

210W Single Output Switching Power Supply LL-DR-38V0A62-210WYT series

■ Features:

- Universal AC input / Full range(100-277V)
- Built-in active PFC function
- Always-on Auxiliary Power: 12Vdc, 30mA (Transient Peak Current up to 50mA)
- Protections:Short circuit / Over voltage
- LVLE power unit
- Three in one dimming function (0-10Vdc or PWM or resistance)
- Suitable Wet locations
- 100% full load burn-in test
- High Efficiency :88%-92%(Typ.)
- 5 years warranty

SPECIFICATION

| MODEL | | LL-DR-38V0A62-210WYT |
|-------------------|---|--|
| OUTPUT | DC VOLTAGE(Max) | 44V |
| | CONSTANT CURRENT REGION | 23-38V |
| | RATED CURRENT | 0.62A |
| | RIPPLE&NOISE(max.) | 100mVp-p |
| | CURREN TOLERANCE | ±10% |
| | LINE REGULATION | ±2% |
| | LOAD REGULATION | ±5% |
| | SETUP,RISETIME | <2000ms/ 115VAC at full load , <1000ms / 277V AC at full load |
| HOLD UP TIME(TYP) | 16ms at full load 100VAC /277VAC | |
| INPUT | VOLTAGE RANGE | 100~277VAC |
| | RATED POWER | 25W |
| | FREQUENCY RANGE | 47~63Hz |
| | POWER FACTOR(Typ) | PF>0.92/100VAC~277VAC at full load |
| | THD | <20% |
| | EFFICIENCY(Typ.) | 88% |
| | ACCURRENT AT 25W (TYP) | 0.25A / 100VAC, 0.09A /277VAC |
| | INRUSH CURRENT(TYP) | COLD START 75A at 277VAC |
| LEAKAGE CURRENT | <0.75mA/277VAC | |
| PROTECTION | OVER CIRCUIT | 95-110 % Protection type : Constant current limiting, recovers automatically after fault condition is removed |
| | Integral short circuit | Hiccup mode, recovers automatically after fault condition is removed |
| | Open Voltage protection | 48-58V Protection type : Shut down and latch off o/p voltage, re-power on to recover |
| | Overload protection | 105-120 % Hiccup mode, recovers automatically after fault condition is removed |
| ENVIRONMENT | WORKING TEMP. | -40 ~ +60°C |
| | WORKING HUMIDITY | 20~95%RH non-condensing |
| | STORAGE TEMP.,HUMIDITY | -40 ~ +80°C , 10 ~ 95%RH |
| | TEMP.COEFFICIENT | ±0.03%/°C(0~50°C) |
| | VIBRATION | 10~500Hz, 2G 12 min./1cycle, period for 72 min.each along X,Y,Z axes |
| SAFETY STANDARDS | design refer to UL8750, CSA C22.2 No. 250.0-08, EN61347-1, EN61347-2-13, UL60950-1, TUV EN60950-1 | |

