

■ Features

- Power Rating: 240W
- Input Voltage: 120-277Vac or 127-420Vdc
- Constant voltage design
- Output current (0mA-20000mA)
- 0-10V/PWM/Timer/DALI/DMX (Optional) Dimming
- Dim to Off with 0.5W Standby Power
- 12V 300mA Auxiliary power to power controllers and fans (optional)
- UL Class P, Type HL
- Optional External Thermal Protection NTC
- OVP, SCP, & OTP
- IP67
- 5+ year warranty
- Surge Immunity 10kV



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

■ Application

- Strip lights, Landscape lights, Bay lights, Street lights, Flood lights
- Horticultural lighting

■ Model List

| Model Number | Input Voltage Range | Output Power | Output Voltage | Output Current Min | Output Current Max | Certification |
|-----------------|---------------------|--------------|----------------|--------------------|--------------------|---------------|
| LWA240-V012-XYZ | 120-277Vac | 240 W | 12V | 0 | 20A | UL/cUL |
| LWA240-V024-XYZ | 120-277Vac | 240 W | 24V | 0 | 10A | UL/cUL |
| LWA240-V048-XYZ | 120-277Vac | 240 W | 48V | 0 | 5A | UL/cUL |

| Ordering Options | XY= | Dimming Method | Programmable | 12Vaux | Dim-off |
|--|------|--|--------------|--------|---------|
| | NN | - | - | - | - |
| | DN | 0-10V | - | - | √ |
| | EN | 0-10V | - | √ | √ |
| | AN | DALI | - | - | √ |
| | MX | DMX | √ | - | √ |
| Cable Options | Z= | K=UL cable with ground wire (green), S=VDE cable/Class I, D=VDE cable/Class II | | | |
| External Thermal Protection NTC Option | -THR | LWA240-V024-XYZ-THR | | | |

DMX Notes: Works with DMX-512 Presently. DMX Dimming range 10-100% (1% DMX command will be treated as 10% Dimming).
 Note: Dimmable Constant Voltage Drivers Do NOT Support Switching DC-DC Regulator as Load

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■ Technical Data

| | |
|---------------------------|---|
| Input Voltage | 120-277Vac or 127V-420Vdc |
| Input Frequency | 47~63Hz |
| Power Factor | >0.9@60-100%load, refer to PF vs. Load curve |
| THD | <15%@60-100%load, refer to THD vs. Load curve |
| Input Current | 2.2Amax@120Vac & Full-Load, 1.1Amax@220Vac & Full-Load |
| Inrush Current | 65A peak, 1.2ms duration, <0.25A2s@230Vac, Cold Start 70A peak, 1.3ms duration, <0.5A2s@277Vac, Cold Start |
| Leakage Current | 1mA max @277Vac 60Hz, UL8750, 0.75mAmax @240Vac 50Hz, IEC61347-1 |
| Input Under Voltage | Shut down and auto-restart |
| Input Over Voltage | *Optional: Shutdown @320Vac |
| Surge Protection | Line to line 6kV, line to ground 10kV, IEC 61000-4-5 |
| Voltage Accuracy | ±3%Vo |
| Setup Time | 1.2s max. |
| Output Overshoot | 10% Vo, max. |
| Output Over Current | 120% Io, typ. |
| Short Circuit | Auto recovery. The output recovers when short is removed. |
| Over Temperature | Lower the output current when $T_c \geq 105 \pm 10^\circ\text{C}$; Auto Recovery When $T_c \leq 70 \pm 10^\circ\text{C}$ 105 +/- 10°C (relates to internal component temperature / optional settings are possible, contact Autec sales) |
| Operating Temperature | -40°C ~ +70°C ; 10%RH ~ 100%RH (See Derating Curve for more details) |
| Storage Temperature | -40°C ~ +85°C; 5%RH ~ 100%RH |
| MTBF | ≥280,000 hours, 75°C case temperature (MIL-HDBK-217F) |
| Lifetime | ≥100,000 hours, 75°C case temperature, refer to life vs. Tc curve |
| Case Temperature | 90°C max, marked in the Tc point of label |
| Dimension 12V Models | 8.82x2.68x1.63 by inch (body), 9.88x2.68x1.63 by inch (endcaps included) 225.0 x 68 x 38.5 by mm (body), 251.0 x 68 x 38.5 by mm (endcaps included) |
| Dimensions 24V,48V Models | 8.46x2.66x1.32 by inch (body), 9.52x2.66x1.32 by inch (endcaps included) 215.0x67.5x38.5 by mm (body), 242.0x67.5x33.5 by mm (endcaps included) |
| Net Weight | 1200g |
| Packing | 20pcs/Carton/22kg, 490x370x190mm |

Notes: Unless specified, all the test results are measured in 25°C room temperature.

* Marked items are optional. Please contact Autec Sales to specify the required functions.

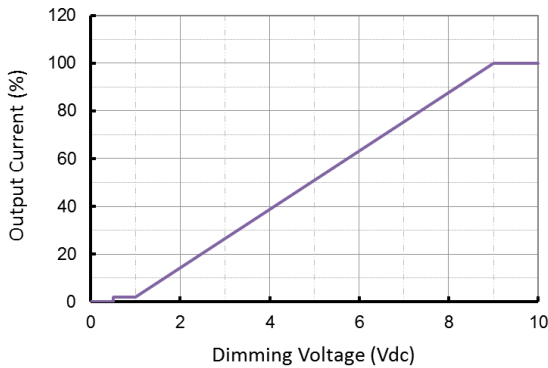
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■ Dimming

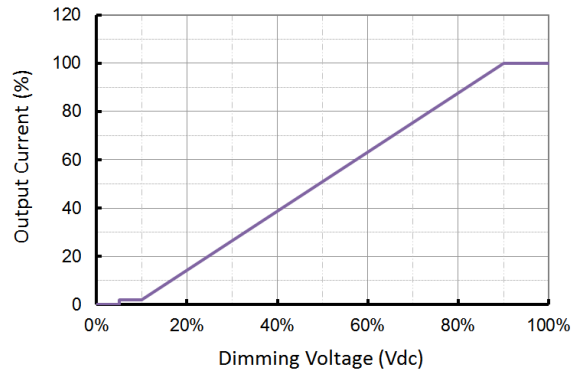
| Parameter | Min. | Typ. | Max. |
|--|---------------|------------|---------------------|
| Vdim Sourcing Current | 200uA | 300uA | 450uA |
| Vdim Allowed Input Voltage | -20 V | | 20 V |
| 0-10V Dimming Range | 2% (Vdim=1V) | Linear | 100% (Vdim=9~10V) |
| PWM Dimming Range | 2% (Duty=10%) | Linear | 100% (Duty=90-100%) |
| Dim-off threshold | 0.4V or 4% | 0.5V or 5% | 0.6V or 6% |
| Dim-on threshold | 0.6V or 6% | 0.7V or 7% | 0.8V or 8% |
| PWM High | 3V | | 10V |
| PWM Low | 0V | | 0.6V |
| PWM Frequency | 300Hz | | 2kHz |
| External PWM Controller Current Sinking Capability | 300uA | | |
| DA1,DA2 High Level | 9.5 | 16 | 22.5 |
| DA1,DA2 Low Level | -6.5 | 0 | 6.5 |
| DA1,DA2 Current | 0 | | 2mA |

