



P023R6 LED Fixtures

Low Voltage 660 mA, dimmable

Direct Current Controlled

P023R6 series, CC

ETL 5005242 (UL 1598 std)

Bright LEDs, Cool Operation



Product Description - low profile long life LED fixture

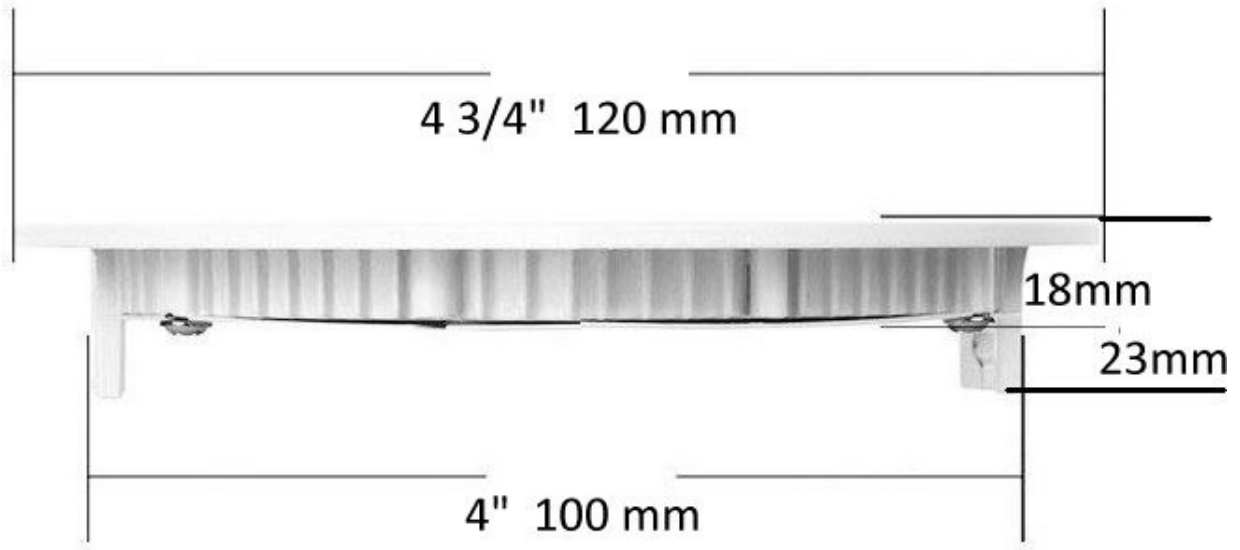
The P023R series of LED fixtures are **ETL listed** and IC rated for direct contact with insulation – recognizing it's cool operating temperatures and distributed heat (no hot spots). **Closet Rated** under NEC codes. **JA8 / Title 24** listed.

Technical specifications

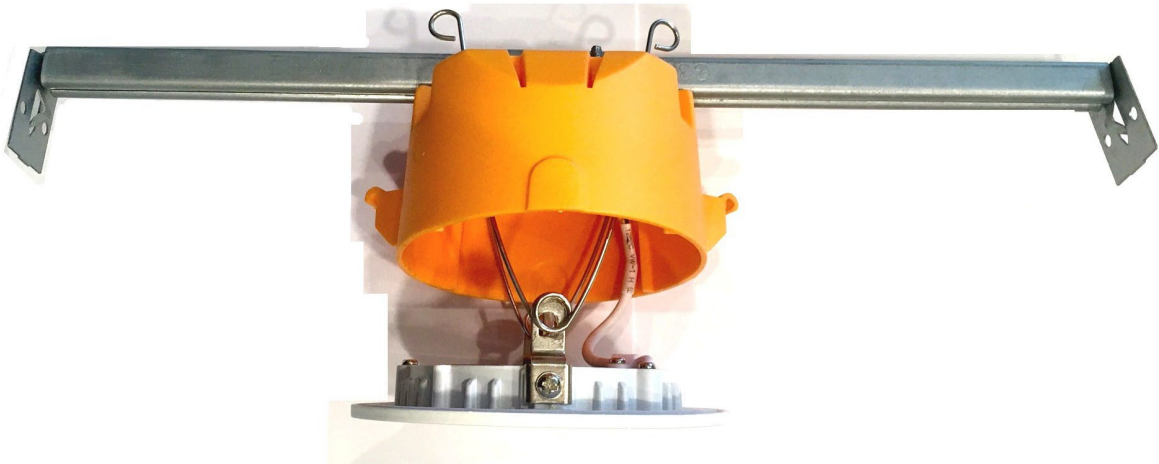
| | |
|----------------------------|--|
| Wattage | 6 watts operating |
| CRI | 80 and 90 options |
| Wattage, Operating current | 0 to 660 mA total of current in both channels, can mix for color control |
| Dimming Range | 0 to 100%, flicker free, no artifacts |
| Lumens | 540 |
| Color Temperature | 6 fixed options available plus tunable white |
| Operating Voltage | 7.5 to 9.0 volts |
| Recommended wiring | Series, 4 or 5 fixtures in series sharing one driver |
| Constant Voltage | Not Recommended |
| Operating Temperature | Ceiling mount, -20 to 50 Deg C non condensing |
| IP Rating | Suitable for Damp environments |
| IC Rated | Yes, see the AL-CBOX4 Fire Rated Rough-In for MDU applications |
| LM-80 tested | 10,000 hours |
| LED type | 2835 long life |
| Closet Rated | Suitable for use within Closet storage spaces when installed per NEC requirements. |

