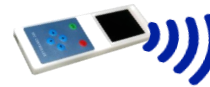


### ■ Features

- Power Rating: 680W
- Input Voltage: 120-277Vac (90-305Vac)
- Constant current and constant voltage hybrid output
- Output current (800mA-20000mA)
- Output current programmable with Near Field Communication controller
- Efficiency to 95%
- Compatible with 0-10V, PWM, Timer, Dim-to-off option, Isolated Dimming, 12V/200mA AUX
- UL/Class P Type HL
- Lightning, OVP, SCP, OTP, & Over Current Protection
- Tc = 90°C
- IP67
- 5-year warranty
- Surge Protection: Diff: 6kV, Common: 10kV



\*Near Field Communication controller

RoHS Compliant



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

### ■ Application

- Horticultural grow applications
- 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	Certification
L2WCP680S1420ST-XYZ-H	120-277Vac	680W	25-48V	5700mA	14200mA	95%	UL/cUL
L2WCP680S1250ST-XYZ-H	120-277Vac	680W	28-56V	5000mA	12500mA	95%	UL/cUL
L2WCP680S0937ST-XYZ-H	120-277Vac	680W	38-80V	3750mA	9370mA	95%	UL/cUL
L2WCP680S536ST-XYZ-H	120-277Vac	680W	67-140V	2140mA	5360mA	95%	UL/cUL
L2WCP680S428ST-XYZ-H	120-277Vac	680W	84-180V	1710mA	4280mA	95%	UL/cUL
L2WCP680S313ST-XYZ-H	120-277Vac	680W	115-240V	1250mA	3130mA	95%	UL/cUL
L2WCP680S250ST-XYZ-H	120-277Vac	680W	144-300V	1000mA	2500mA	95%	UL/cUL
L2WCP680S200ST-XYZ-H	120-277Vac	680W	180-375V	800mA	2000mA	95%	UL/cUL
L2WCP680S160ST-XYZ-H	120-277Vac	680W	225-460V	400mA	1600mA	95%	UL/cUL

Add -EU for VDE Cable

Ordering options	
<b>XY= Programmable</b>	<b>Z=Dimming</b>
<b>FC=Near Field Communication</b>	<b>D=DALI Dimming</b>
	<b>B=BLE Dimming</b>
For example L2WCP680SXXXST-XYZ-EU For VDE Cable	
Add -H for heat sink at the bottom, full power output at 120-277Vac Input: L2WCP680SXXXST-XYZ-H	

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July 14, 2020

■ **Technical Data**

Input voltage range	120-277Vac(90-305Vac)
Frequency	47-63Hz
Power factor	> 0.95
Output voltage	18-460V
Output power	680W
Max input current	2.6A@277Vac
Efficiency	95%(typ.)
Line Regulation	± 1%
Load Regulation	± 1%
Inrush Current	65A peak, 1.2ms duration@277Vac , <0.25A2s
Dimming	0~10V/ PWM/ Timer, Dim-to-off option
THD	< 20%
Current Programmable	Yes
Over Current Protection	95%-105%; 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	1.05Vo, Protection type: Hiccup mode, recovers automatically after fault condition is removed
Over Temp. Protection	Hiccup mode, recovers automatically after fault condition is removed
Operating Temperature	-35~+50°C
Max T-case Temp.	90°C
Operating Humidity	10 ~ 100% RH non-condensing
Storage Temp., Humidity	-40 ~+85°C, 5 ~ 100% RH
Vibration	10~500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes
Dimensions	276x90x57.3mm
Dimensions with tabs	306x90x57.3mm
Packing	4pcs/carton
Weight	2540g

■ **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°C / 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

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**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.

