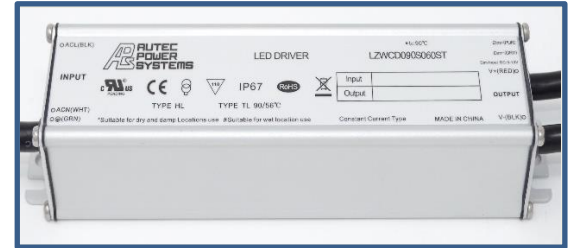


**Not Recommended for New Design (NRND)**

**■ Features**

- Power Rating: 90W
- Input Voltage: 100-277Vac
- Constant current design
- Programmable output current(470mA-3500mA)
- Digital programmability using PC-connected module and software
- Dimmable 0-10V, PWM, time 4 in 1 dimmable
- Efficiency to 91%
- UL Class 2 output options available
- OTP, SCP, OVP, and lightning protection
- IP67

RoHS  
Compliant



IP67  

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

**■ Application**

- Outdoor applications: Street lights, tunnel lights, landscaping lights, garden lights

**■ 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
LZWCD090S060ST-P	100-277Vac	90W	90-191V	470mA	600mA	91%	CE FCC UL
LZWCD090S085ST-P	100-277Vac	90W	64-150V	600mA	850mA	89%	CE FCC UL
LZWCD090S120ST-P	100-277Vac	90W	45-106V	850mA	1200mA	88%	CE FCC UL
LZWCD090S190ST-P	100-277Vac	90W	28-69V	1300mA	1900mA	88%	CE FCC UL
LZWCD090S260ST-P*	100-277Vac	90W	22-48V	2000mA	2600mA	88%	CE FCC UL
LZWCD090S350ST-P*	100-277Vac	90W	14-35V	2600mA	3500mA	86%	CE FCC UL

\*Class 2 output

**■ Technical Data**

Input voltage range	100-277Vac
Frequency	47~63Hz
Power factor	>0.9@60-100%, refer to PF vs Load curve
THD	<20%@60-100%load, refer to THD vs Load curve
Input current	1.1Amax@110Vac & full load, 0.55Amax@230Vac full load
Inrush current	65A peak, 1.2ms duration@230Vac 25°C 80A
Leakage current	1mA max. @277Vac 60Hz, 0.75mAmx @240Vac 50Hz, IEC61347-1
Rated power	90W
Current Accuracy	±5%
Ripple & Noise (pk-pk)	Ip-p: 5%LED Load 60%-100% Load
Turn-on Delay time	1.2s
Output over shoot	10%Io

**Technical Sales / Customer Service:** +1-818-338-7788 • Email: [sales@autec.com](mailto:sales@autec.com)  
31328 Via Colinas Suite 102 • Westlake Village, CA 91362 USA • [www.autec.com](http://www.autec.com)

February 20, 2019

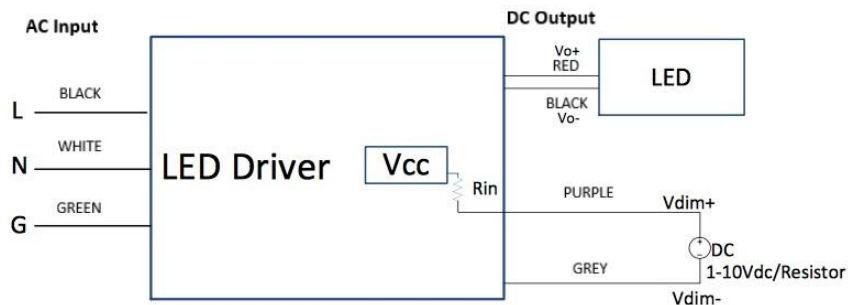
■ **Technical Data(cont.)**

Output over voltage	135% Vomax
Short circuit protection	Protection type: hiccup mode, recovers automatically after fault condition is removed
Over temperature protection	Decrease output current until over temperature state is removed
Operating temperature	-40 ~ 70°C;
Storage temperature	-40 ~+85°C
Humidity operational	10% ~ 100%RH
Humidity storage	5% to 100%RH
MTBF	>320,000 hours @230Vac & 80% Load
Life rating	>58,000 hours
Maximum case Temperature	90°C
Length (L)	5.71" (145mm)
Width (W)	2.66" (67.5mm)
Height (H)	1.48" (37.5mm)
Weight	720G

