# L2WCP120 Series

**120W, 100-277Vac Input, Programmable Constant Power LED Driver**

RoHS Compliant

*Near Field Communication controller

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

## Features

- Power Rating: 120W
- Input Voltage: 100-277Vac
- Constant current and constant voltage hybrid output
- Output current (340mA-5000mA)
- Output current programmable with Near Field Communication controller
- Efficiency to 94%
- Compatible with 0-10V, PWM, Timer, Dim-to-off option, 12V/200mA AUX
- UL, Type HL
- Lightning, OVP, SCP, OTP, & Over Current Protection
- Tc=85˚C
- IP67
- 5-year warranty
- Surge Protection: Diff: 6kV, Common: 10kV

## 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 110V/220V | Certification |
|---|---|---|---|---|---|---|---|
| L2WCP120S500ST-XYZ | 100-277Vac | 120W | 24-36V | 2000mA | 5000mA | 92%/94% | UL/cUL |
| L2WCP120S333ST-XYZ | 100-277Vac | 120W | 36-48V | 1330mA | 3330mA | 91%/93% | UL/cUL |
| L2WCP120S250ST-XYZ | 100-277Vac | 120W | 48-80V | 1000mA | 2500mA | 90%/92% | UL/cUL |
| L2WCP120S150ST-XYZ | 100-277Vac | 120W | 80-140V | 600mA | 1500mA | 92%/93% | UL/cUL |
| L2WCP120S086ST-XYZ | 100-277Vac | 120W | 140-233V | 340mA | 860mA | 92%/93% | UL/cUL |

(Add-J for J-Box, Ex.) L2WCP120SXXXST-J-XYZ; Contact Autec Sales for all options.)

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

## Technical Data

| | |
|---|---|
| Input voltage range | 100-277Vac |
| Frequency | 47-63Hz |
| Power factor | > 0.99 @115Vac & 80~100% Full load, > 0.97 @230Vac & 80~100% Full load |
| Output voltage | 24-233V |
| Output power | 120W |

## ■ Technical Data(cont.)

| | |
|---|---|
| Ripple and Noise | 2.0%Vo |
| Max input current | 1.17A @115Vac, 0.57A@230Vac |
| Efficiency | 90-94% |
| Line Regulation | ±0.3% |
| Load Regulation | ±0.6% |
| Inrush Current | 65A @230Vac cold start +25℃ |
| Dimming | 0~10V/ PWM/ Timer, Dim-to-off option |
| THD | < 20% |
| Current Programmable | Yes |
| Output Current Programmable Range | 340-5000mA |
| Over Current Protection | Protection type: Constant current limiting, recovers automatically after fault condition is removed |
| Short Current Protection | Hiccup mode, recovers automatically after fault condition is removed |
| Over Voltage Protection | 1.3Vo, 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~+70˚C |
| Max T-case Temp. | 85˚C |
| Operating Humidity | 10 ~ 100% RH non-condensing |
| Storage Temp., Humidity | -40 ~+85℃, 5 ~ 100% RH |
| Temp. Coefficient | ±0.05%℃ (0~50℃) |
| Vibration | 10~500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes |
| Dimensions | 207x70x37mm 6.9x2.75x1.26 in |
| Packing | 25pcs/carton |
| Weight | 758.7g |