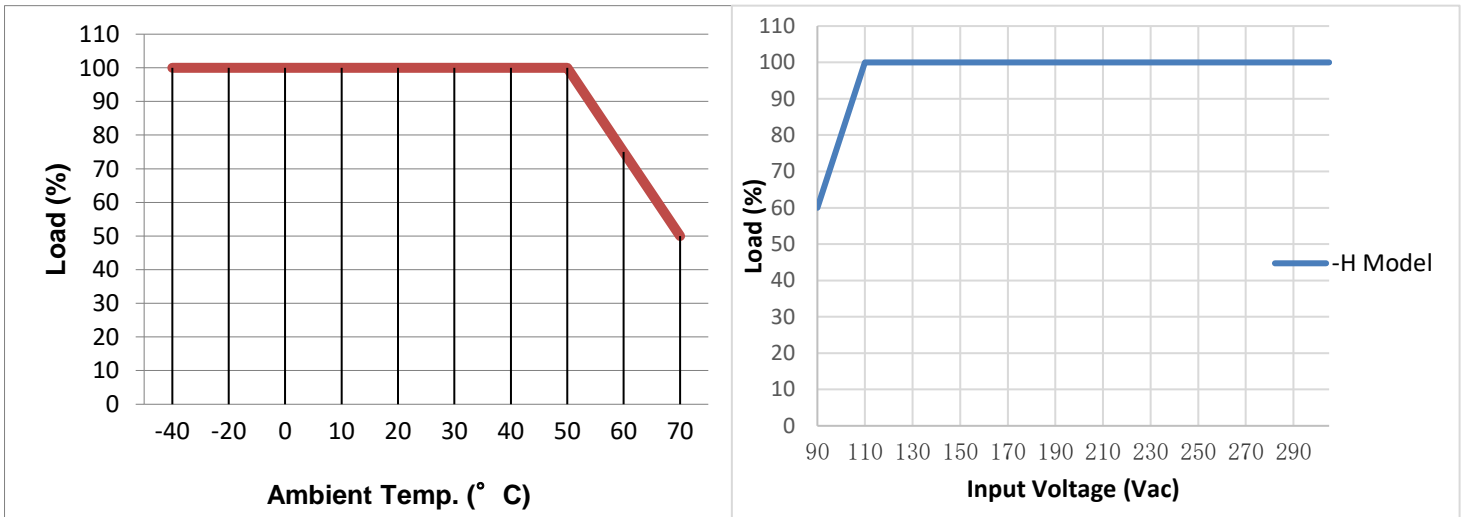
■ **Near Field Communication Controller**



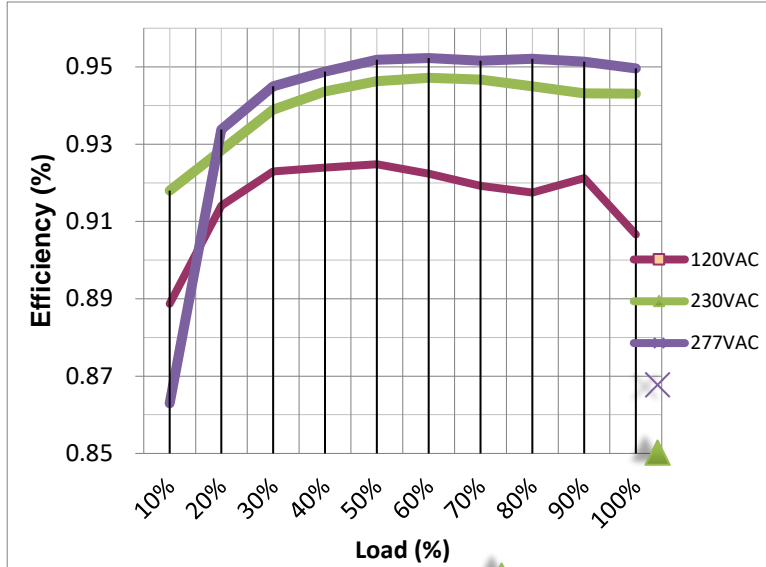
**NOTE:**

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.