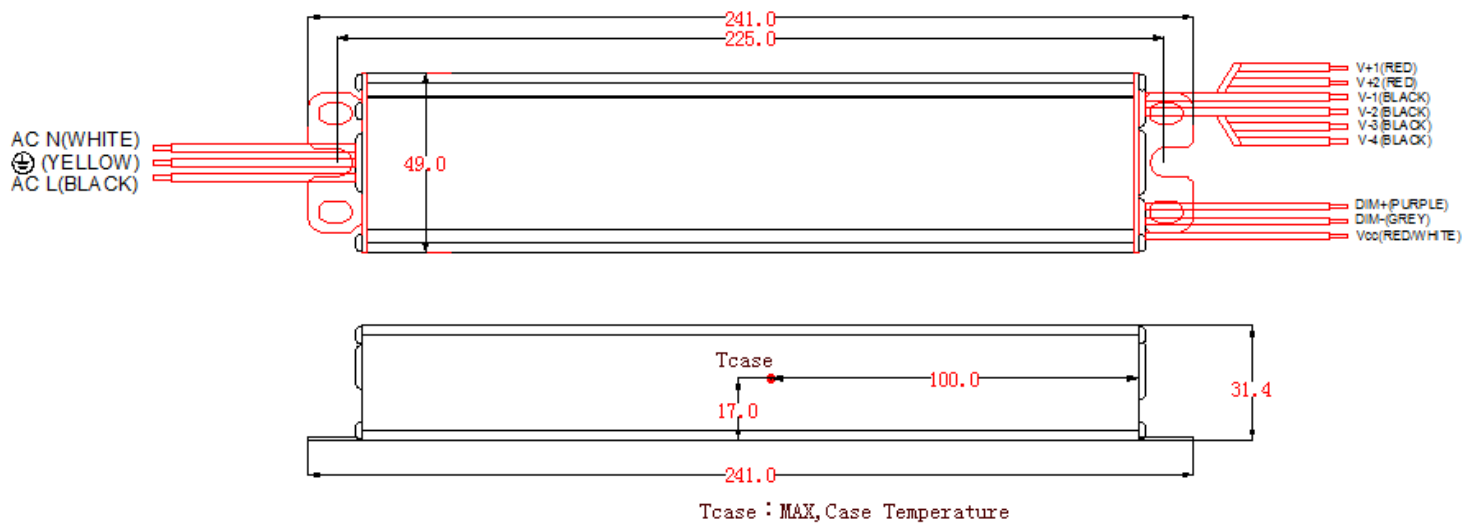


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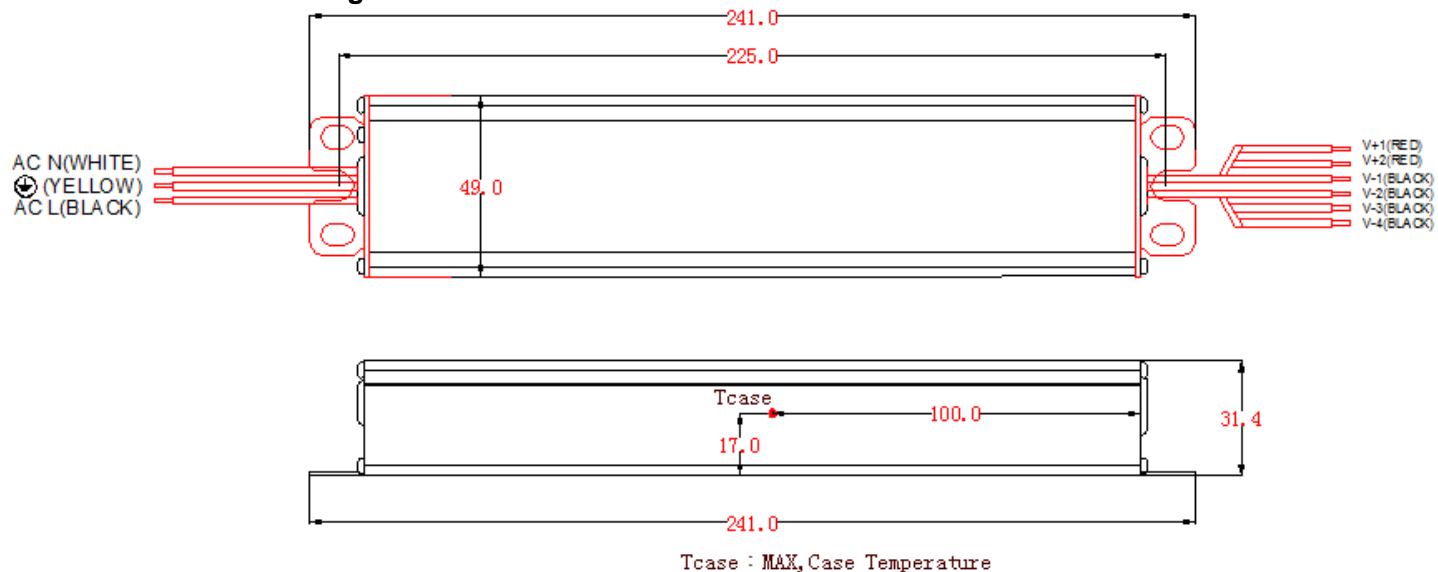
| | | |
|-------------------------|---|---|
| SAFETY & EMC | WITHSTAND VOLTAGE | I/P-O/P:3.75KVAC I/P-FG: 2KVAC O/P-FG:0.5KVAC |
| | ISOLATION RESISTANCE | I/P-O/P , I/P-FG , O/P-FG : 100M Ohms /500VDC /25°C//70%RH |
| | EMC EMISSION | Compliance to EN55015, EN61000-3-2 Class C ;EN61000-3-3 |
| | EMC IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV),criteria A |
| OTHERS | MTBF | 300Khrs min. MIL-HDBK-217F(25°C) |
| | DIMENSION | 241*49*31.4mm(L*W*H) |
| | PACKING | |
| NOTE | Suffix "XAXX" after letter V is 4 digit number which represents the output current in ampere for each output channel, for example, "5A00" means 5.0 A, "0A67" means 0.67 A. Suffix "Y" after letter 240W is "D" or "N",suffix "D" which represents the dimmer type,suffix "N" which represents no dimmer type. | |