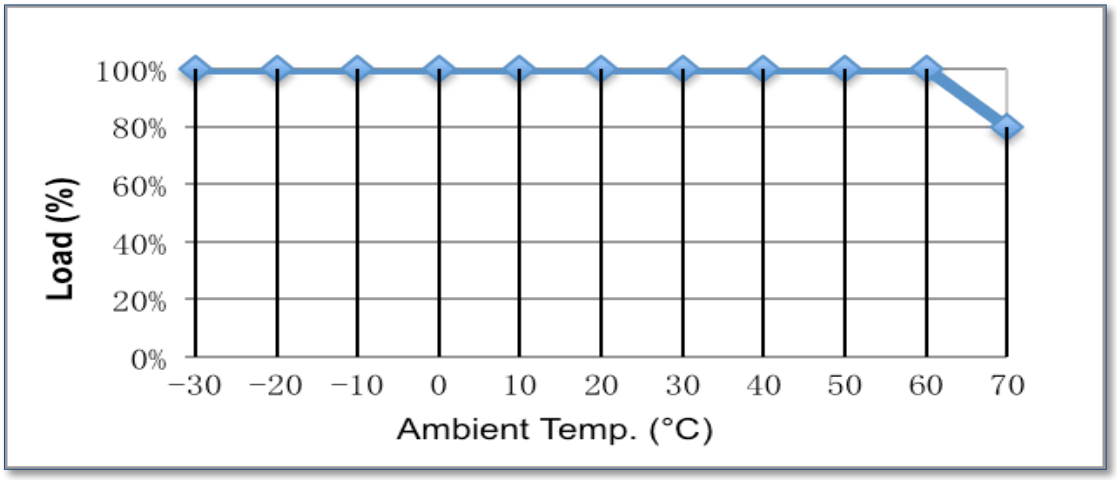
## ■ Safety Compliance

| | |
|---|---|
| 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 |

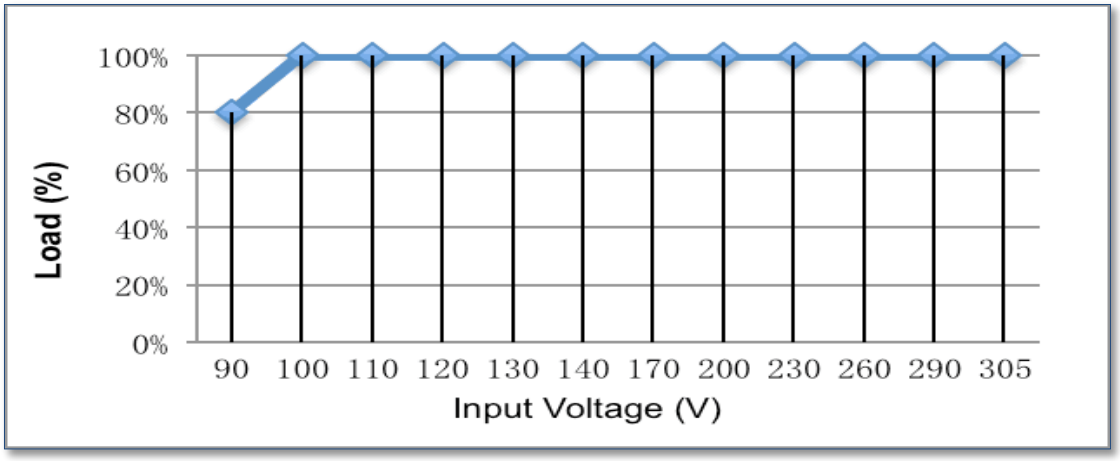
**Disclaimer:**

**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.