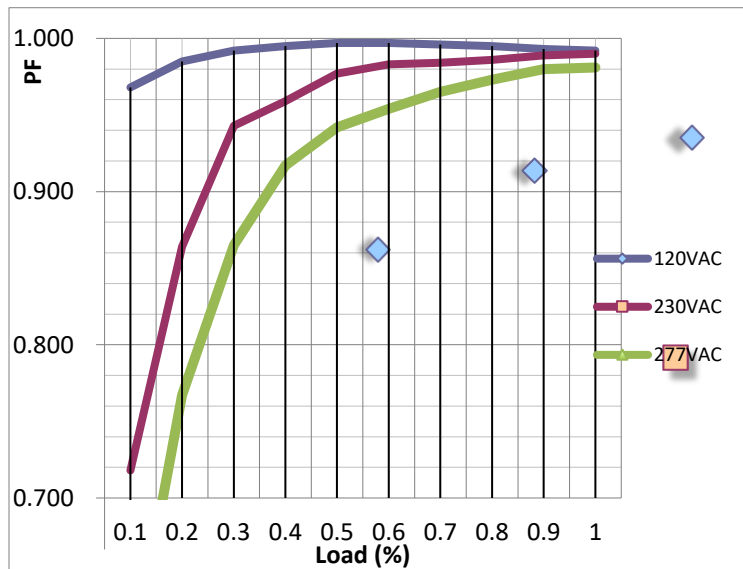
■ **Derating Curve**



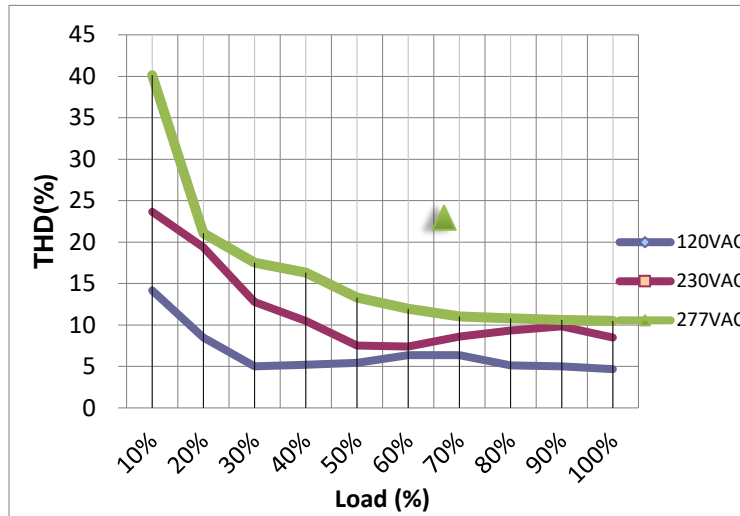
■ Efficiency vs Output



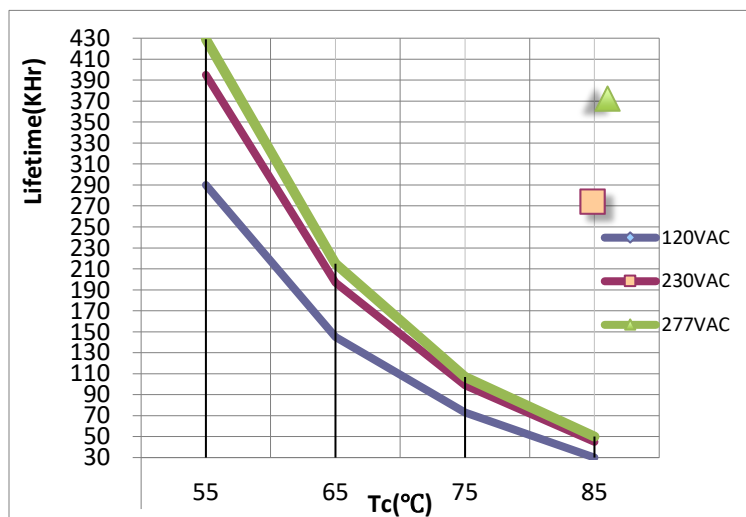
■ Power Factor vs Output



■ THD vs Output

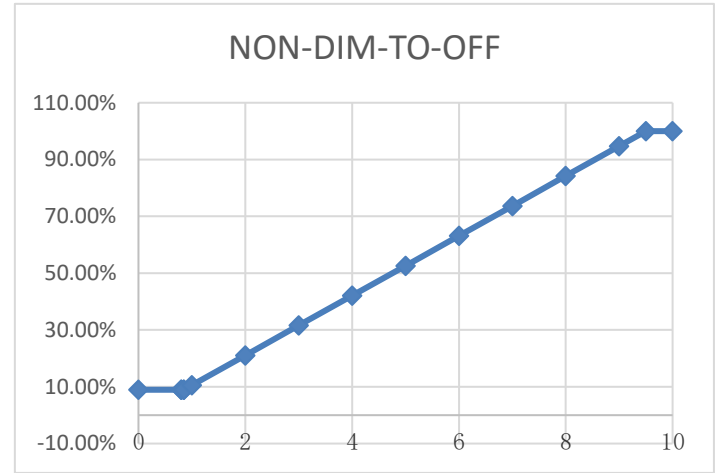
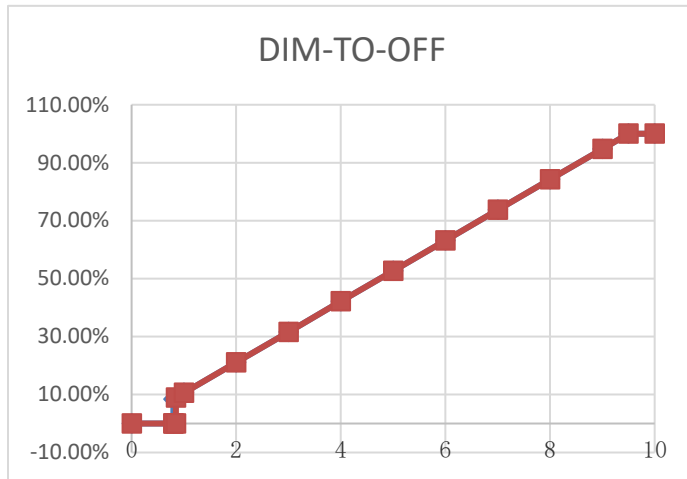


■ Lifetime vs Case Temperature



## ■ 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
PWM Frequency Range	0.5-3KHZ
PWM high level	>2.3V
PWM low level	<0.8V
12V Aux output voltage	10-15V