■ Dimming Curve

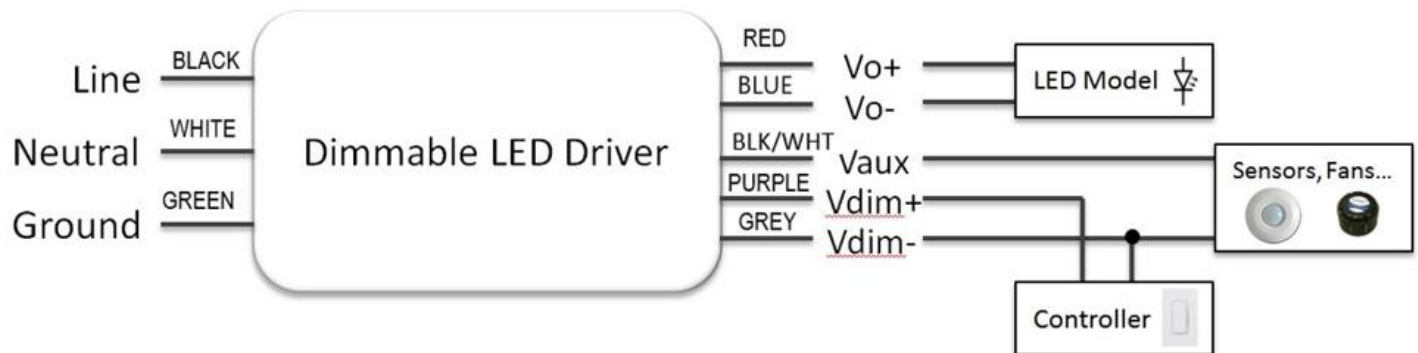
0-10V Dimming Curve



PWM Dimming Curve

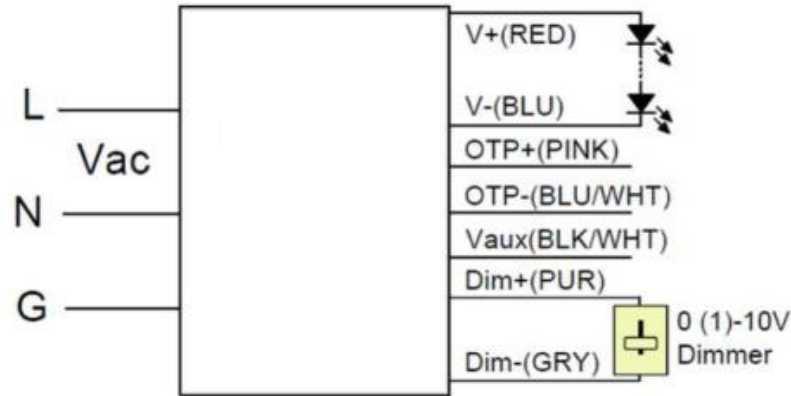


■ Wiring Diagram



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■ **Wiring Diagram/Optional External Thermal Protection**



■ **External Thermal Protection Table(optional)**

| Parameter | | Min. | Typ. | Max. | Notes |
|---------------------------------|--------------------------|----------|-----------|---|---|
| External Thermal Protection NTC | R1 | - | 7.81 kOhm | - | When R_NTC falls below R1, External Thermal Protection is triggered, reducing output current until R2 is reached. |
| | R2 | - | 4.16 kOhm | - | When R_NTC is less than R2, output current is reduced to the programmed "Protection Current Floor." |
| | Protection Current Floor | 10%loset | 60%loset | 100%loset | 10%loset > I _{omin} (default setting is 60%) |
| I _{omin} | | 60%loset | 100%loset | 10%loset ≤ I _{omin} (default setting is 60%) | |

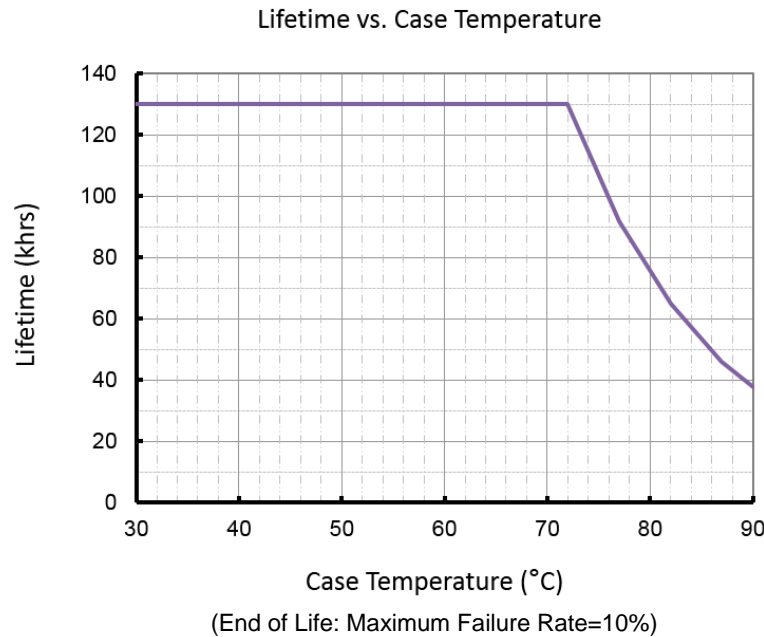
■ Safety/EMC Compliance

| Safety Standards | Description |
|------------------|---|
| UL8750 | Light emitting diode(LED) equipment for use in lighting products |
| UL1012 | Power units other than class 2 |
| IEC 61347-1 | Lamp control gear Part 1: general and safety requirements |
| IEC 61347-2-13 | Lamp control gear Part 2-13: particular requirement for DC or AC supplied electronic control gear for LED modules |
| EMI Standards | Description |
| IEC 55015 | Conducted emission test & radiated emission test |
| IEC 61000-3-2 | Harmonic current emissions; Class C |
| IEC 61000-3-3 | Voltage fluctuations & flicker |
| FCC Part 15 | ANSI C63.4:2009 Class B |
| EMS Standards | Description |
| IEC 61000-4-2 | Electrostatic discharge (ESD): 8 kV air discharge, 4 kV contact discharge |
| 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 |
| 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 |