**Notes:**

1. Unless specified, all the test results are measured in the 25°C ambient temperature.
2. The results vary according to different LED load characteristics.
3. Please confirm working conditions according to the derating curve of output power vs. input voltage and temperature. LED driver recommended for its intended use only, do not exceed data sheet specifications.
4. Refer to lifetime vs. Tc curve.
5. Contact Autech Sale for Tc location.

■ **Wiring Diagram**



**Technical Sales / Customer Service:** +1-818-338-7788 • Email: [sales@autec.com](mailto:sales@autec.com)

31328 Via Colinas Suite 102 • Westlake Village, CA 91362 USA • [www.autec.com](http://www.autec.com)

February 20, 2019

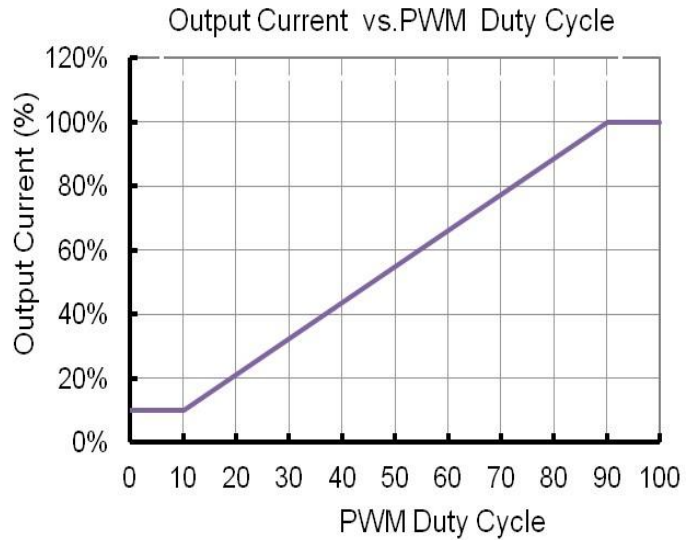
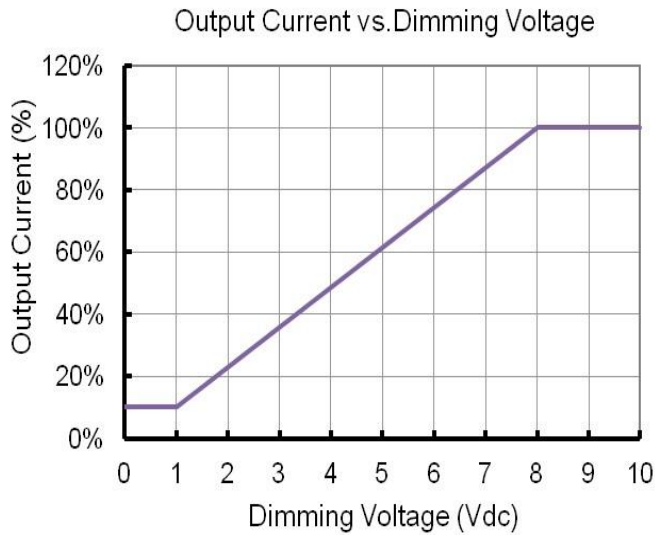
■ Safety Compliance