4 inch style

Panel Style LED Wafers – Low Voltage Dimmable



[AL-CBOX4 ceiling mount Options](#)



AL-CBOX4 mounting hanger bar

16 to 24 inch joist spacing
Supports up to 20 lbs
Flat or vertical truss attachment
See **AL-CBOX4.pdf**

Color Temperature options

Available in 6 different color temperatures, these fixtures can be operated as a fixed color, or tunable white fixture. Any 660 mA current source can be used. Up to 5 fixtures can be wired in series to share one driver. That driver can be located up to 150 ft from the LEDs – since constant current eliminates the concerns about voltage drop. This 6 watt device can be installed as either tunable white or fixed color. Connecting both inputs in parallel will generate the 3850K color. .

| Model | 2700 | 3000 | 3500 | 3850 | 4000 | 5000 |
|-------|--------------------------|------|------|------|------|------|
| CCT | X -----> X X -----> X | | | | | |
| Fixed | | X | X | | * | |

X= Stock, * = on request

Ordering part numbers

| Model | Voltage | Current | CCT | CRI | Lumens | Note |
|---------------------|---------|---------|----------------------------|--------|--------|----------------------|
| P023R6-660mA-2700K | 7.5-9 | 0-660mA | 2700K | 80, 90 | 540 | warm side of 27/50K |
| P023R6-660mA-3000K | 7.5-9 | 0-660mA | 3000K | 80, 90 | 540 | |
| P023R6-660mA-3500K | 7.5-9 | 0-660mA | 3500K | 90 | 540 | |
| P023R6-660mA-3850K | 7.5-9 | 0-660mA | 3850K | 80, 90 | 540 | 27/50K combined |
| P023R6-660mA-4000K | 7.5-9 | 0-660mA | 4000K | 90 | 540 | |
| P023R6-660mA-5000K | 7.5-9 | 0-660mA | 5000K | 80, 90 | 540 | cool side of 27/50K |
| P023R6-660mA-27/50K | 7.5-9 | 0-660mA | Tunable 2700 to 5000 | 80, 90 | 540 | Tunable White |

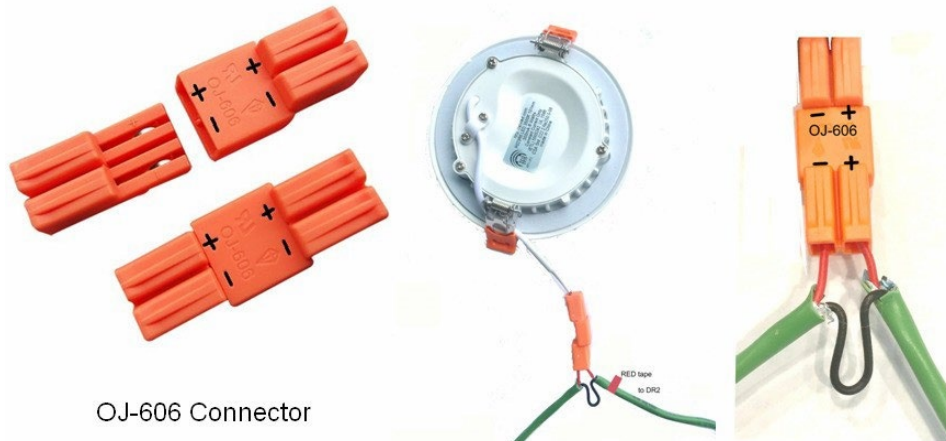
360 mA operation

This 6 watt LED can be installed for 360 mA operation for use with 360 or 300 mA drivers. The total power is 6 watts at 3850 CCT. The voltage increases from 9v to 18v in this method.

