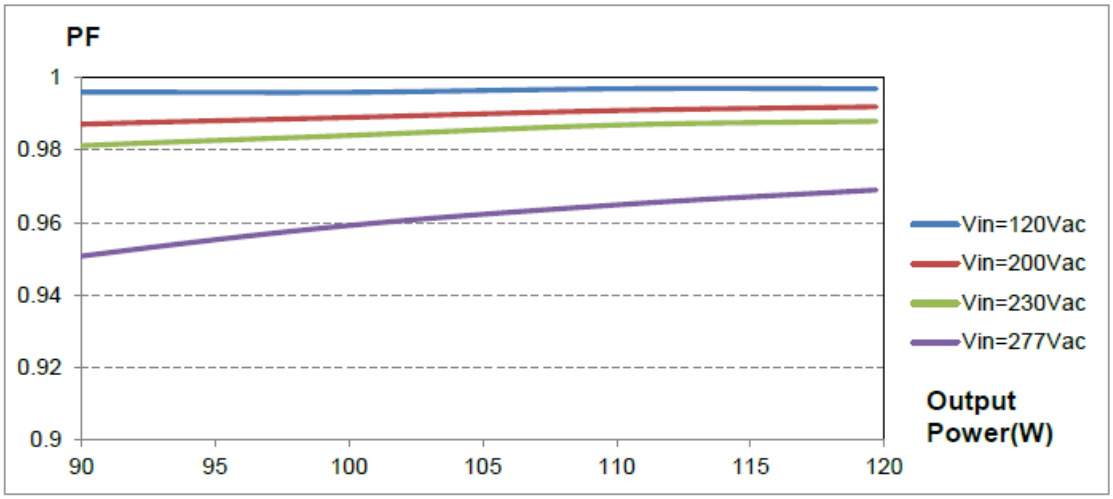
Output Current vs. External Setting Resistor