Safety Category	Standard
UL 8750	Light Emitting Diode(LED) Equipment for Use in lighting Products
UL 1012	Power Unit Other Than Class 2
UL 1310	Class 2 Power Units
IEC 61347-1	Lamp Control Gear Part 1: General and Safety Requirements
IEC 61347-2-13	Lamp Control Gear Part 2-13: Particular Requirements for DC or AC Supplied Electronic Control Gear for LED Modules
EMI Standards	Notes
IEC 55015	Conducted emission test & Radiated emission test
IEC 61000-3-2	Harmonic current emissions; Class ( $\geq 75\%$ load)
IEC61000-3-3	Voltage fluctuations & flicker
FCC Part 15	Class B
EMS Standards	Notes
IEC 61000-4-2	Electrostatic discharge (ESD)
IEC 61000-4-3	Radio frequency electromagnetic field susceptibility test (RS)
IEC 61000-4-4	Electrical fast transient (EFT)
IEC 61000-4-5	Surge immunity test L-N:2kV; LN-PE;4kV
IEC 61000-4-6	Conducted radio frequency disturbances test (CS)
IEC 61000-4-8	Power frequency magnetic field test
IEC 61000-4-11	Voltage dips
IEC 61547	Electromagnetic immunity requirements applies to lighting equipment

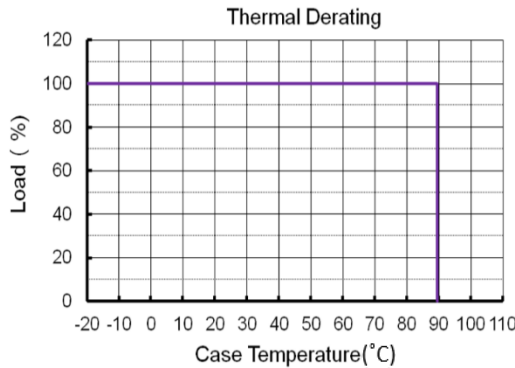
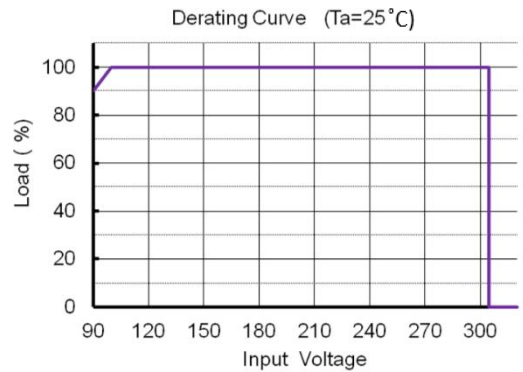
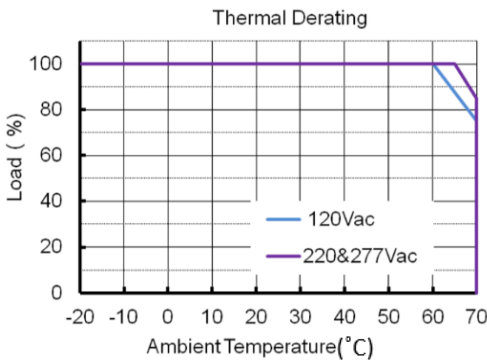
■ Dimming

Parameter	Min.	Typ.	Max.
Vcc	-	12V	-
Rin	-	50kOhm	-
Absolute maximum voltage range on the 0-10V input pin	-20V	-	20V
0-10V Dimming range	10%(Vdim=0~1V)	-	100%(Vdim=8~10V)
PWM Dimming range	10%(Duty=0-10%)	-	100%(Duty=90-100%)
PWM High	3V	-	10V
PWM Low	0V	-	0.6V
PWM Frequency	300Hz	-	2kHz
External PWM Controller current sinking capability	300uA	-	-

