L2WCP500 Series

500W, 120-277Vac Input, Programmable Constant Power LED Driver

RoHS Compliant

Features

- Power Rating: 500W
- Input Voltage: 120-277Vac
- Constant current and constant voltage hybrid output
- Output current (530mA-16670mA)
- Output current programmable with Near Field Communication controller
- Efficiency to 94%
- Compatible with 0-10V, PWM, Timer, Dim-to-off option, Isolated Dimming, 12V/200mA AUX
- UL/Class P, Type HL
- OCP, SCP, OVP, and OTP
- IP67
- Tc = 92˚C
- 5-year warranty
- Surge Protection: Diff: 6kV, Common: 10kV

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

Application

- Indoor and outdoor applications

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 277Vac	Certification
L2WCP500S1667ST-XYZ	120-277Vac	500W	18-36V	6670mA	16670mA	94%	UL/cUL
L2WCP500S1190ST-XYZ	120-277Vac	500W	25-48V	4760mA	11900mA	94%	UL/cUL
L2WCP500S1042ST-XYZ	120-277Vac	500W	28-56V	4170mA	10420mA	94%	UL/cUL
L2WCP500S781ST-XYZ	120-277Vac	500W	38-80V	3130mA	7810mA	94%	UL/cUL
L2WCP500S446ST-XYZ	120-277Vac	500W	67-140V	1790mA	4460mA	94%	UL/cUL
L2WCP500S357ST-XYZ	120-277Vac	500W	84-180V	1430mA	3570mA	94%	UL/cUL
L2WCP500S260ST-XYZ	120-277Vac	500W	115-240V	1040mA	2600mA	94%	UL/cUL
L2WCP500S208ST-XYZ	120-277Vac	500W	144-300V	830mA	2080mA	94%	UL/cUL
L2WCP500S167ST-XYZ	120-277Vac	500W	180-375V	670mA	1670mA	94%	UL/cUL
L2WCP500S133ST-XYZ	120-277Vac	500W	225-460V	530mA	1330mA	94%	UL/cUL

Ordering options	
XY= Programmable	**Z=Dimming**
FC=Near Field Communication	**D=**DALI Dimming
	B=BLE Dimming

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■ Technical Data

Input voltage range	120-277Vac
Frequency	47-63Hz
Power factor	0.95
Output voltage	18-460V
Output power	500W
Max input current	1.93A @277Vac
Efficiency	94%
Line Regulation	±1%
Load Regulation	±1%
Inrush Current	65A @230Vac cold start +25℃
Dimming	0~10V/ PWM, Dim-to-off option
THD	< 20%
Current Programmable	Yes
Over Current Protection	1.05*Iomax; Protection type: Constant current limiting, recovers automatically after fault condition is removed
Short Circuit Protection	Hiccup mode, recovers automatically after fault condition is removed
Over Voltage Protection	1.05*Vomax, Protection type: Hiccup mode, recovers automatically after fault condition is removed
Over Temperature Protection	Hiccup mode, recovers automatically after fault condition is removed
Operating Temperature	-35˚C to +50˚C(@220Vac without any extra heat sink, add another heat sink to get a higher Ta
Max T-case Temp.	92˚C
Operating Humidity	10 ~ 100% RH non-condensing
Storage Temp., Humidity	-40 ~+85℃, 5 ~ 100% RH
MTBF	>200kHrs to MIL-HDBK-217 @ 25˚C
Vibration	10~500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes
Dimensions	250x84x48mm
Dimensions with tabs	276x84x48mm
Packing	6pcs/carton
Weight	1.9kg