Mechanical Specification

Remark: Support 0-10Vdc or PWM or resistance dimming function.



Remark: without dimming switch.

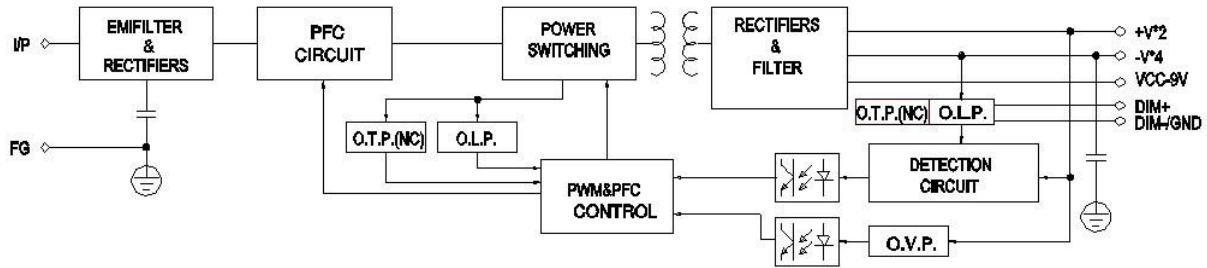


Remark:X=D,P;Support 0-10Vdc or PWM or resistance dimming function,with or without dimming switch(4 bit)

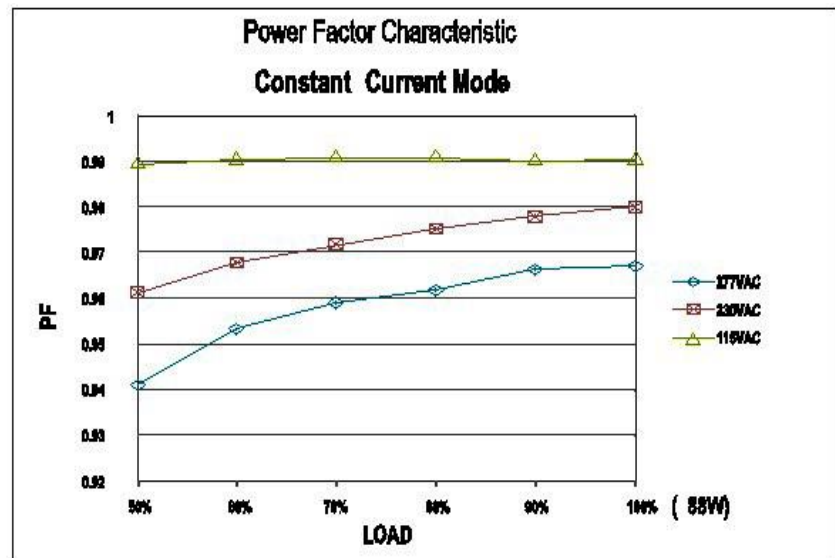
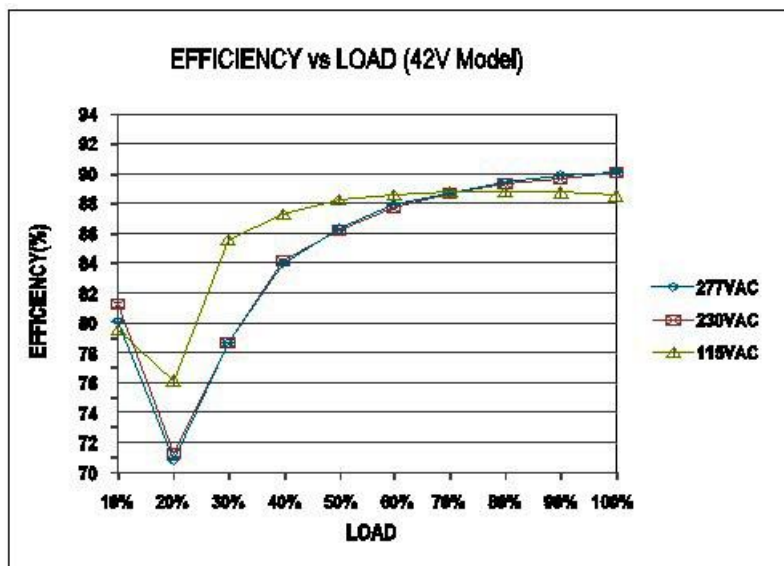