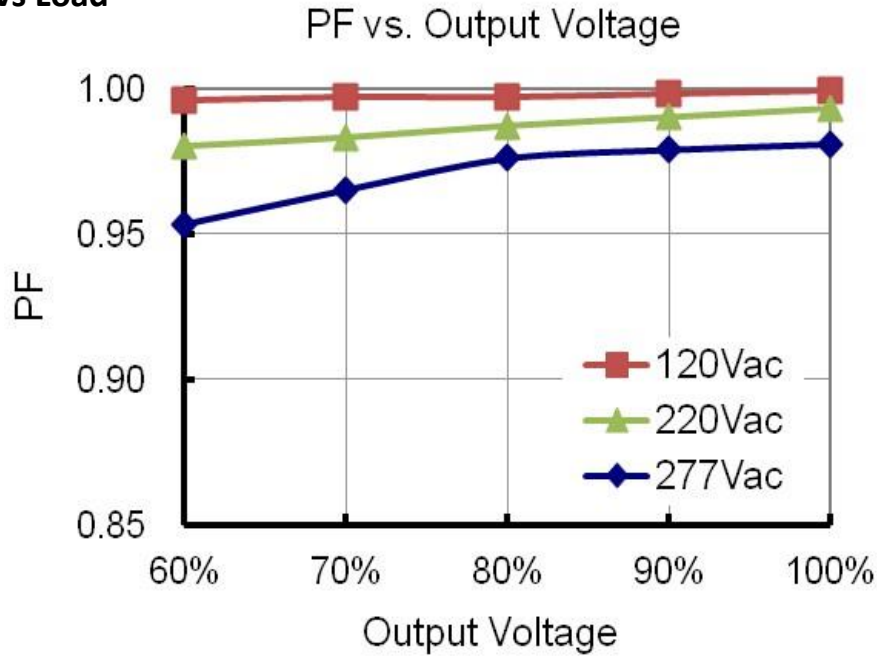
■ **Dimming Curve**



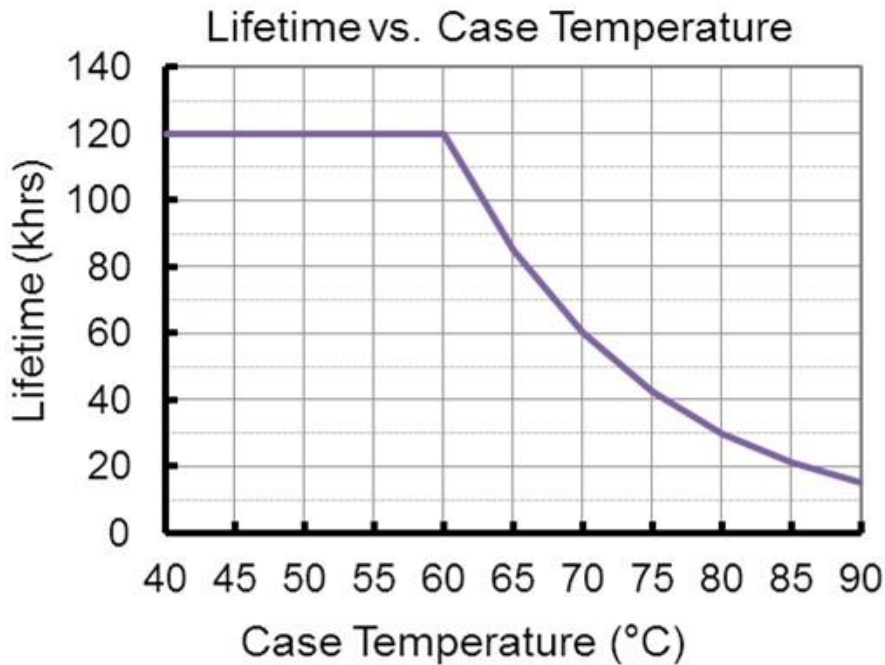
■ **Derating Curve**



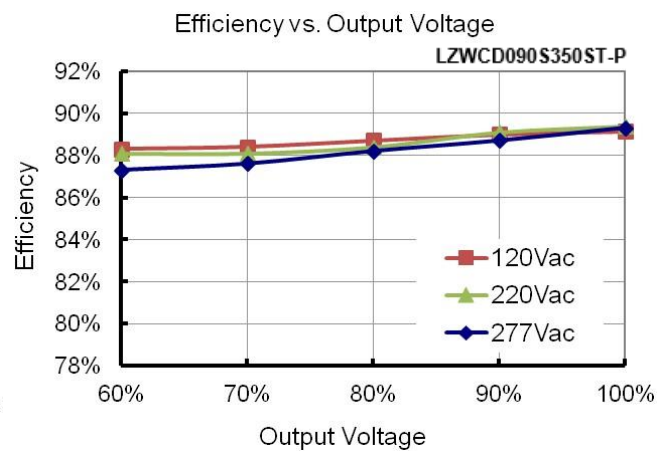
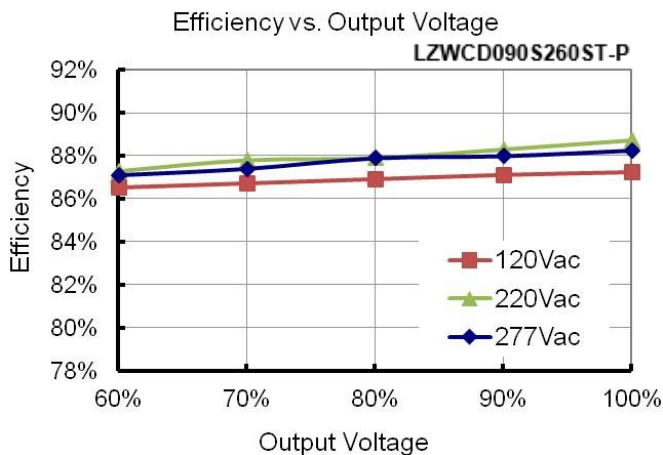