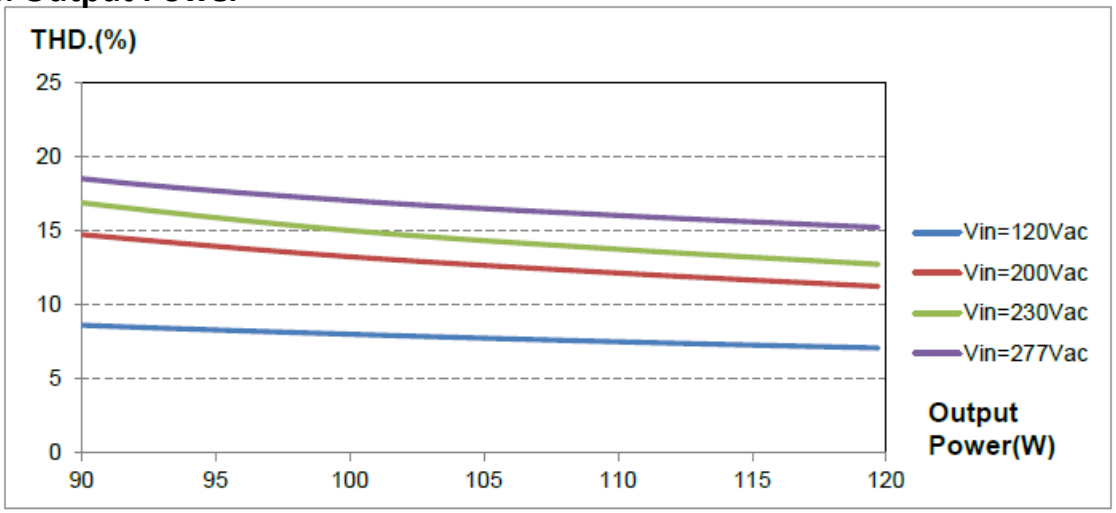
■ Lifetime vs Case Temperature



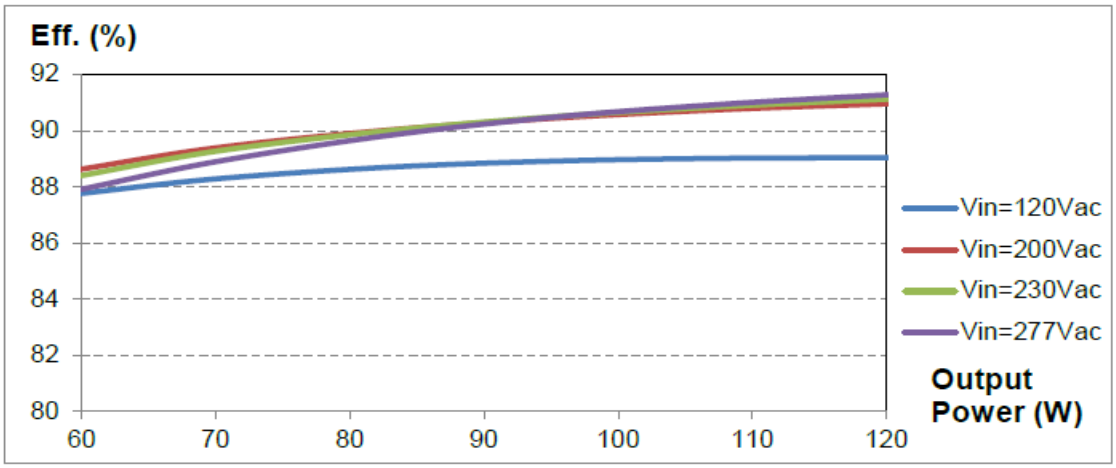
■ Power Factor vs. Output Power



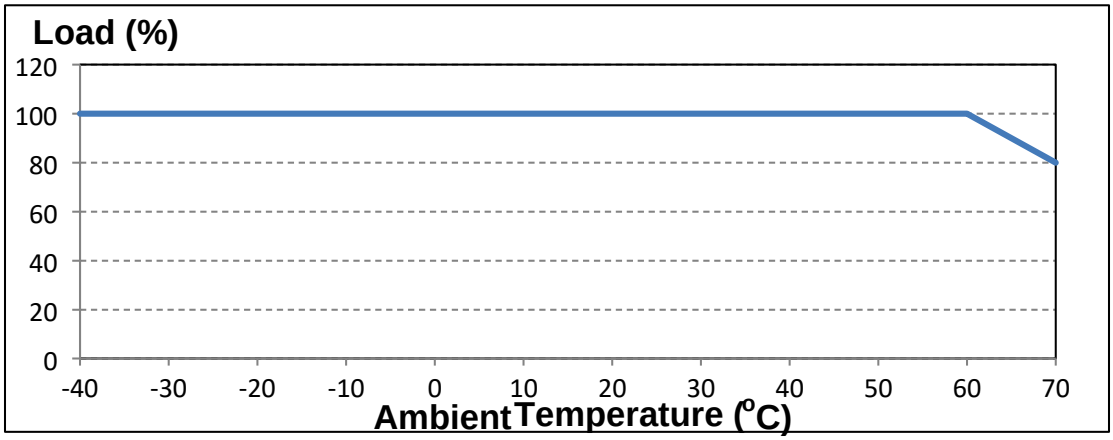
■ THD vs. Output Power



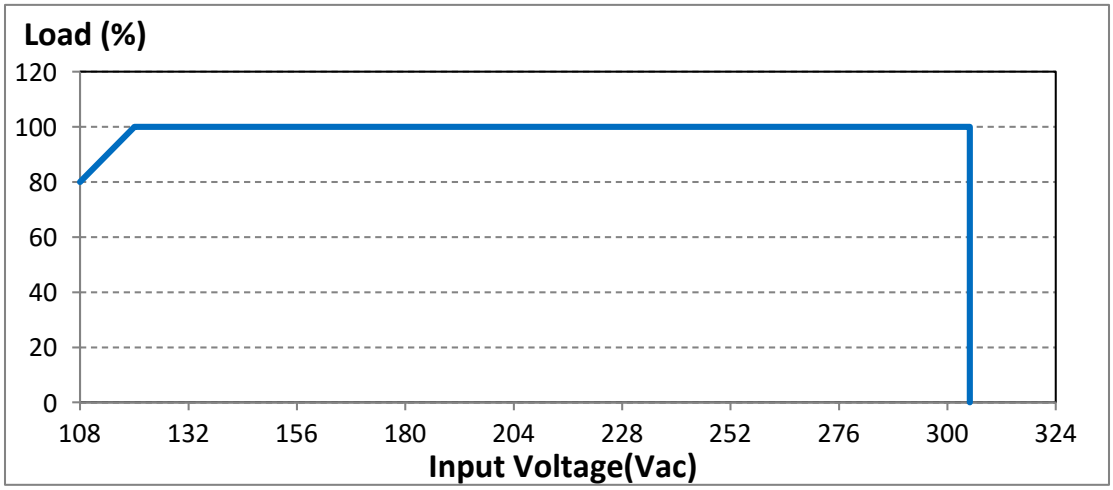
■ Efficiency vs. Output Power