**

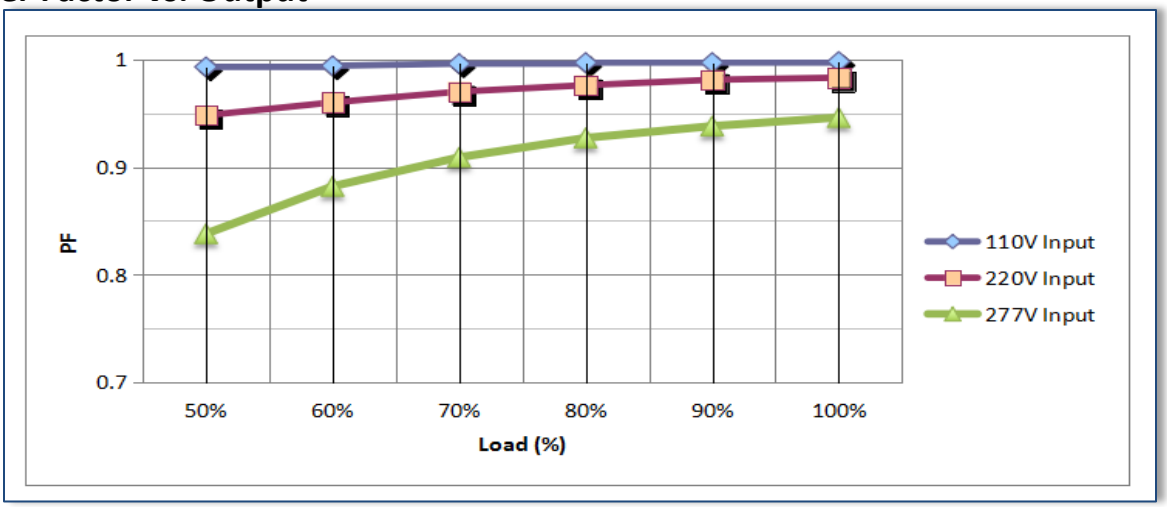
## ■ Derating curve



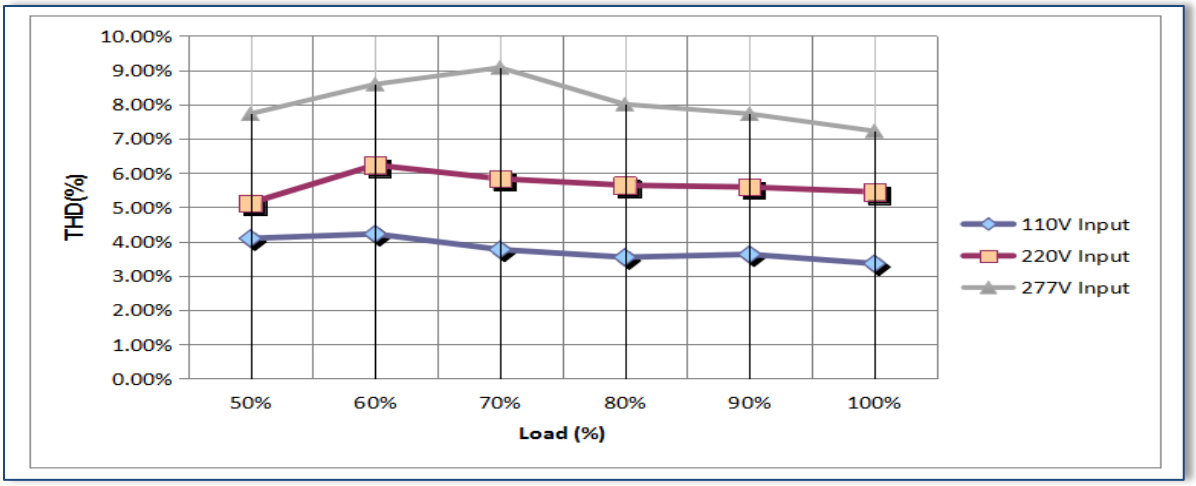

## ■ Static Characteristics



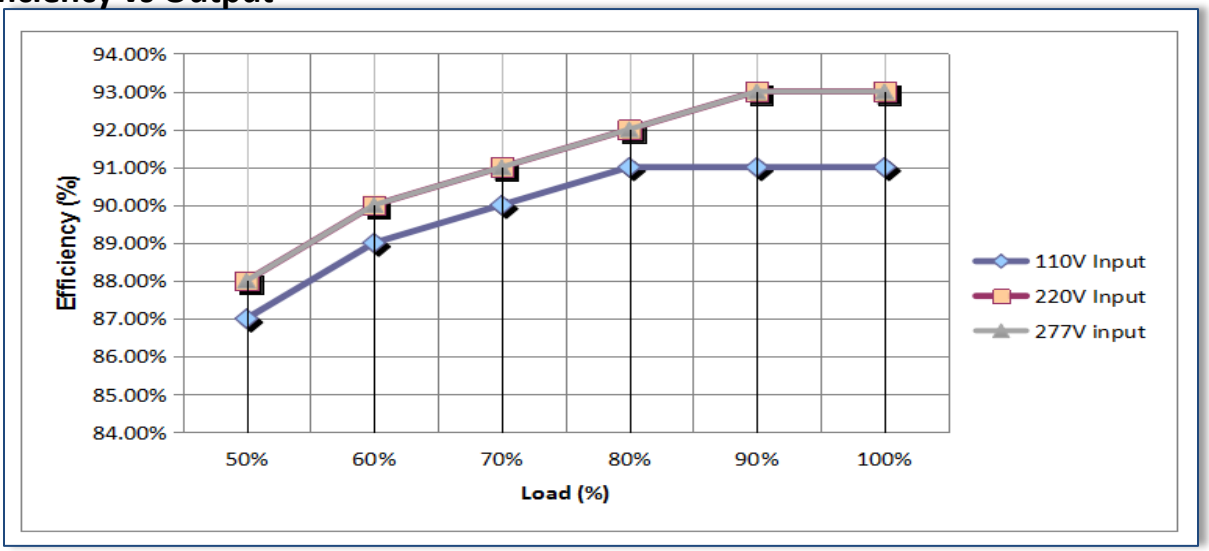