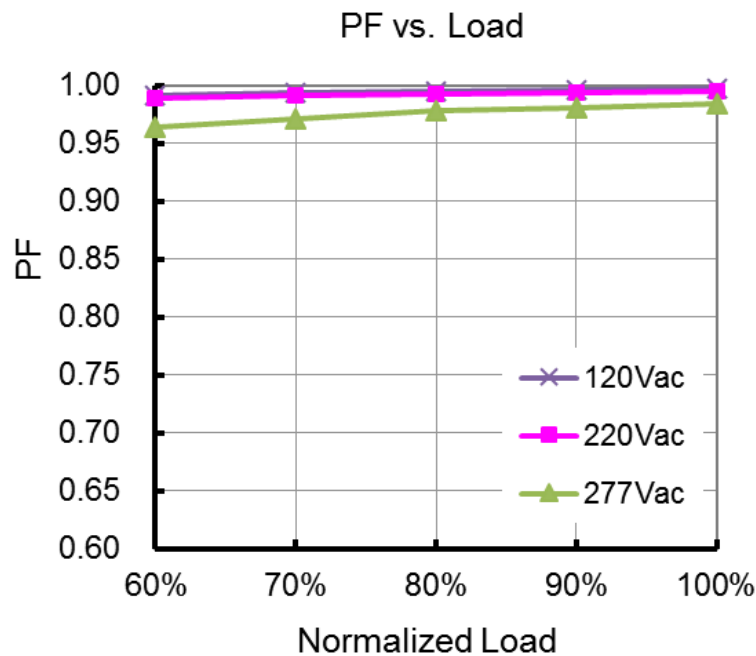
Disclaimer:

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.

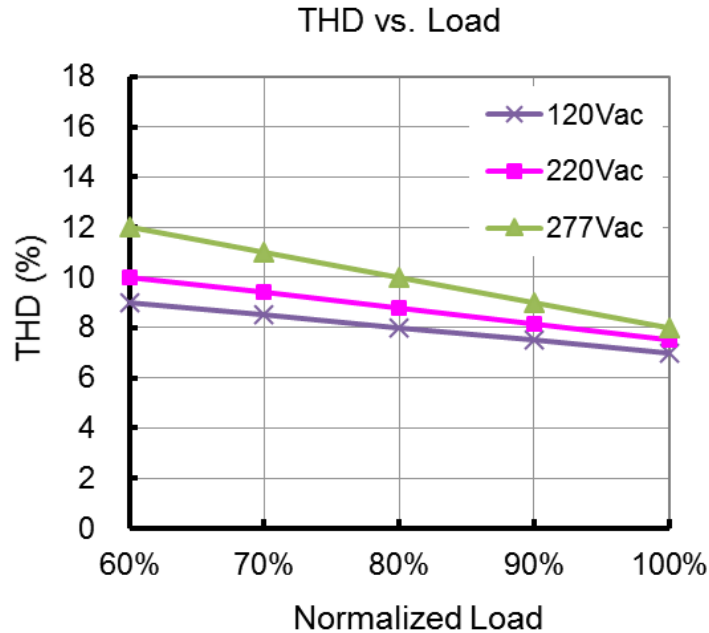
■ **Lifetime vs. Case Temperature**



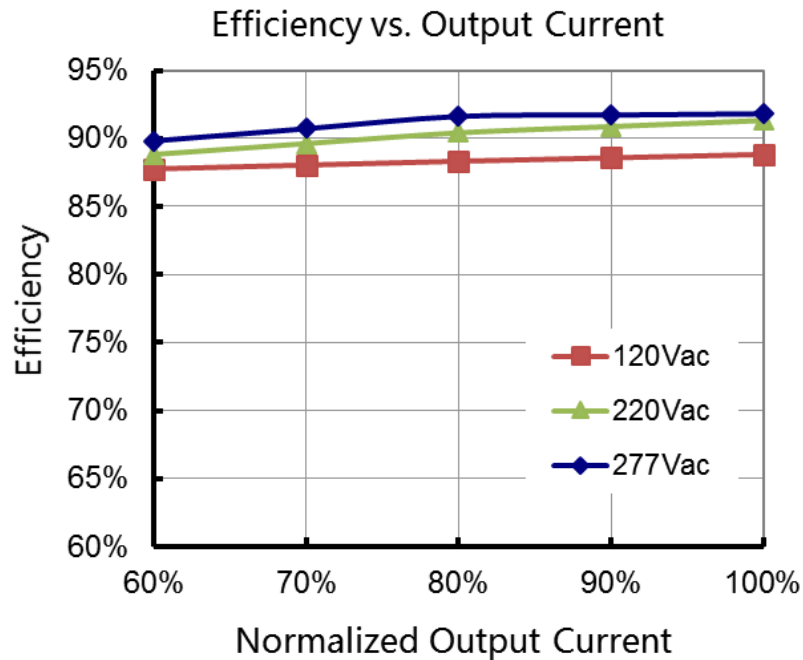
■ **Power Factor vs. Load**



■ THD vs. Load

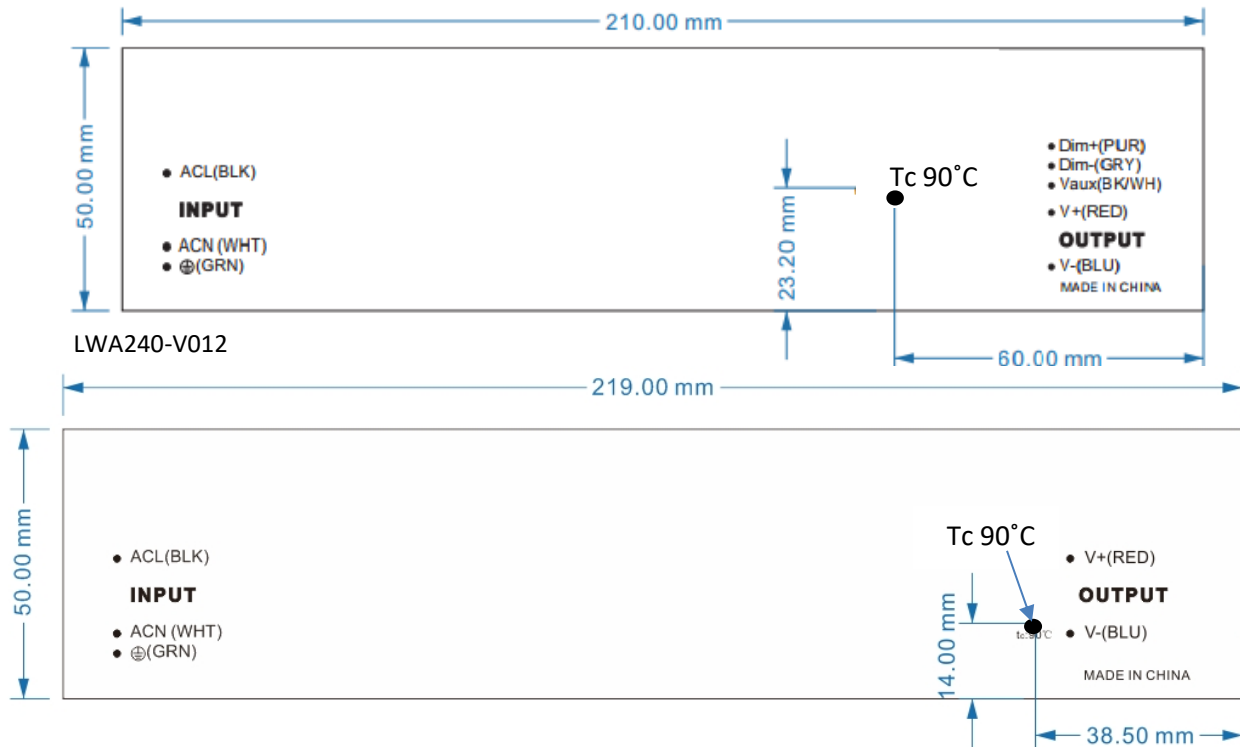


■ Efficiency vs. Load (24V Model)