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Block Diagram



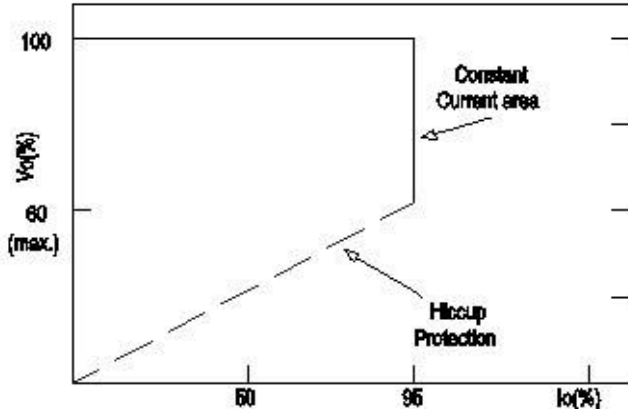
| The life time curve: | | | | | | | | | | |
|--------------------------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| TC (°C) | 60°C | 65°C | 70°C | 75°C | 80°C | 85°C | 90°C | 95°C | 100°C | 105°C |
| TA (°C) | 25°C | 30°C | 35°C | 40°C | 45°C | 50°C | 55°C | 60°C | 65°C | 70°C |
| The power of life (Hour) | 323531 | 239850 | 190225 | 133791 | 92923 | 75409 | 59646 | 57311 | 53029 | 50110 |



DRIVING METHODS OF LED MODULE
 This LED power supply is suggested to work in constant current mode area (CC) to drive the LEDs

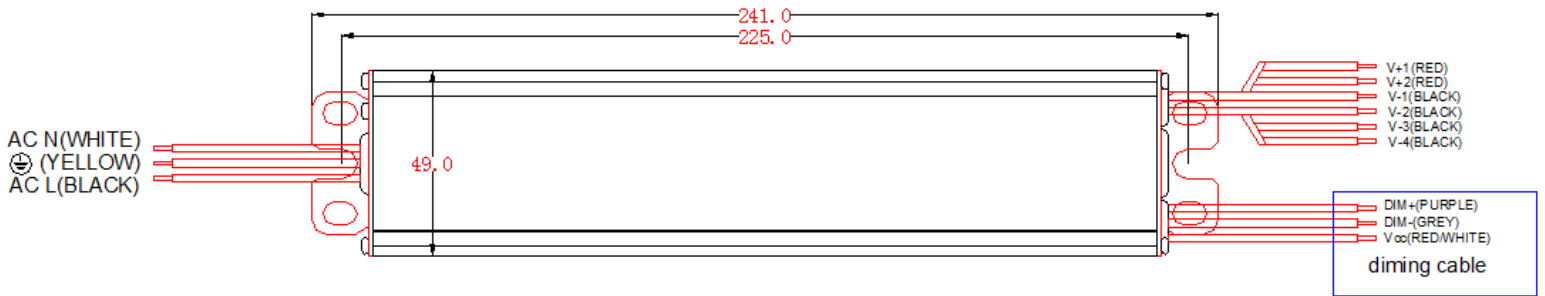


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Typical LED power supply I-V curve

DIMMING OPERATION



Built-in 3 in 1 dimming function, output constant current level can be adjusted through dimming cable by connecting a resistance or 0~10Vdc or 10V PWM signal between DIM+ and GND. Please DO NOT connect "DIM-" to "V-1".