■ Derating Curve

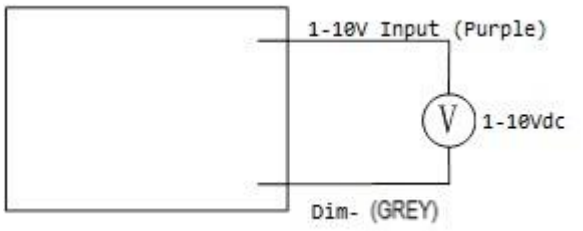


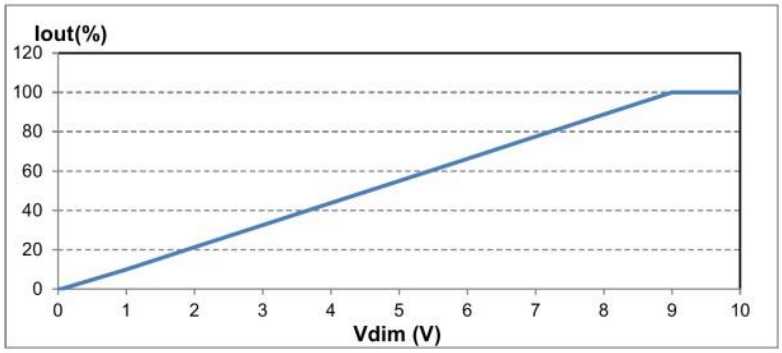
■ Static Characteristics



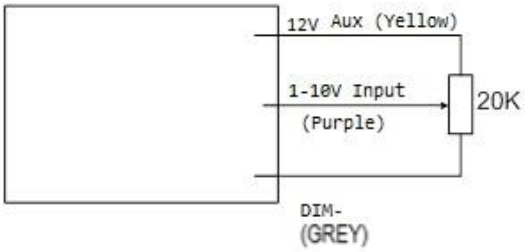
■ Dimming

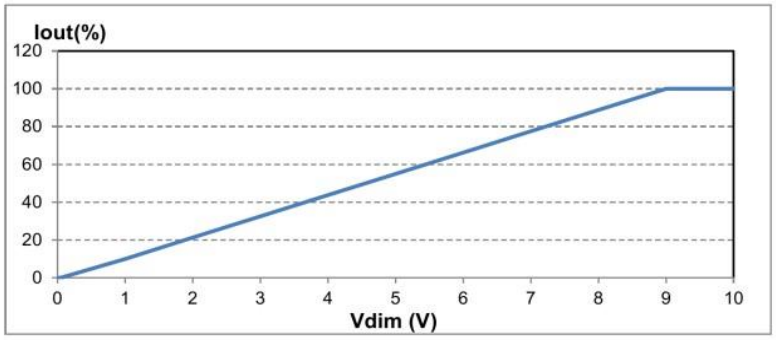
Mode 1 : 1-10Vdc Input on Dimming Control