■ **Tc Location(LED Driver Label)**

LWA240-Vxxx (024,048)

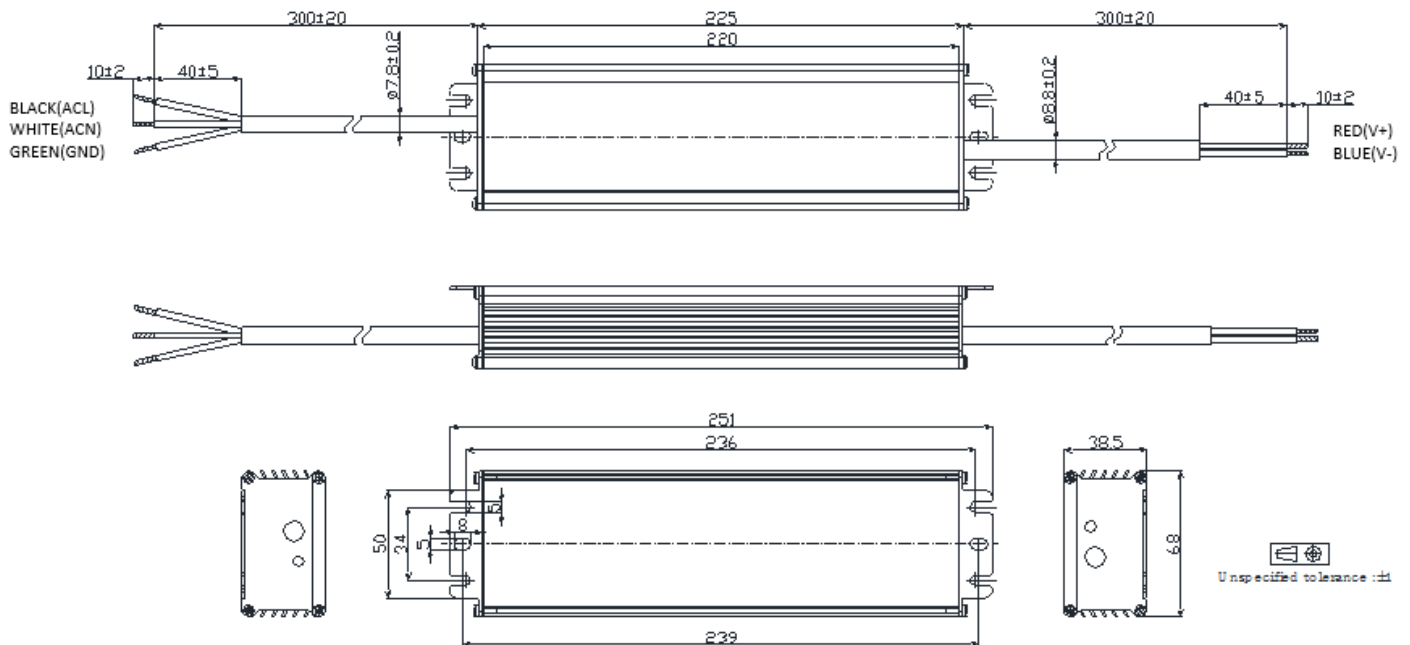


■ **Mechanical Design**

- **LWA240-V012-NNK (UL Cable)**

AC input (UL SJTW 3x18AWG)

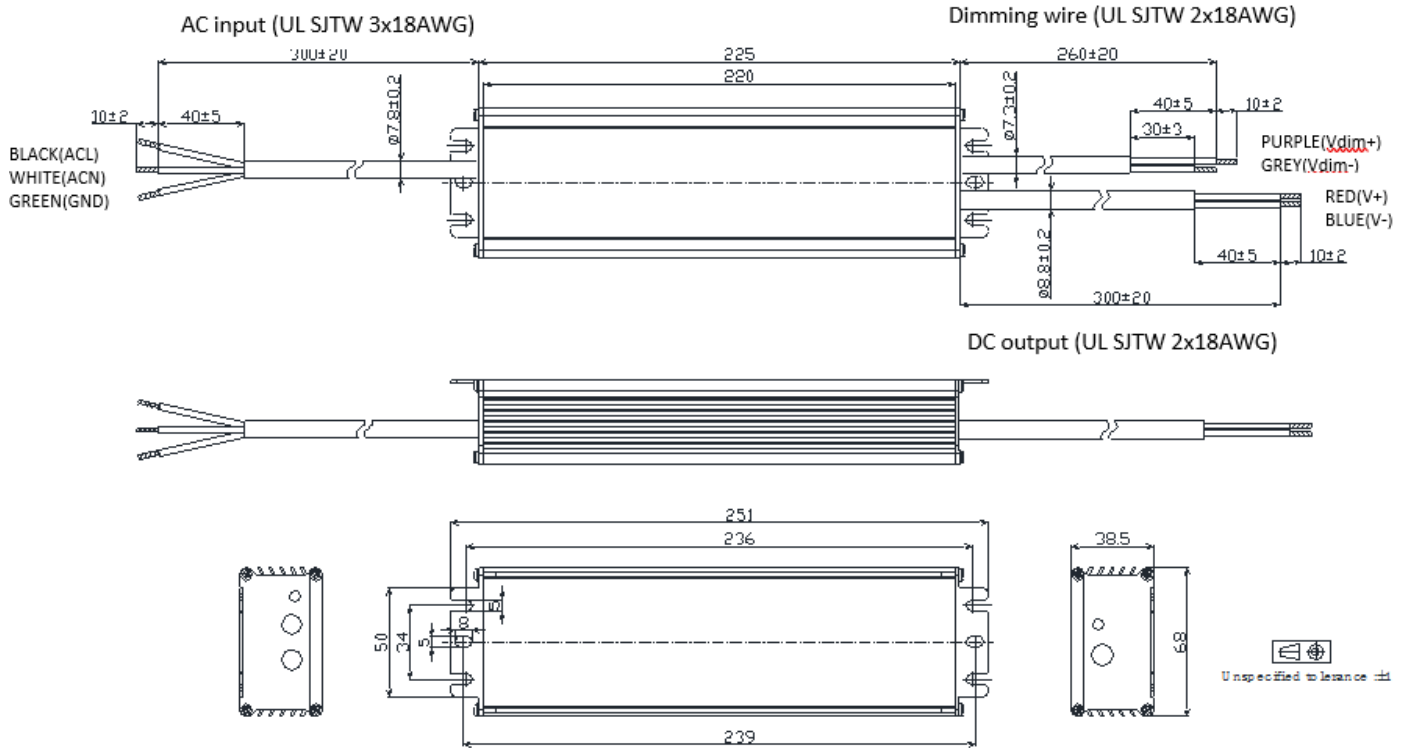
DC output (UL SJTW 2x18AWG)