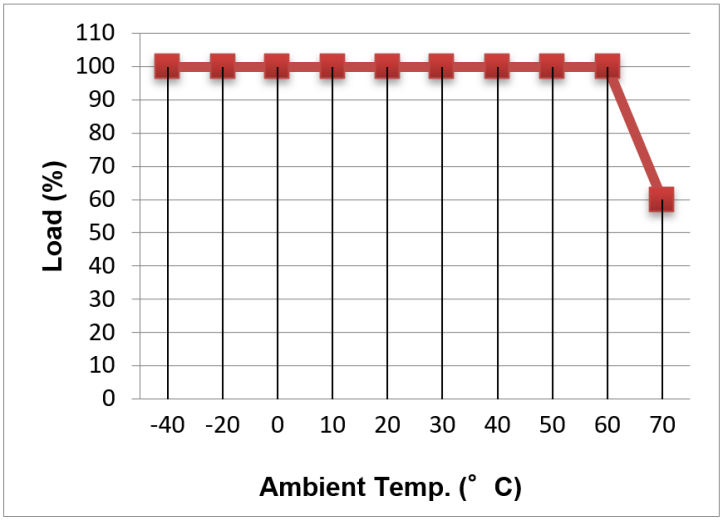
■ Safety Compliance

Safety Standards	UL8750, UL935, UL1012, CSA-C22.2 No.107.1, EN61347-1, EN61347-2-13
Withstand Voltage	I/P – O/P: 3.75kVAC
Isolation Resistance	I/P – O/P: 100M Ohms / 500VDC /25℃ / 70% RH
EMC Emission	Compliance to EN55015, EN61000-3-2 Class C (≥60% load); EN61000-3-3
EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, EN55024

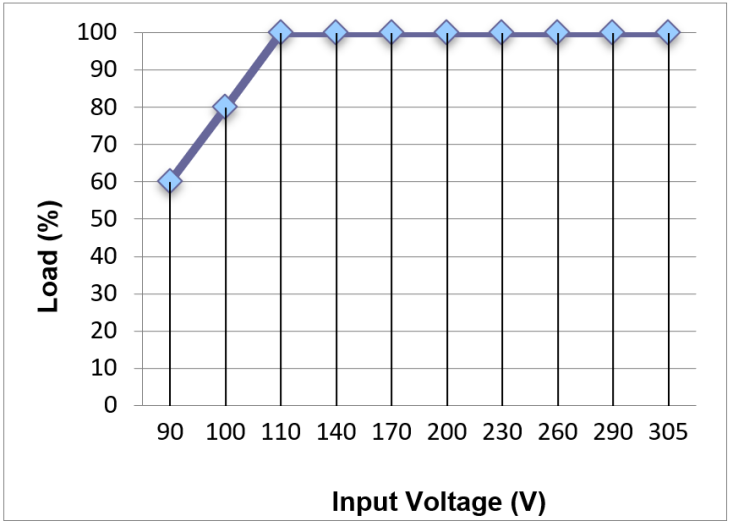
Disclaimer:

Autec Power Systems' (Autec) LED Drivers are Hi-Pot tested during the manufacturing process. Autec assumes no responsibility for secondary Hi-Pot testing at customer location or designated production line(s). Should customer require further Hi-Pot testing, at their own production line, following assembly of the LED Driver into the customer's assembled fixture, Autec requests advance notice. This request must be communicated to Autec in a timely manner and is recommended to be requested at time of issuing each purchase order.

■ Derating curve



■ Static Characteristics



Note: The Ta vs Load curve is tested @220Vac input and without any extra heatsink. The driver can work at higher Ta if extra heatsink was mounted, as long as the Tc is below Maximum Tc, it works fine.

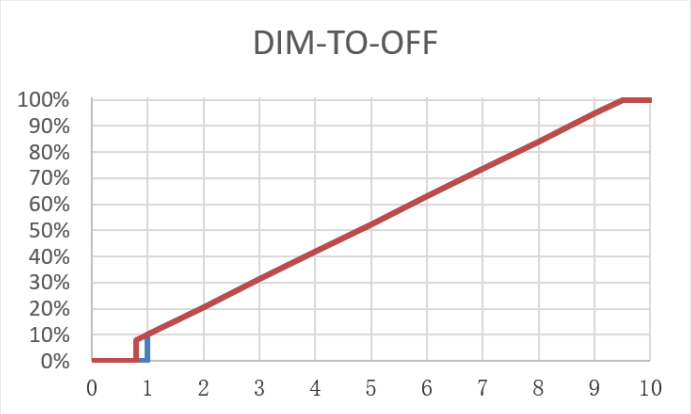
■ Near Field Communication Controller

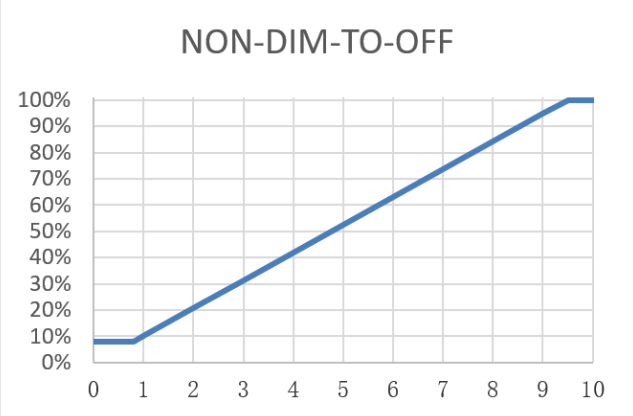
NOTE:

1. The Near Field Communication controller can program the output current, voltage and timer delays.
2. The Near Field Communication programming is a non-contact process, therefore much safer compared to traditional programming methods.
3. Power devices can be programmed without AC power applied to the driver.