12V AUX Source Current	200mA

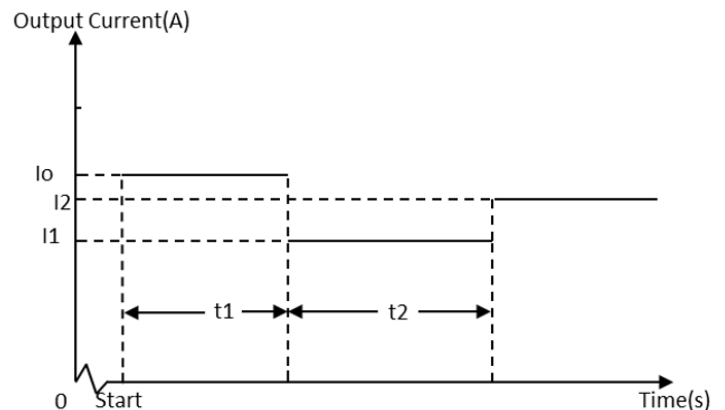
#### NOTE:

1.  $I_o$  is actual output current and  $I_r$  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

## ■ TIMER Dimming

#### NOTE:

1. The dimming time can be programmed by the programmer.
2. The time of  $t_1$  and  $t_2$  can be set by the programmer.(0.5h step)
3. The value of  $I_1$  and  $I_2$  can be set by the programmer.
4. Changing the current from  $I_1$  to  $I_2$  may take a few min.