## ■ Power Factor vs. Output



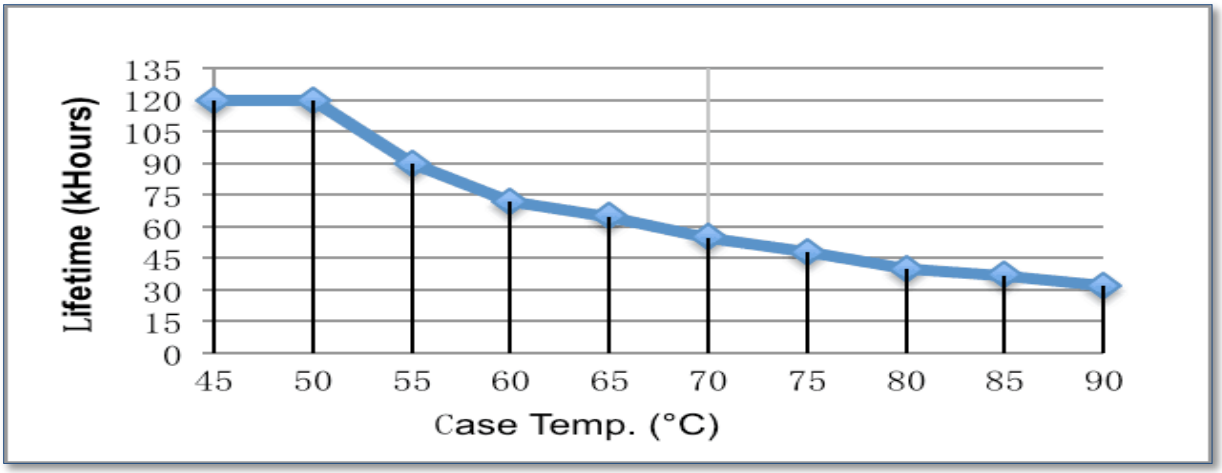
## THD vs. Output




## Efficiency vs Output




## Lifetime vs Case Temp.



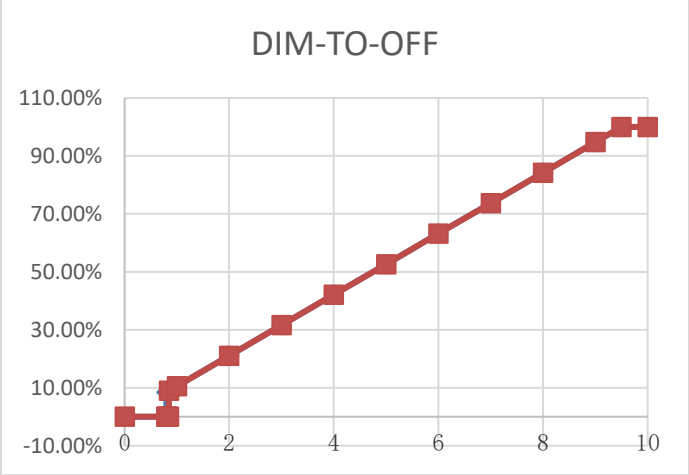
## ■ Near Field Communication Controller