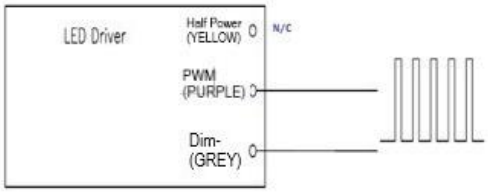


Mode 2 : Potentiometer on Dimming Control

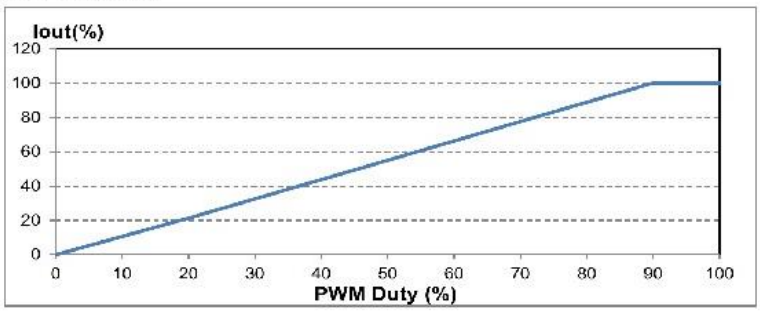




Mode 3 : PWM Signal on Dimming Wires



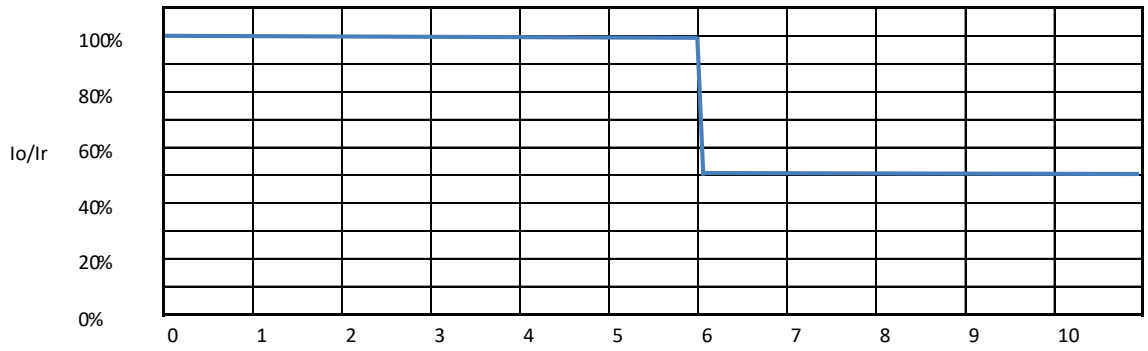
Io/Ir vs PWM Duty



■ Dimming(cont.)

Parameter	Values	Conditions
Input Voltage	0~10 V	Purple wire.
Input Current	10 mA	
PWM Frequency	0.5 ~ 3 kHz	
PWM Pulse Width	10%~100%	

Mode 4 ： Timer Dimming (Does not require dimming wires)

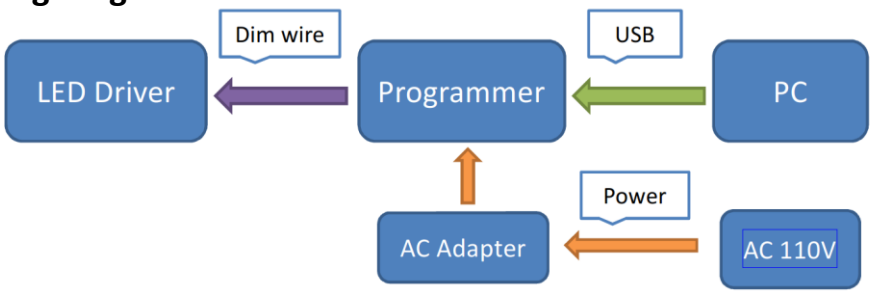


Standard power/time combination above, can be factory set to customer specification. Recycle AC to restart timer.

NOTE:

1. If the dimming function is not used, cap the dimming wires and don't use them.
2. Io is actual output current and Ir is rated current without dimming control.
3. For the driver to operate properly, the load voltage must be maintained above the minimum voltage threshold, approximately 50% of the max. output voltage for any given mode.
4. The dimming signal can be less than 1V, when it is 0-1V, the output current can maintain about 10%Ir, however, the connected LEDs may flicker. Maintain dimming voltage greater than 1V in the application is strongly recommended.
5. Pulse width less than 10% will cause the driver to work improperly.