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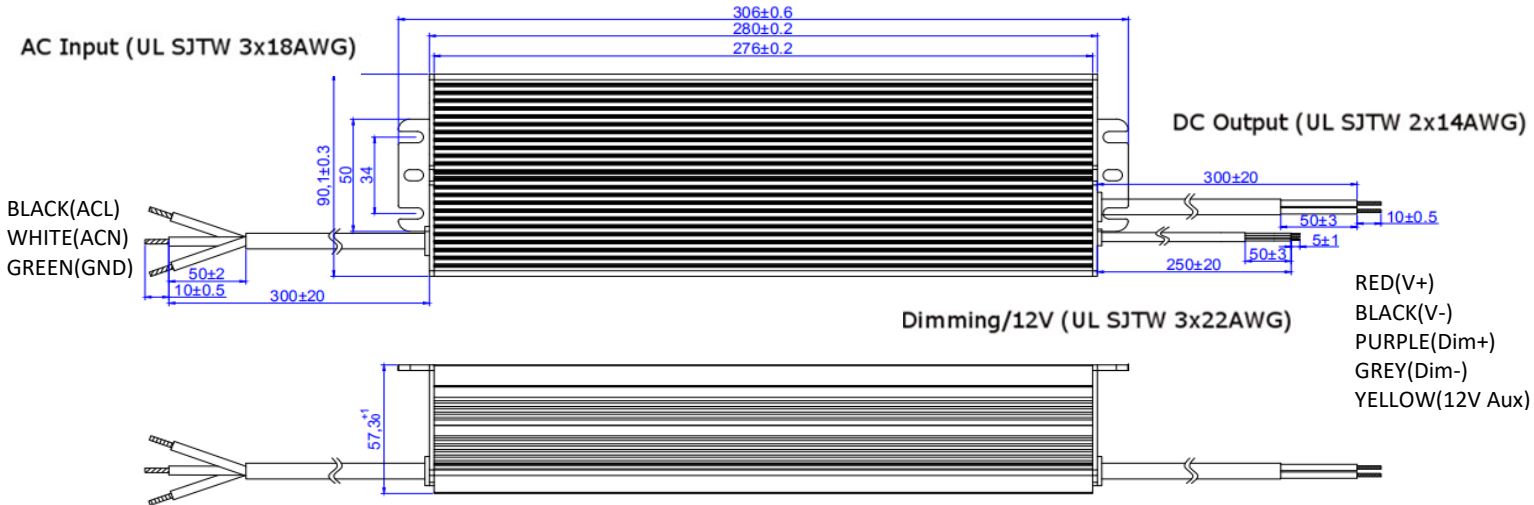
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■ **Mechanical Design**

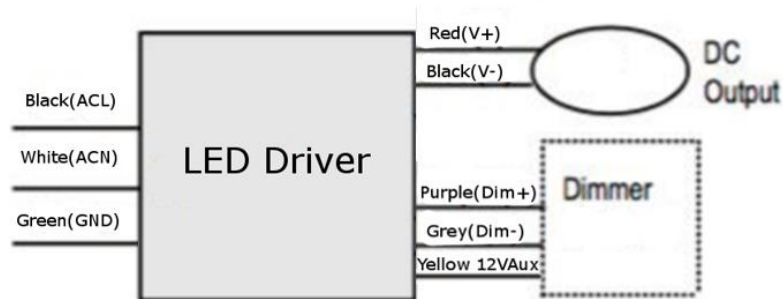
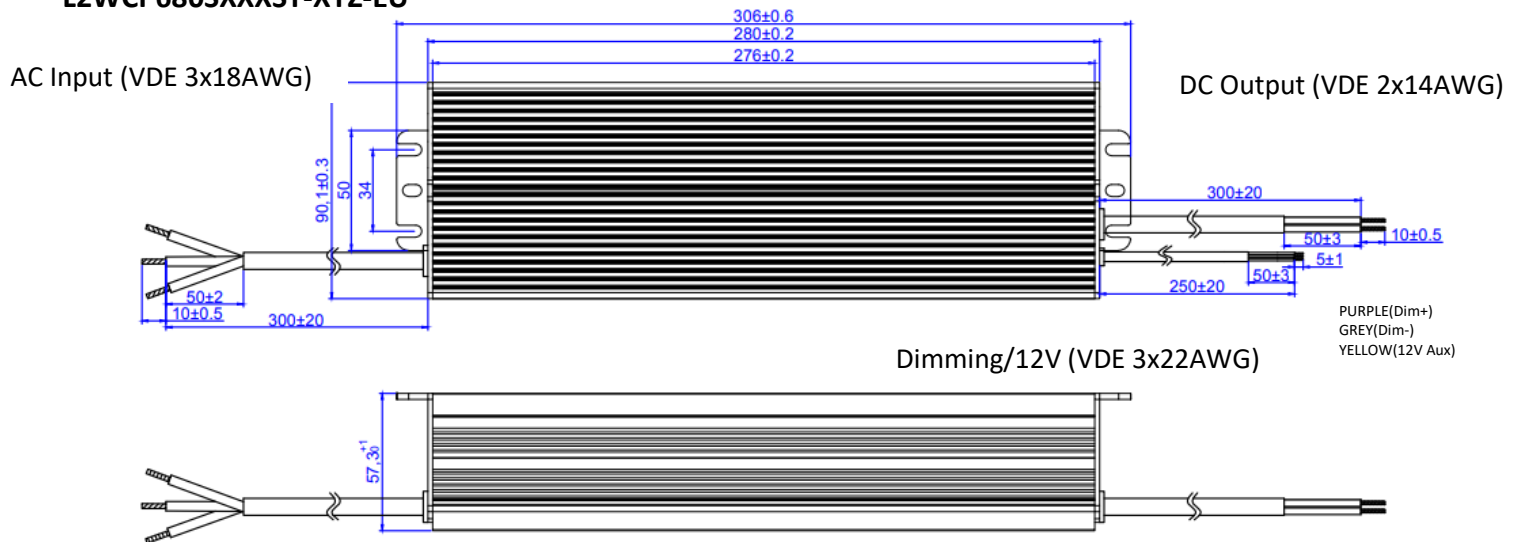
-Models with UL certified cables