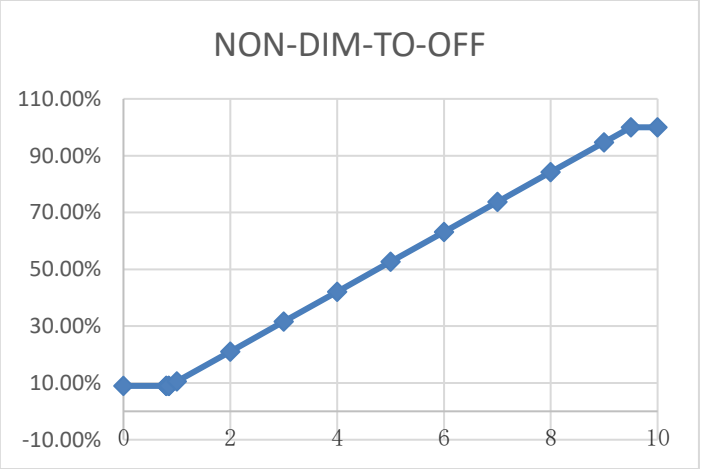
**NOTE:**

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



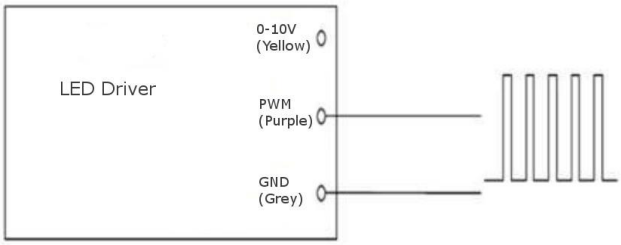




| | |
|---|---|
| GND | Grey |
| Dimming wire 0-10V&PWM | Purple |
| 12V AUX | Yellow |
| Input Dimming Voltage | 0-10V |
| DIM+ Source Current | 0-1mA |
| 12V AUX Source Current | 200mA |
| PWM Frequency Range | 0.5-3KHZ |
| PWM high level | 10V |