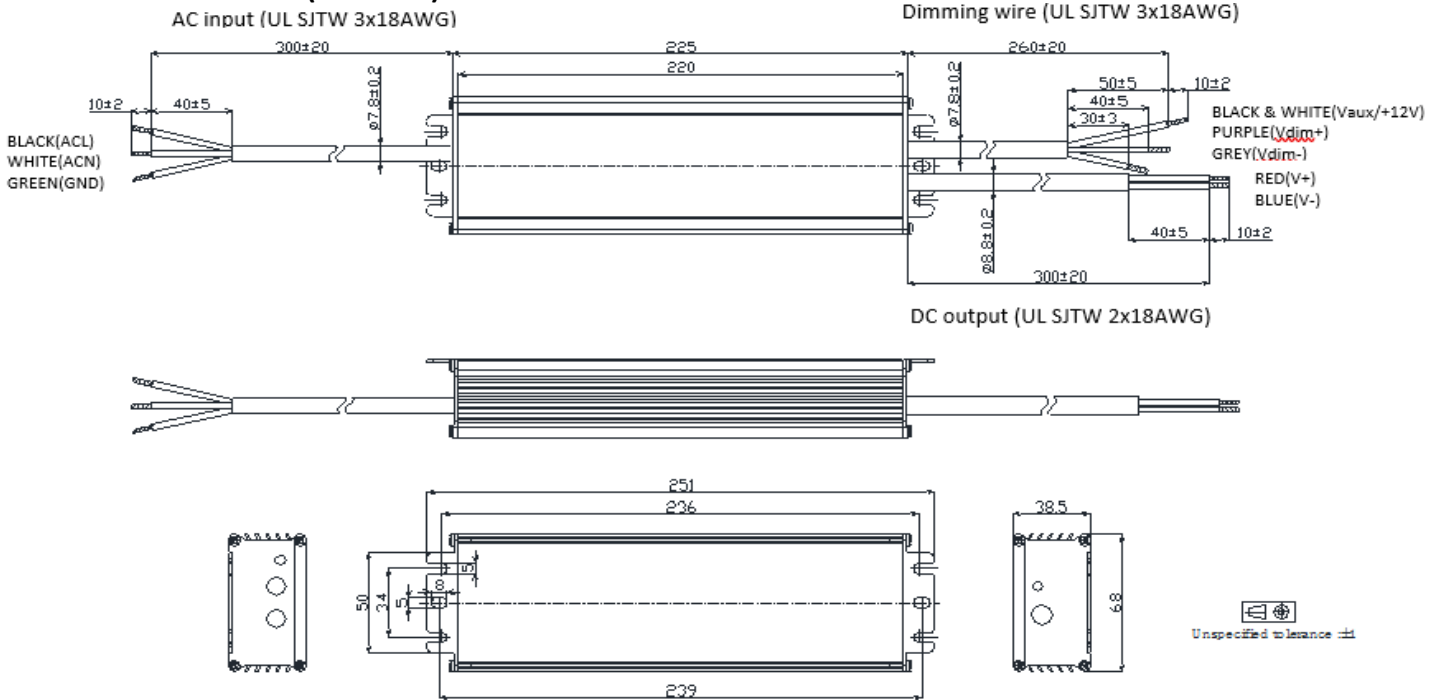
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- LWA240-V012-DNK (UL Cable)



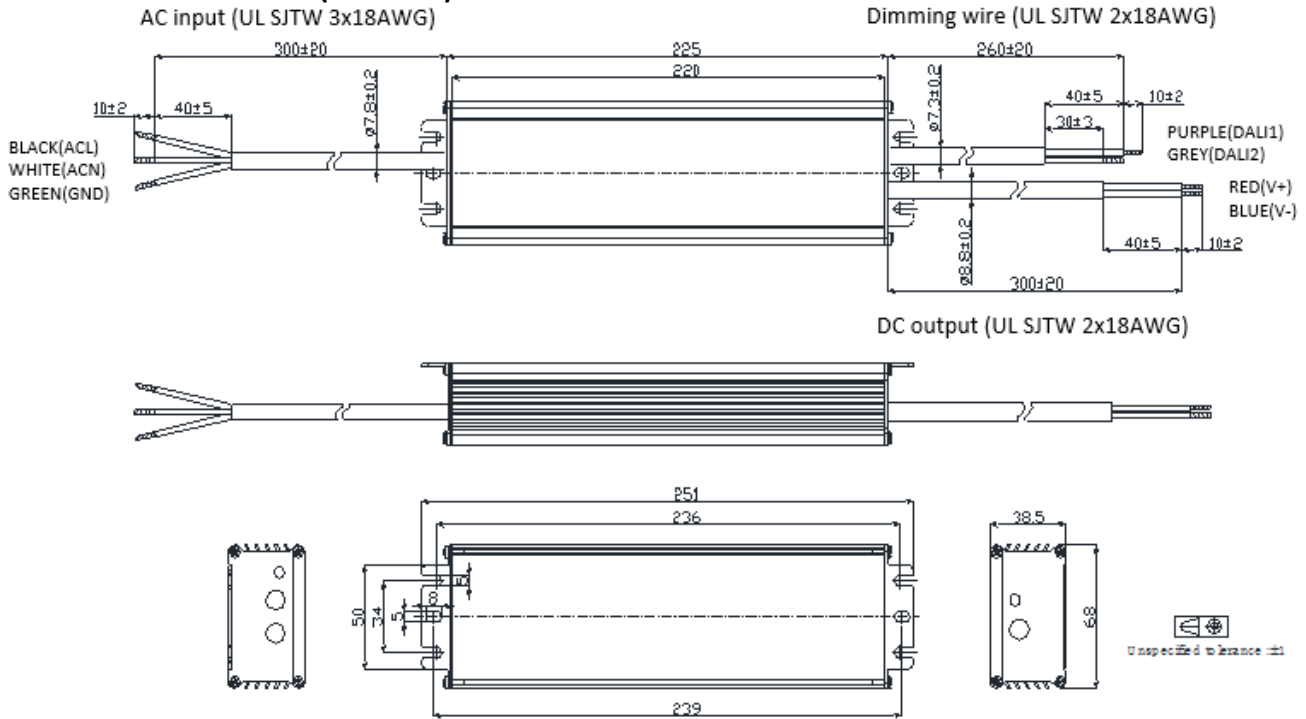
- LWA240-V012-ENK (UL Cable)