■ Dimming

0-10V Analog Dimming &PWM Dimming



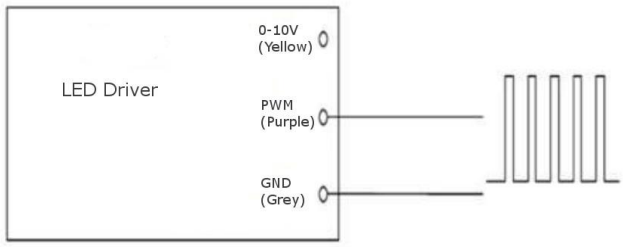


GND	Grey
Dimming wire 0-10V&PWM	Purple
12V AUX	Yellow
Input Dimming Voltage	0-10V
DIM+ Source Current	0.5mA
12V AUX Source Current	200mA
12V AUX output voltage	10-15V
PWM Frequency Range	0.4-10KHZ
PWM high level	>2.3V
PWM low level	<0.8V

NOTE:

1. Io is actual output current and Ir is rated current without dimming control.
2. For the driver to operate properly, the load voltage must be in the working voltage range.
3. We have DIM-TO-OFF option, which can be programmed by the programmer.
4. Maximum input voltage for the dimming wire is 12V.
5. AUX wire is only for source, can't connect to other voltage source.