Reference resistance value for output current adjustment (Typical)

| Resistance value | Single driver | 0 Ω | 10K Ω | 20K Ω | 30K Ω | 40K Ω | 50K Ω | 60K Ω | 70K Ω | 80K Ω | 90K Ω | 100K Ω | OPEN |
|-----------------------------|--|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|-----------|
| | Multiple drivers (N=driver quantity for synchronized dimming operation) | 0Ω /N | 10KΩ /N | 20KΩ /N | 30KΩ /N | 40KΩ /N | 50KΩ /N | 60KΩ /N | 70KΩ /N | 80KΩ /N | 90KΩ /N | 100KΩ /N | ----- |
| Percentage of rated current | | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 95%-110 % |

0~10V dimming function for output current adjustment (Typical)

| Dimming value | 0V | 1V | 2V | 3V | 4V | 5V | 6V | 7V | 8V | 9V | 10V | OPEN |
|-----------------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|----------|
| Percentage of rated current | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 95%-110% |

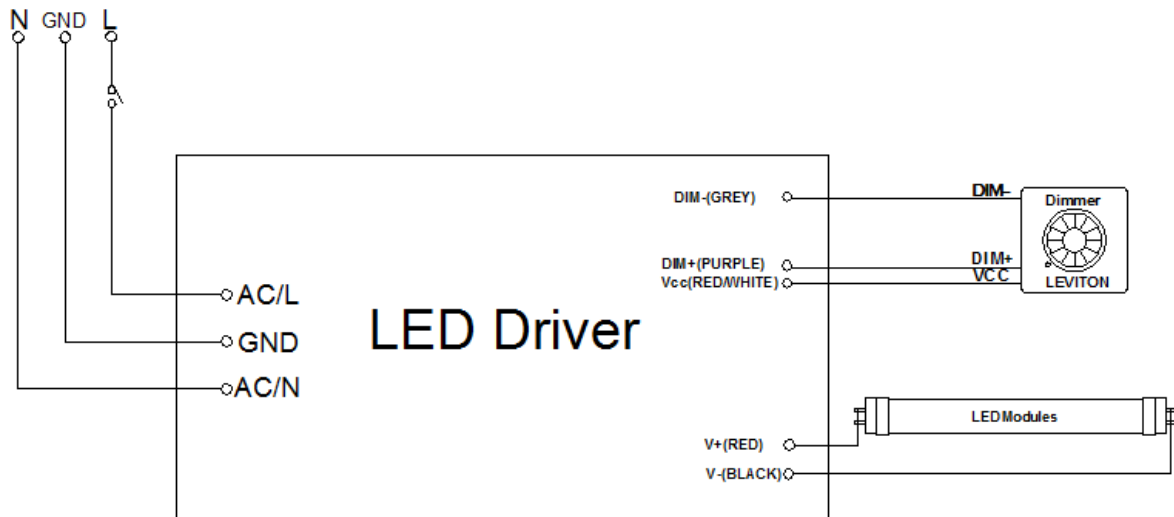
10V PWM signal for output current adjustment (Typical): Frequency range: 100HZ~3KHz

| Duty value | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | OPEN |
|-----------------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|----------|
| Percentage of rated current | 0% | 10% | 20% | 30% | 40% | 50% | 50% | 70% | 80% | 90% | 100% | 95%-110% |

Using the built-in dimming function can't turn the lighting fixture to tally dark. Please refer to the connection method below to achieve 0% brightness of the lighting fixture connecting to the LED power supply unit.

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Dimming connection diagram for turning the lighting fixture ON/OFF:



Using a switch and relay can turn ON/OFF the lighting fixture.

1. Output constant current level can be adjusted through dimming cable by connecting a resistance or 0~10Vdc or 10V PWM signal between DIM+ and DIM-.
2. The LED lighting fixture can be turned ON/OFF by the switch or dimming.