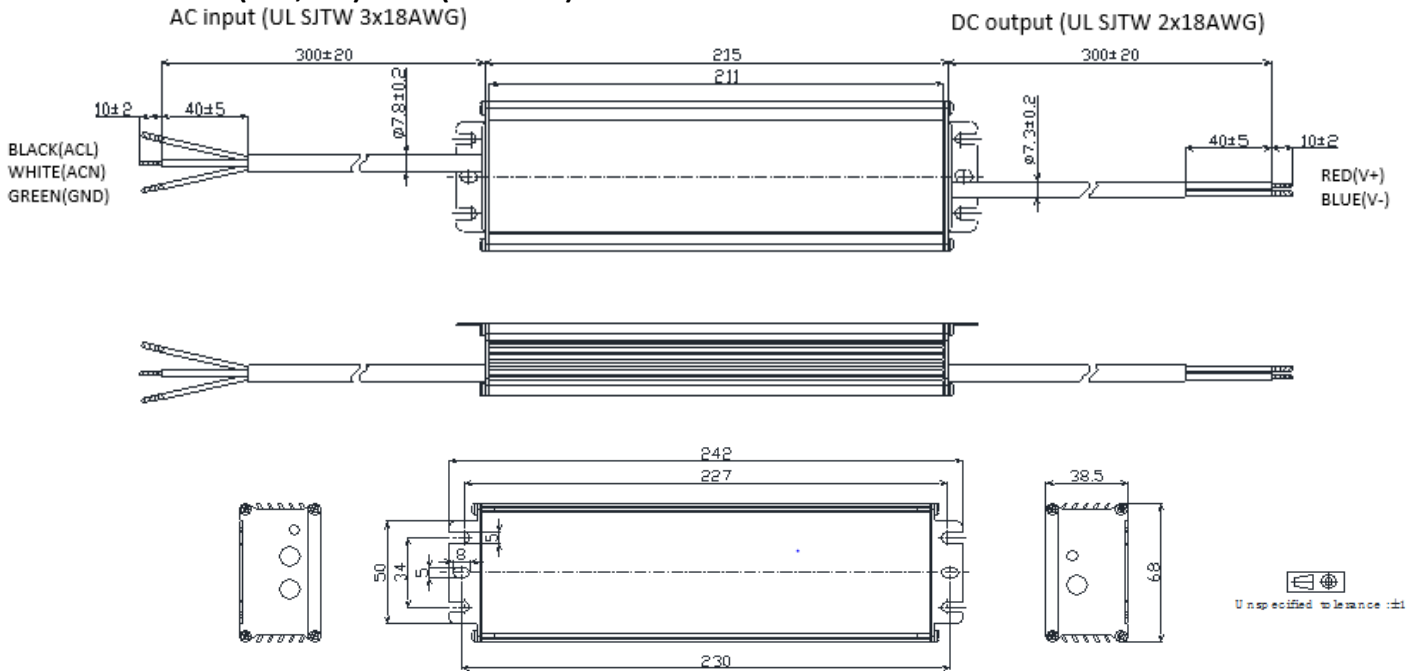
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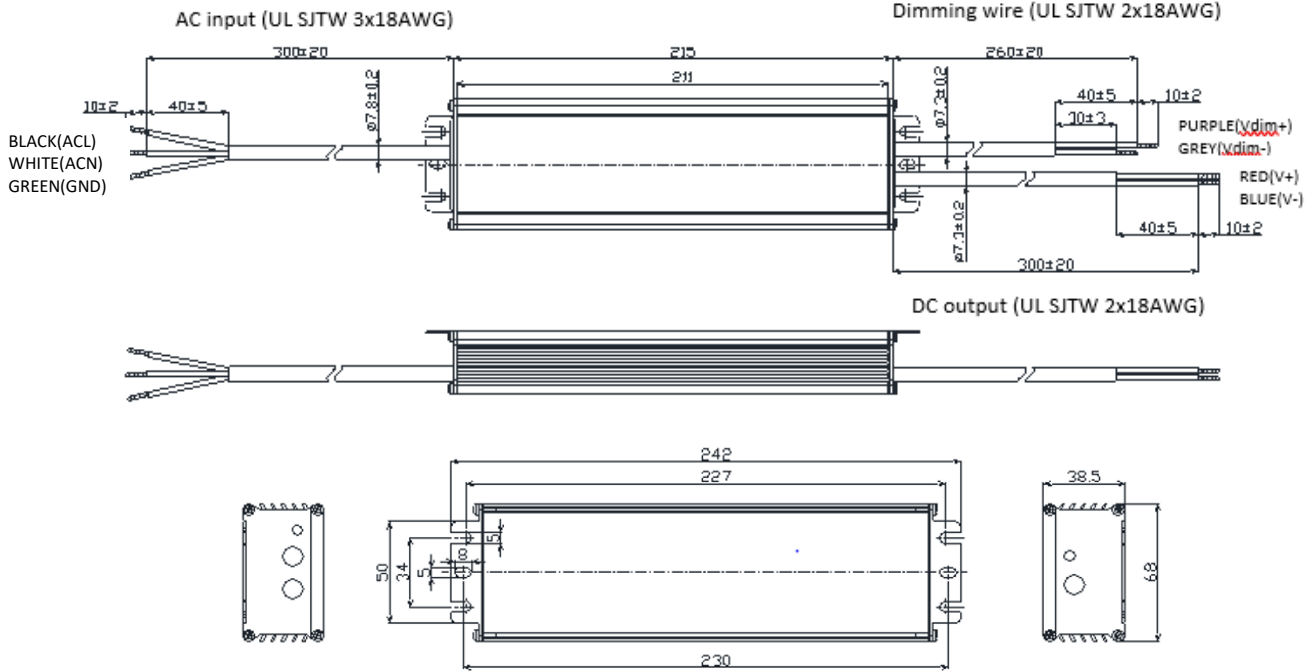
- LWA240-V012-ANK (UL Cable)