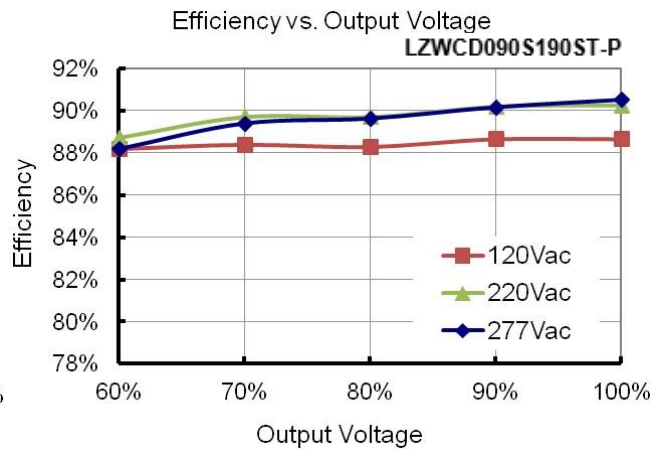
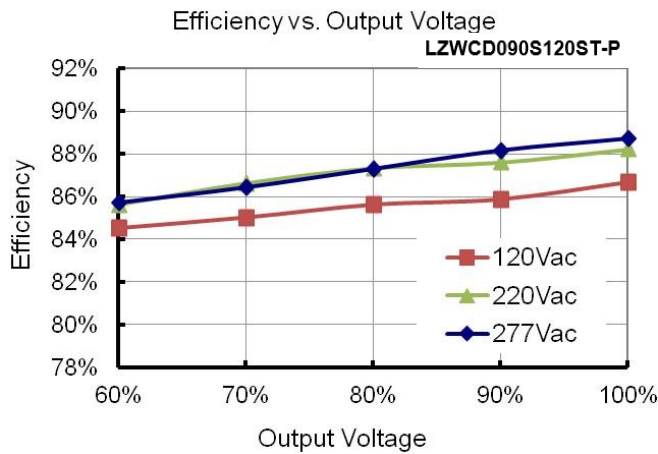
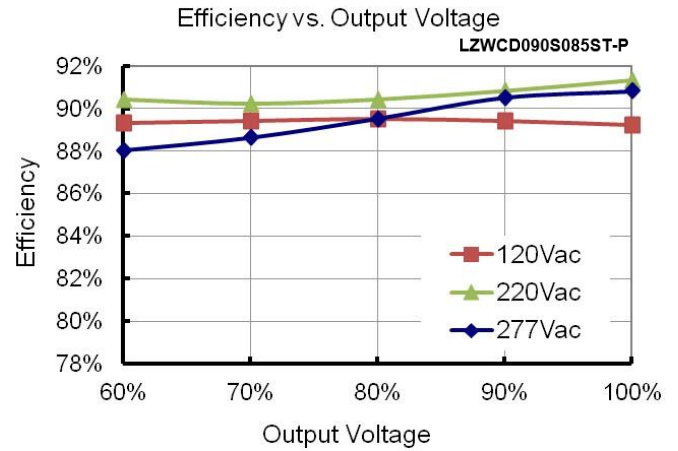
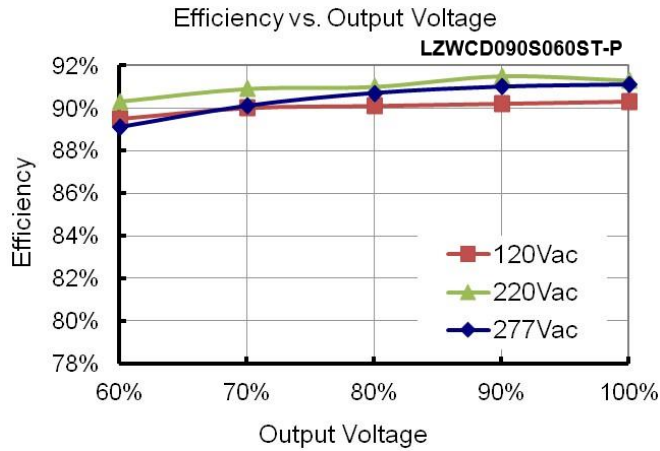
■ Power Factor vs Load