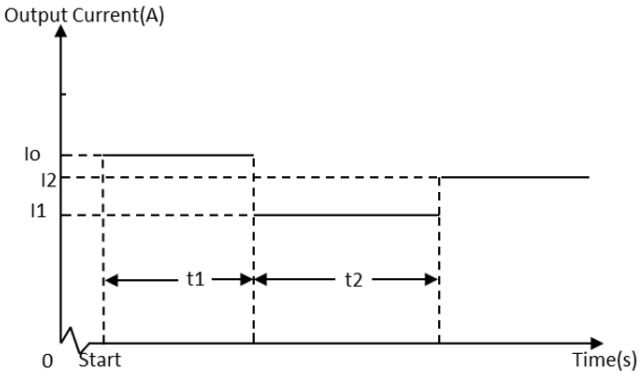
■ PWM Dimming



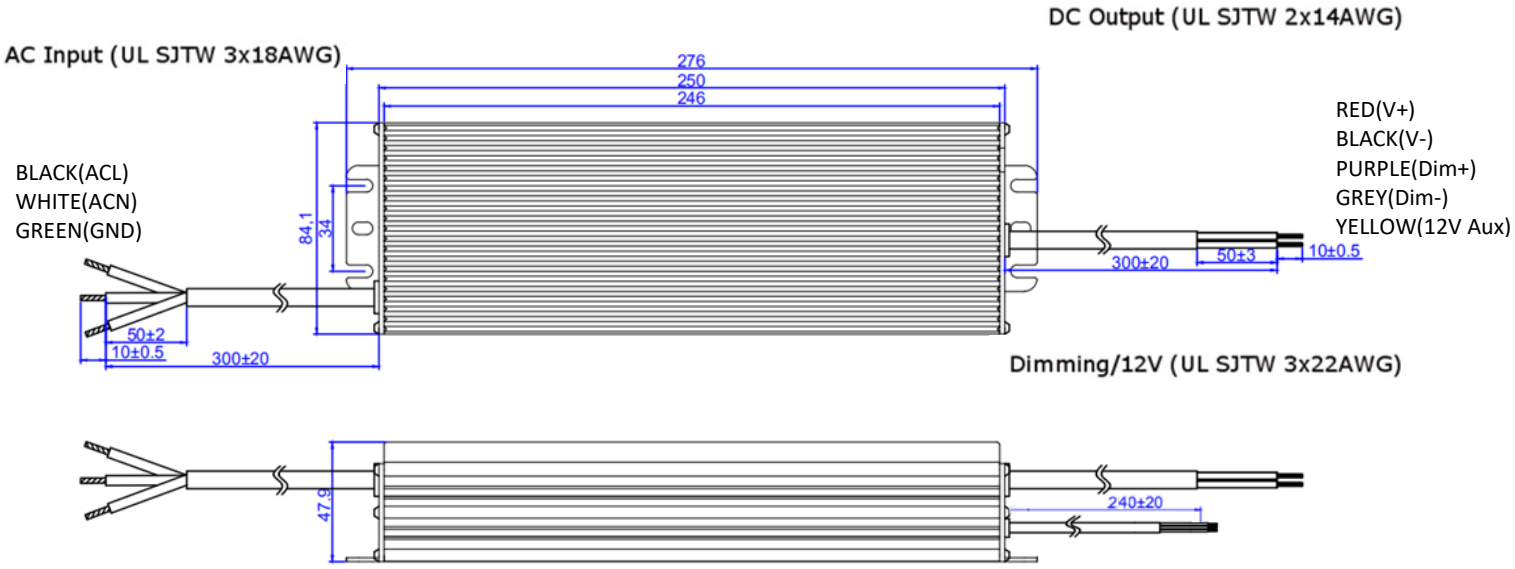
■ TIMER Dimming

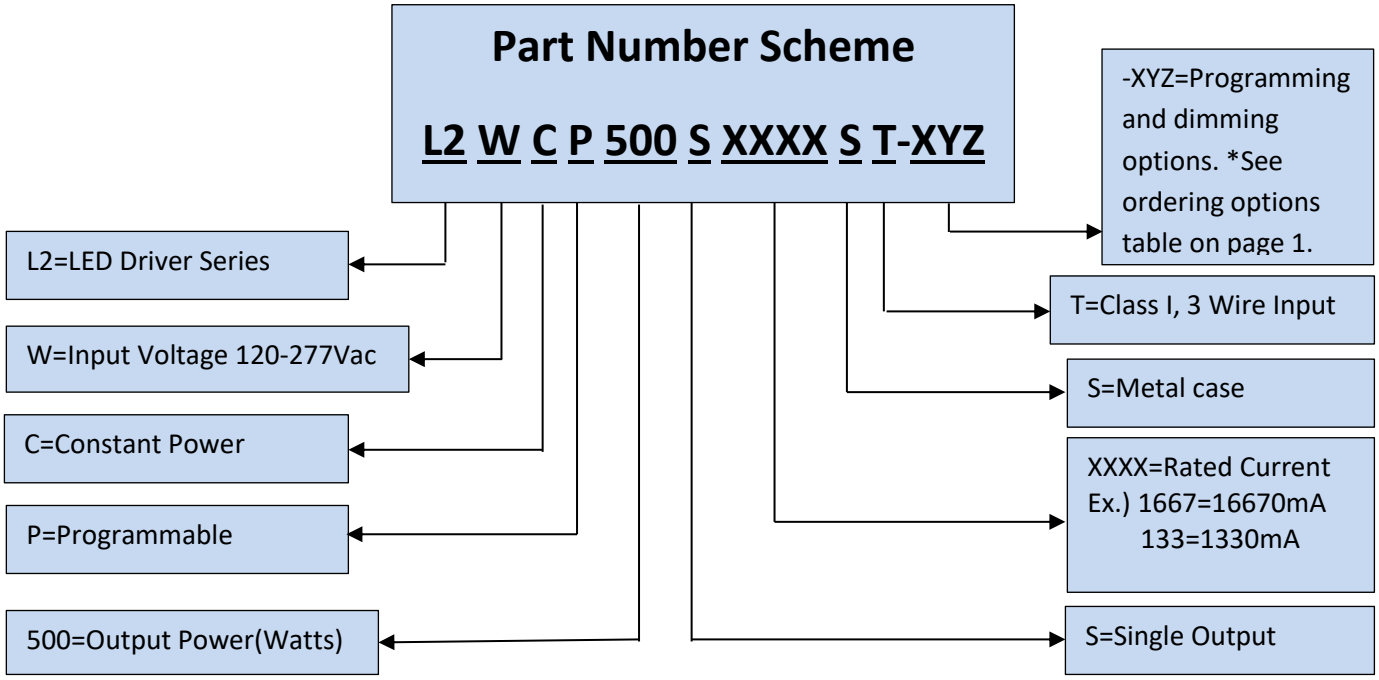
NOTE:

1. The dimming time can be programmed by the programmer.
2. The time of t1 and t2 can be set by the programmer.(0.5h step)
3. The value of I1 and I2 can be set by the programmer.
4. Changing the current from I1 to I2 may take a few min.



■ Mechanical Design





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