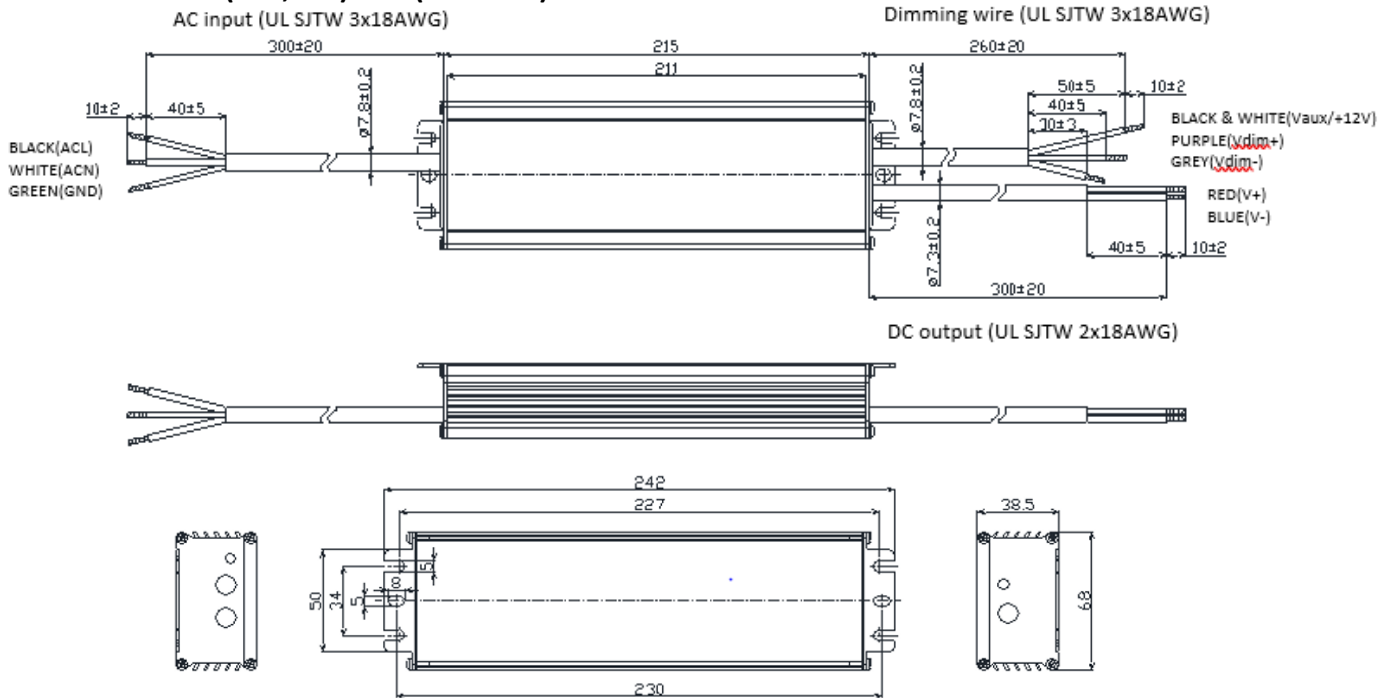
- LWA240-Vxxx (024,048)-NNK (UL Cable)



- LWA240-Vxxx (024,048)-DNK (UL Cable)



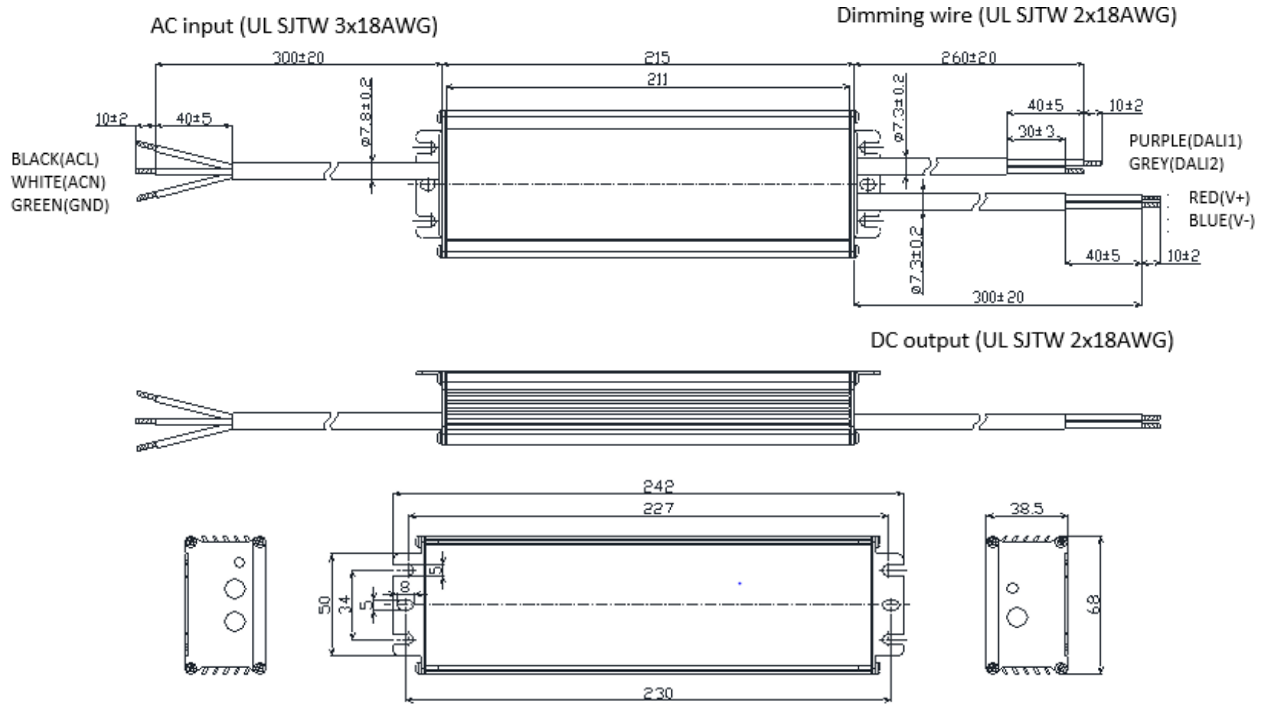
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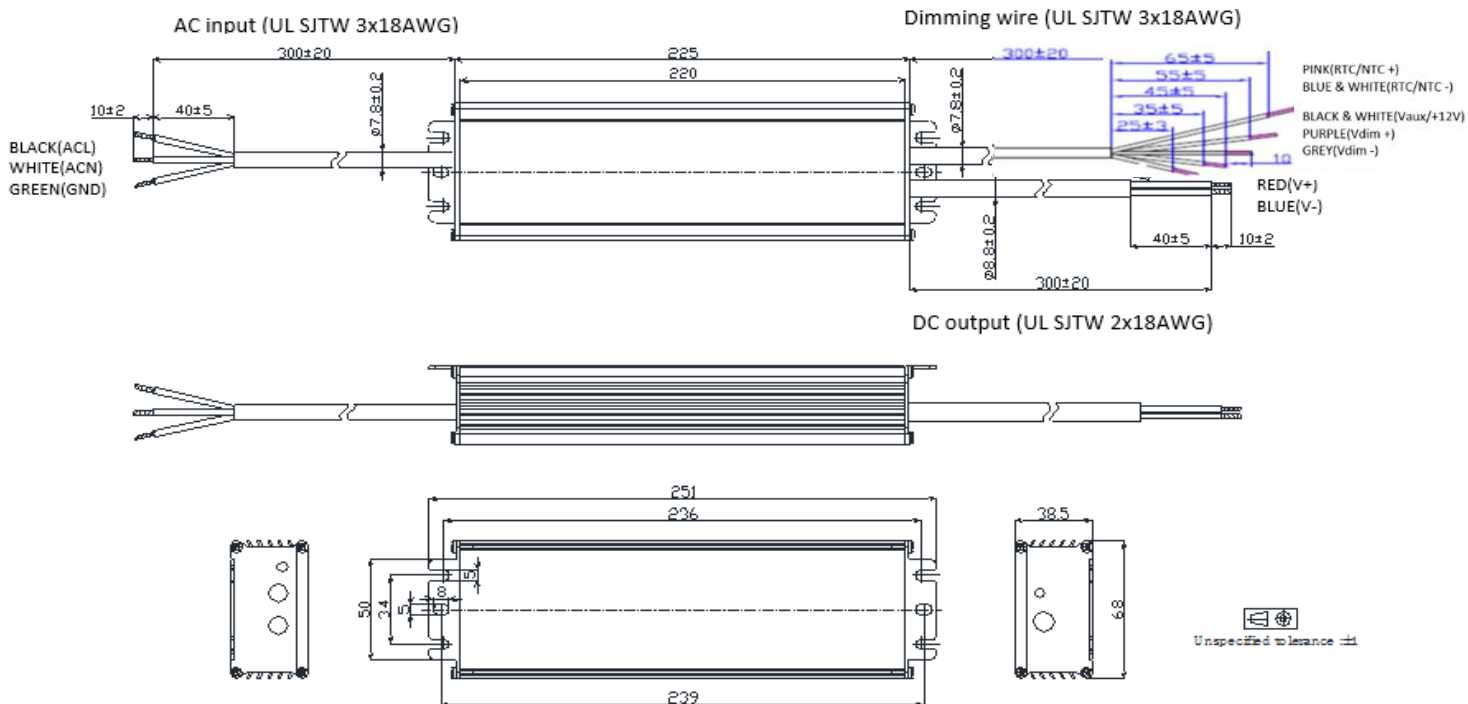
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- **LWA240-Vxxx (024,048)-ANK(UL Cable)**