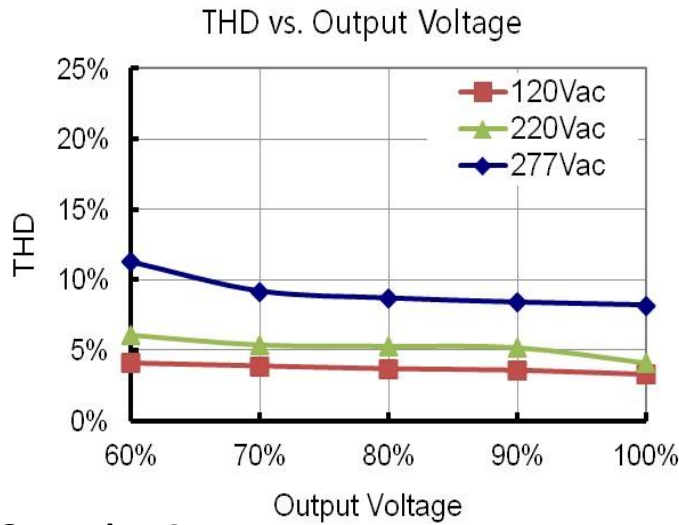
■ Lifetime vs Case Temperature



■ Efficiency vs Load

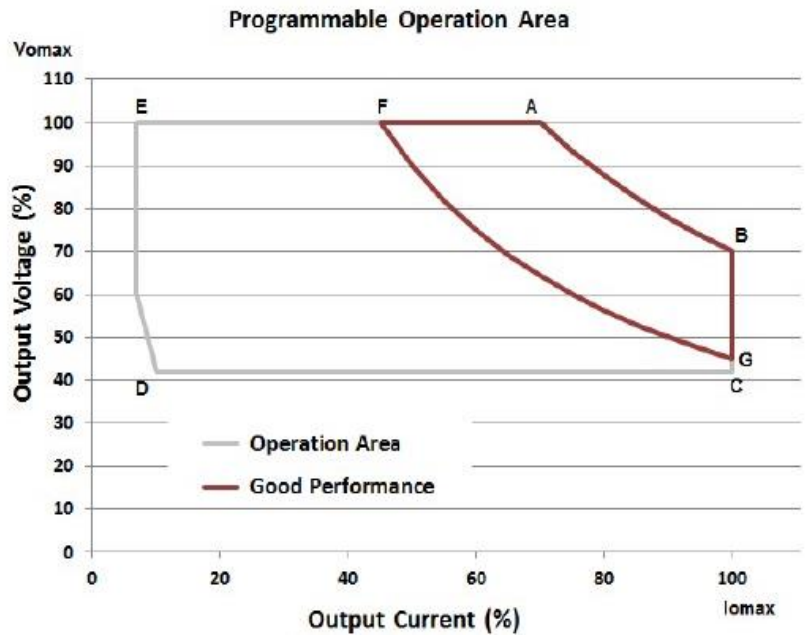


■ THD vs LOAD



■ Programmable Operation Area

Note: here the points of ABCDE form the operation area, and ABGF form the good performance area.