**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

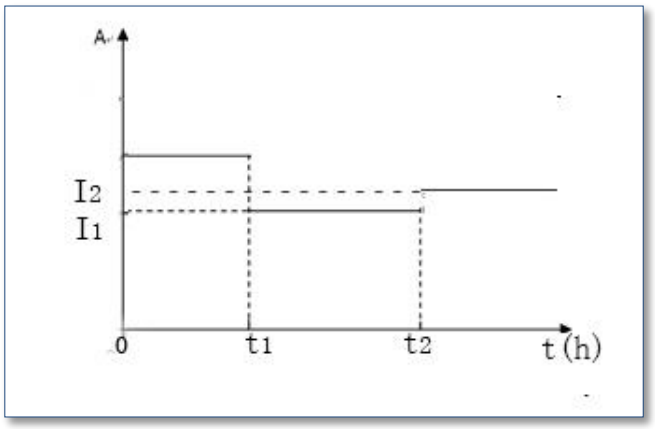




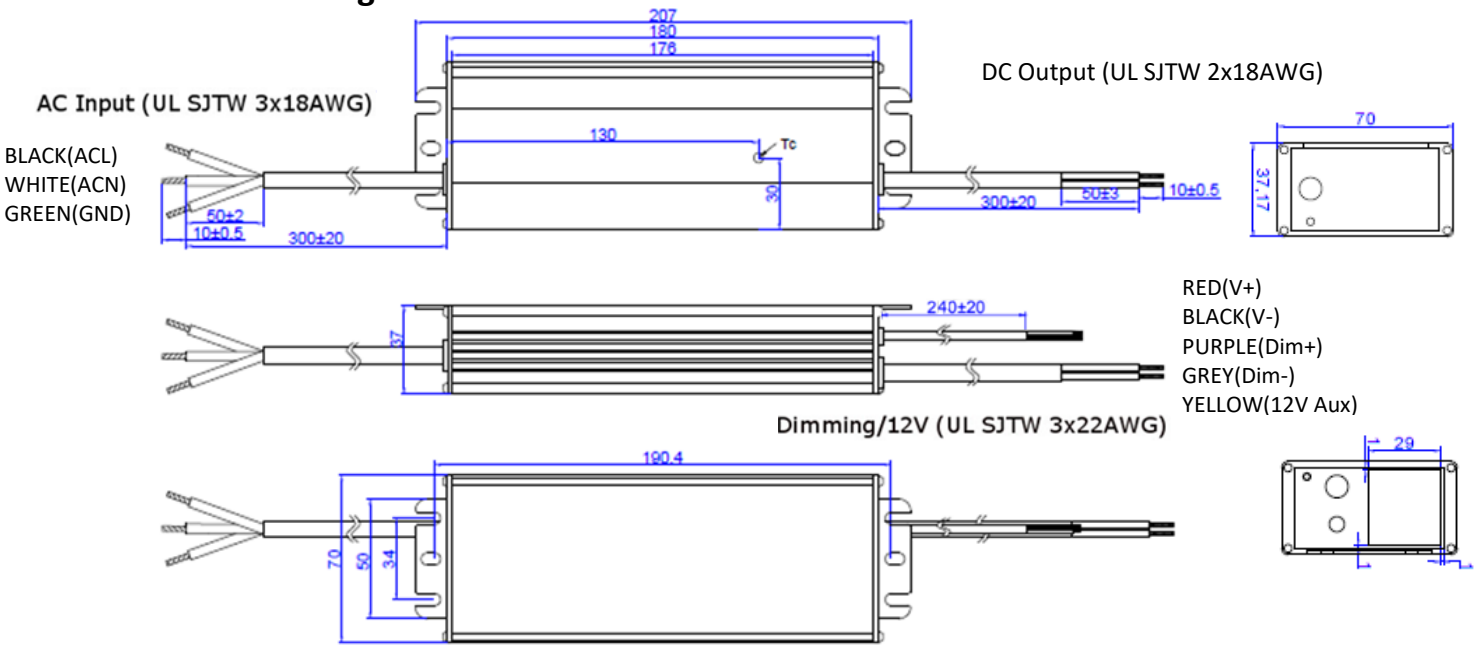
## TIMER Dimming

**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.

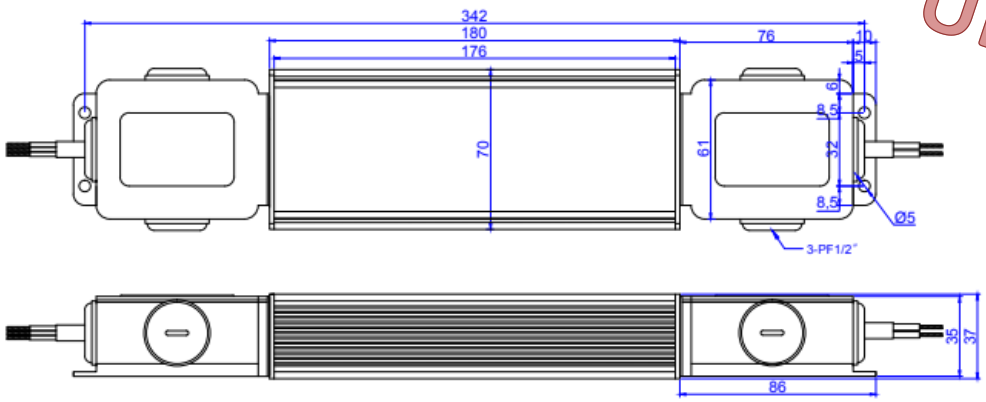



## ■ Mechanical Design



## ■ Mechanical Design J-Box

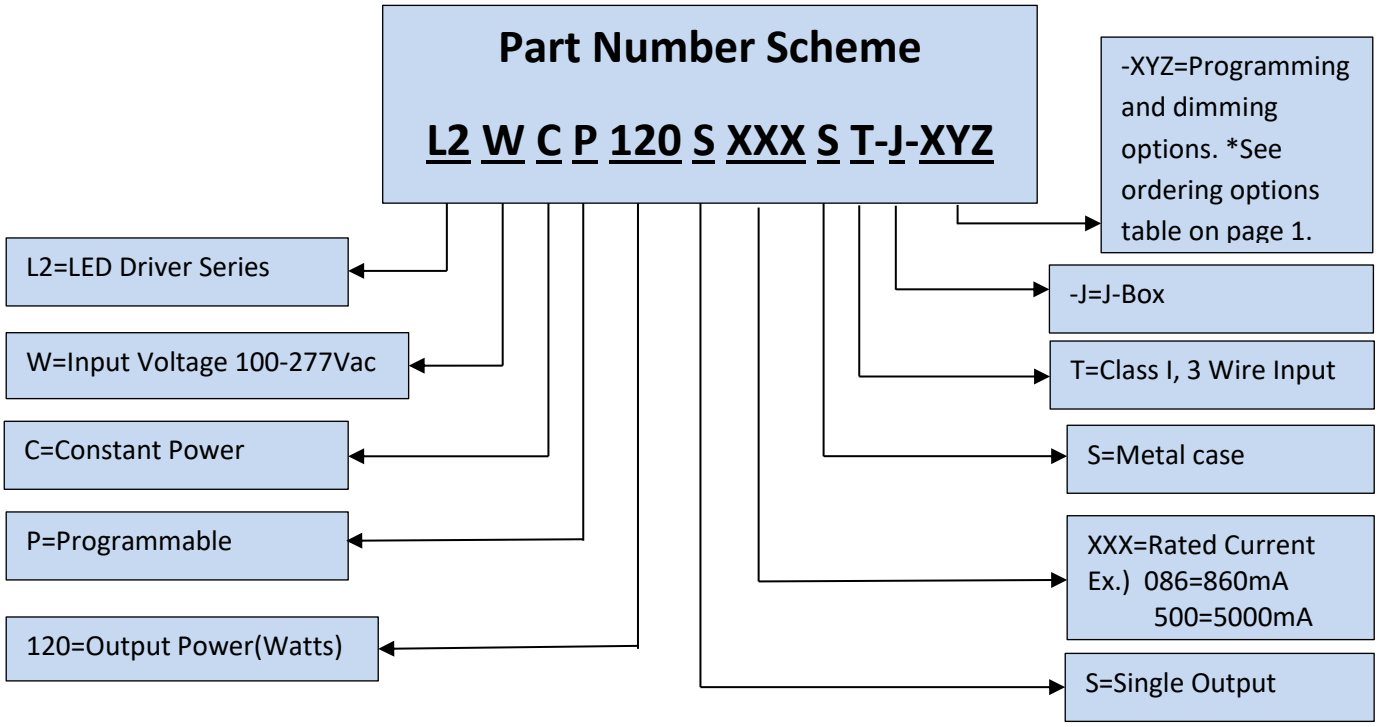





## Part Number Scheme

**L2 W C P 120 S XXX S T-XYZ**

- L2=LED Driver Series
- W=Input Voltage 100-277Vac
- C=Constant Power
- P=Programmable
- 120=Output Power(Watts)
- -XYZ=Programming and dimming options. *See ordering options table on page 1.
- T=Class I, 3 Wire Input
- S=Metal case
- XXX=Rated Current
  Ex.) 086=860mA
  500=5000mA
- S=Single Output

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