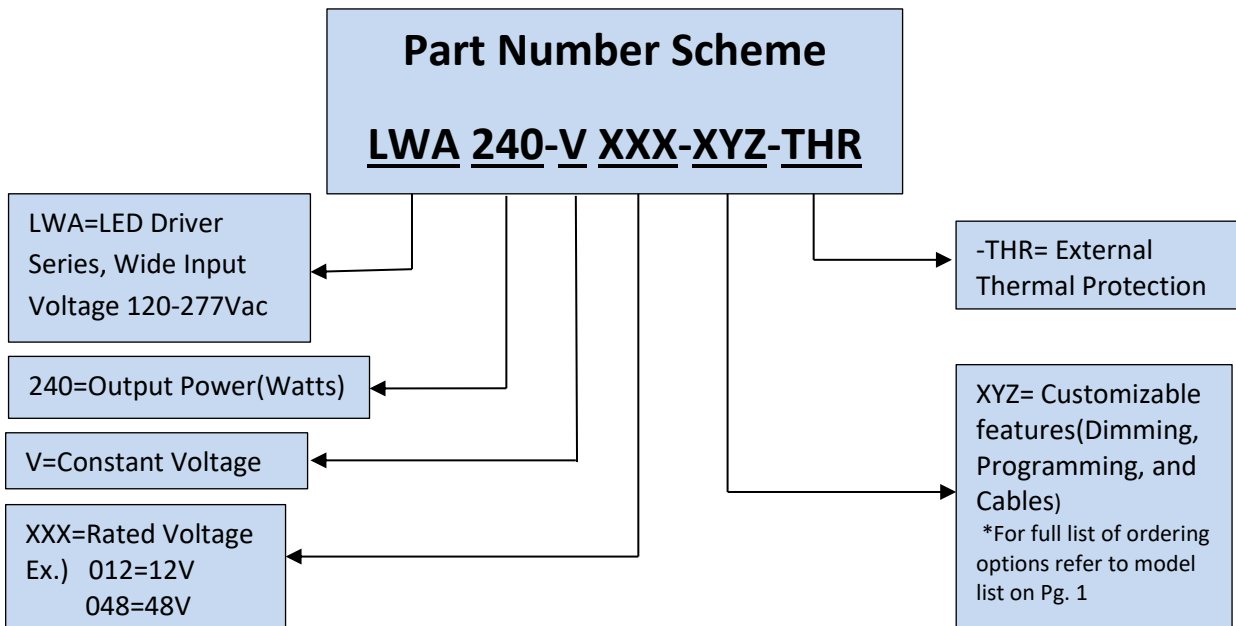
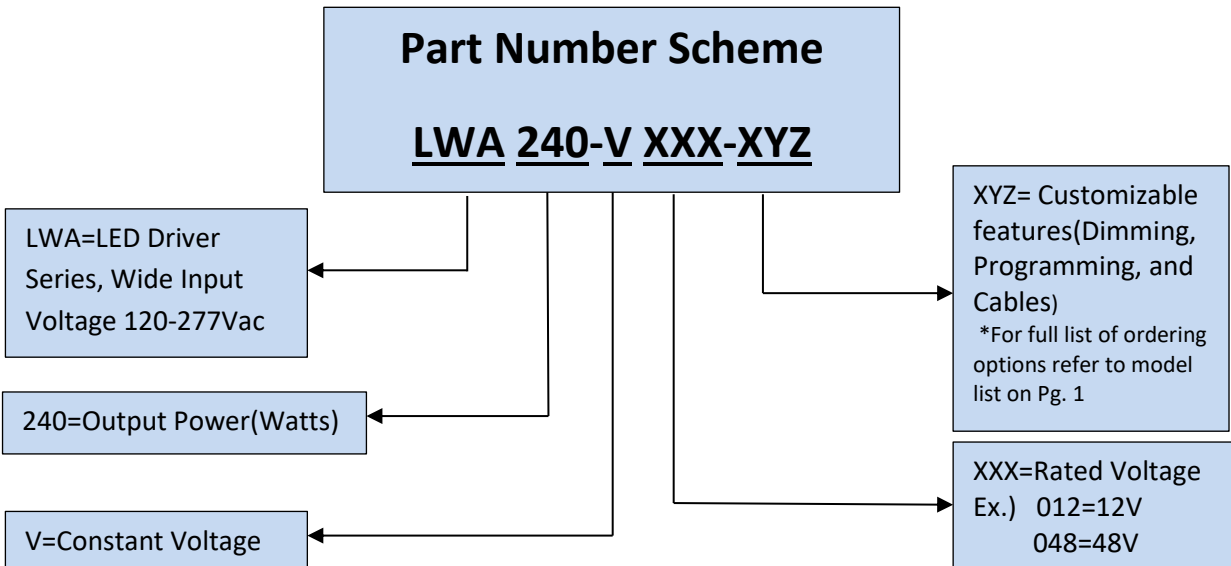


- **LWA240-V012-ENK-THR (UL Cable)**



***Contact Autec Sales for non UL Mechanical Diagrams**

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