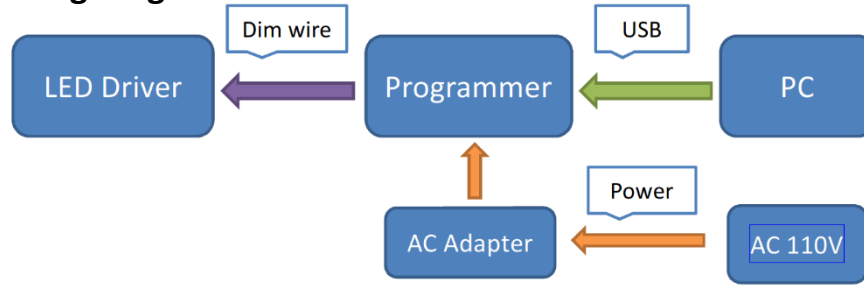
Model	...090S060ST-P		...090S085ST-P		...090S120ST-P		...090S190ST-P		...090S260ST-P		...090S350ST-P	
Item	Io(mA)	Vo (V)	Io(mA)	Vo (V)	Io(mA)	Vo (V)	Io(mA)	Vo (V)	Io(mA)	Vo (V)	Io(mA)	Vo (V)
A	470	191	600	150	850	106	1300	69	2000	45	2600	35
B	600	150	850	106	1200	75	1900	47	2600	35	3500	26
C	600	90	850	64	1200	45	1900	28	2600	21	3500	15
D	60	90	85	64	120	45	190	28	260	21	350	15
E	47	191	60	150	85	106	130	69	200	45	260	35
F	282	191	360	150	510	106	780	69	1200	45	1560	35
G	600	90	850	64	1200	45	1900	28	2600	21	3500	15

Technical Sales / Customer Service: +1-818-338-7788 • Email: [sales@autec.com](mailto:sales@autec.com)