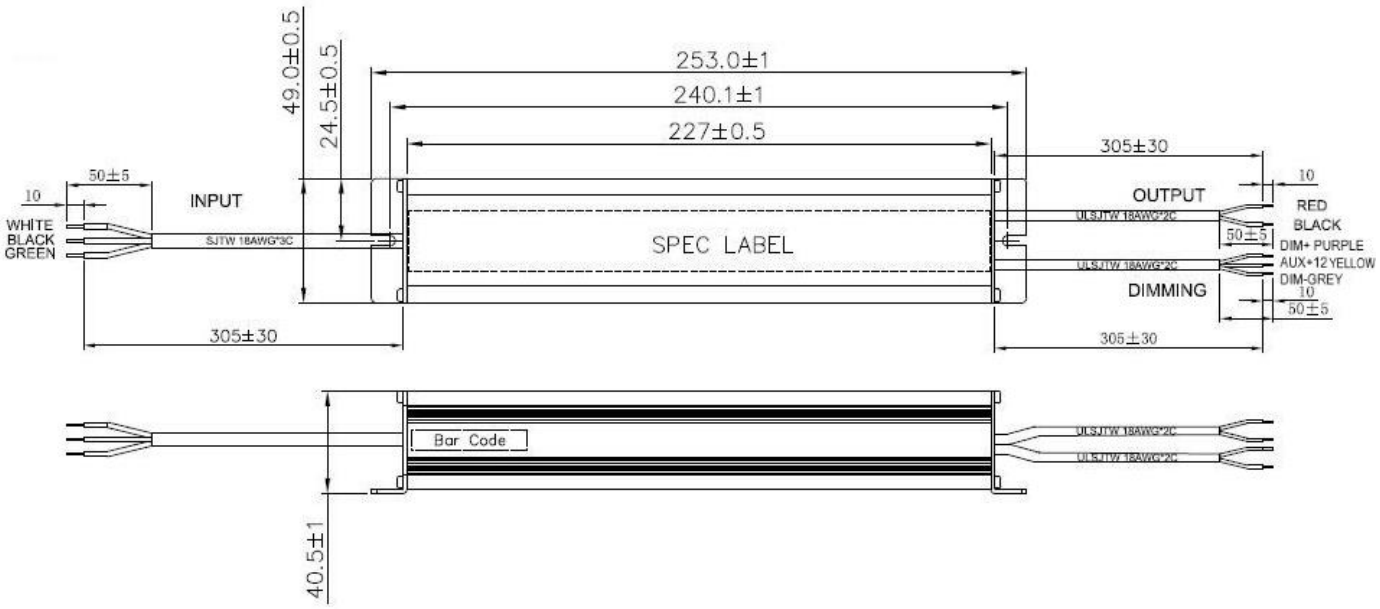
■ PC Programming Diagram



NOTES:

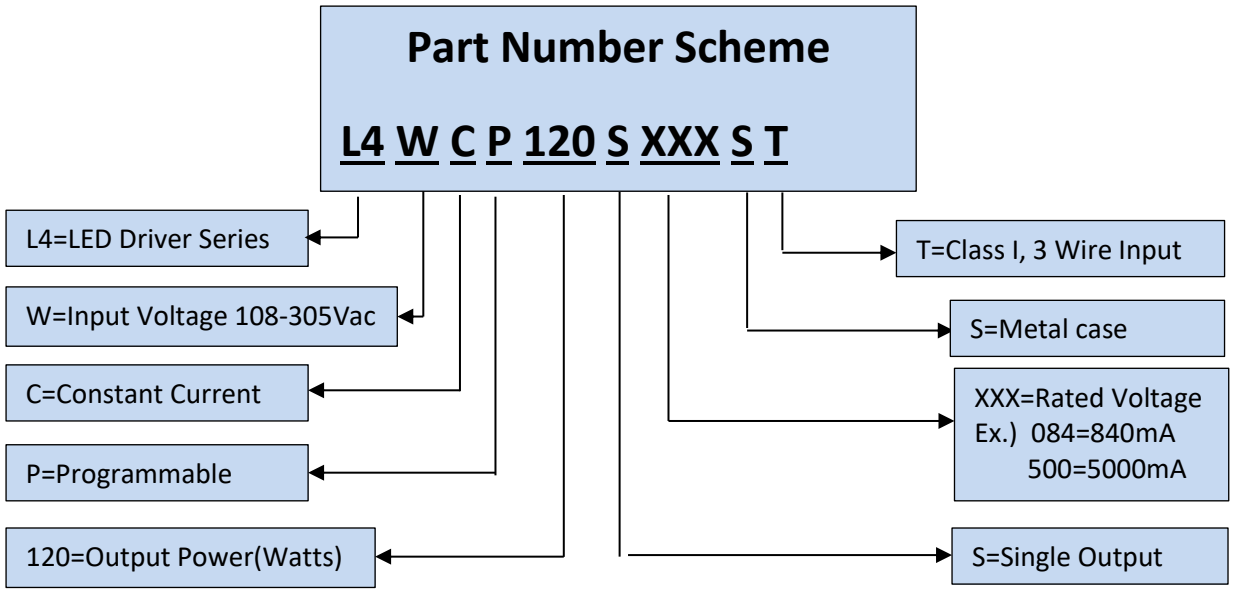
1. To set the desired output current, begin by installing the programming software on your PC and connect the programming module to your PC.
2. Next, connect the LED Driver to the programming module using the Dimming wires.
3. Please note an external power source is needed to provide power to the programming module.
4. Contact Autec Sales for current programming software and complete programming instructions.

■ Mechanical Diagram



Notes: 1. Outline Dimension: 253L*49W*40.5H
2. Input and Output Connector and Pin Assignment
3. The Yellow Dimming wire is optional for 12V Auxiliary Power

Wire Specifications		Colors
Input Wire	3/#18AWG	L= Black, N=White, GND=Green
Output	2/#18AWG	V+ is Red, V- is Black
Dimming Wire	3/#22AWG	Dim + is Purple, Dim Return is Grey, AUX12V+/100mA is Yellow



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***Specifications are subject to change without notice. Autec is not responsible for issues arising from errors or omissions.**

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