**L2WCP680SXXXST-XYZ-H**



-Models with VDE certified cables for Europe

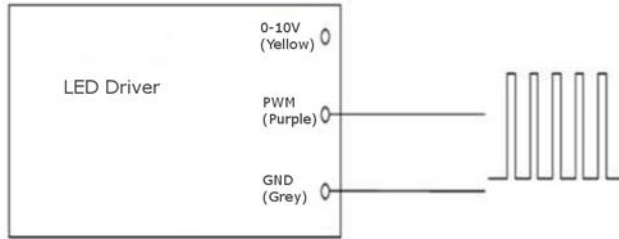
**L2WCP680SXXXST-XYZ-EU**



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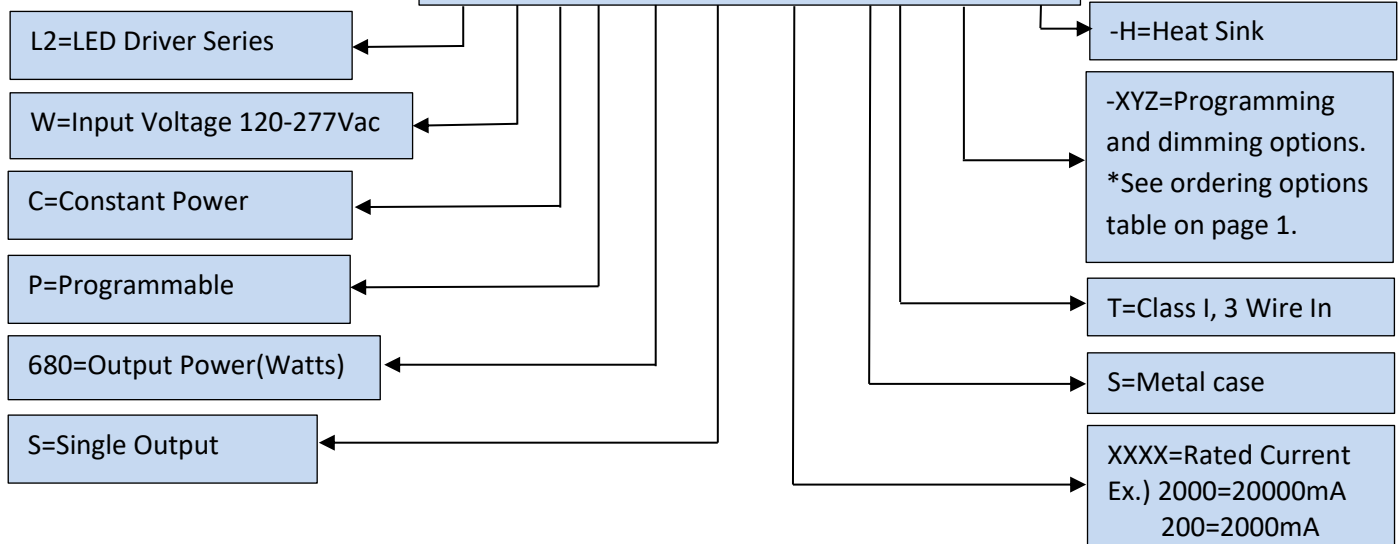
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■ **PWM Dimming Graph**



**Part Number Scheme**

**L2 W C P 680 S XXXX S T-XYZ H**



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

Rev	Change data	Change description			
		Item	From	To	Note
1	7/14/2020	Updated Mechanical	Height 47	Height 57mm	Heat Sink