31328 Via Colinas Suite 102 • Westlake Village, CA 91362 USA • [www.autec.com](http://www.autec.com)

February 20, 2019

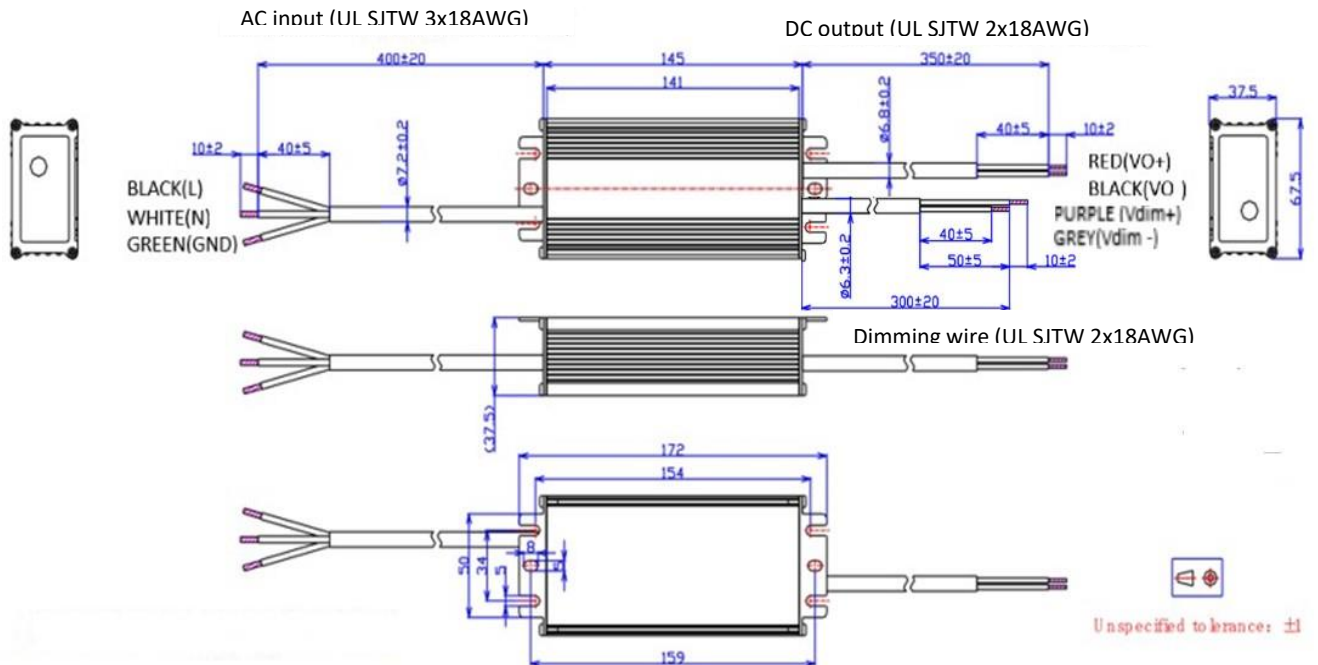
■ **PC Programming Diagram**



**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**

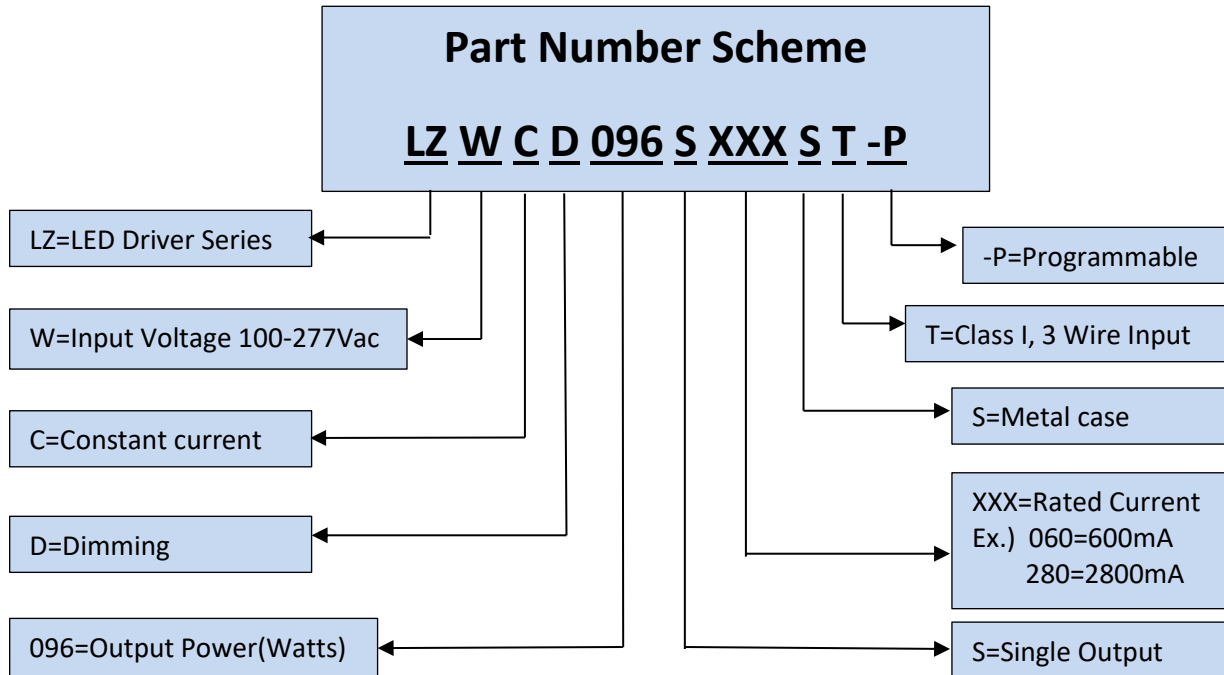


Note: Please make sure the output cable does not connect to dimming cable or the cables of other drivers until 20 seconds after being tested because of the remained voltage in the output capacitor.

**Technical Sales / Customer Service:** +1-818-338-7788 • Email: [sales@autec.com](mailto:sales@autec.com)  
31328 Via Colinas Suite 102 • Westlake Village, CA 91362 USA • [www.autec.com](http://www.autec.com)

February 20, 2019





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

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