Non Color tuning Wiring example

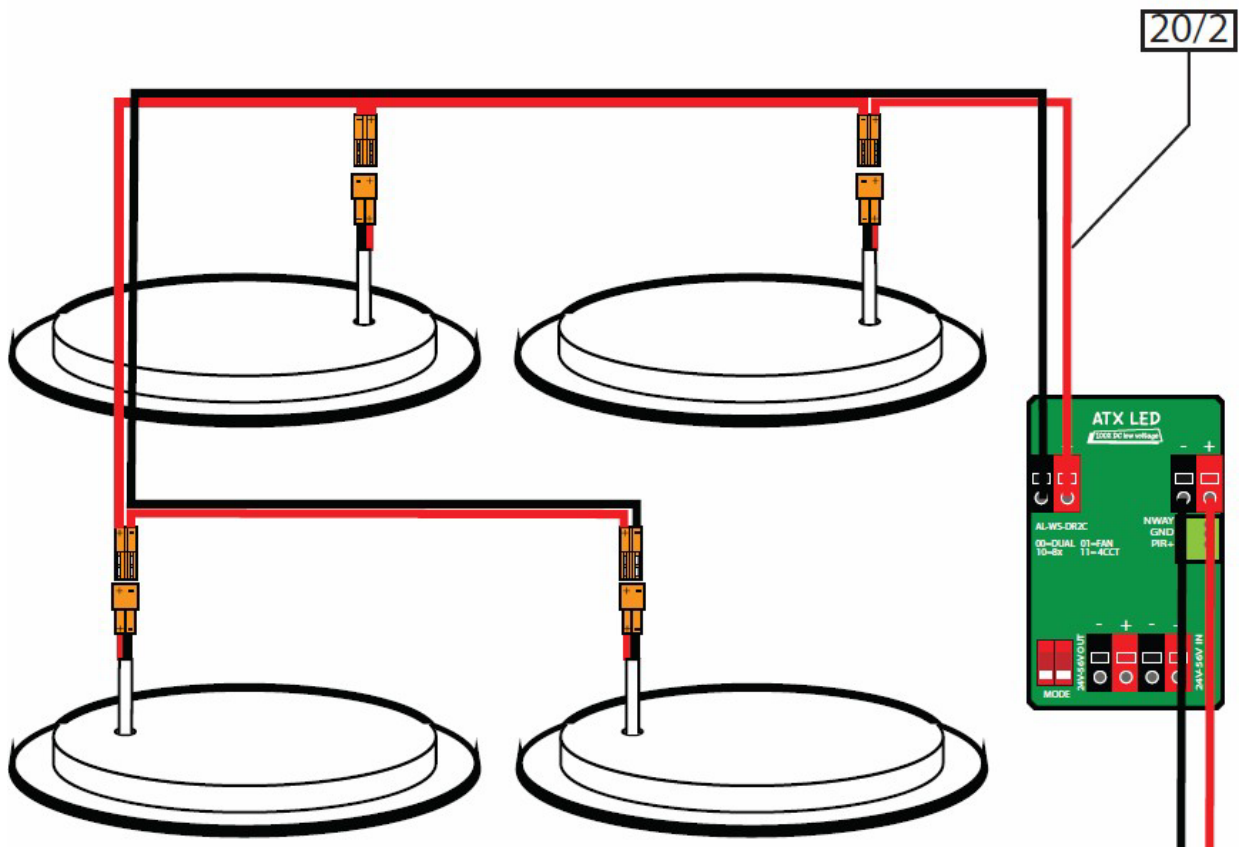
Fixed Color Temperature Wiring, OJ-606 type 2 pin connector
AWG 18 or 20, Note the series wiring method. + (plus) on the OJ-606 goes to the Red terminal on the AL-WS-DR2, - (minus) goes to the next LED.

LED series Wiring



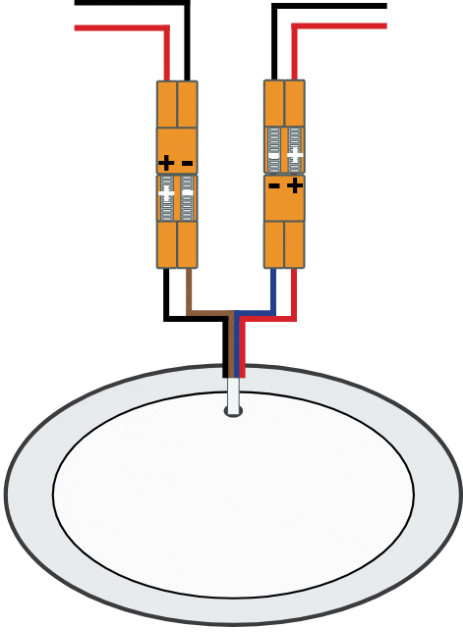
OJ-606 Connector

Right to DR2 switch
Left to next LED

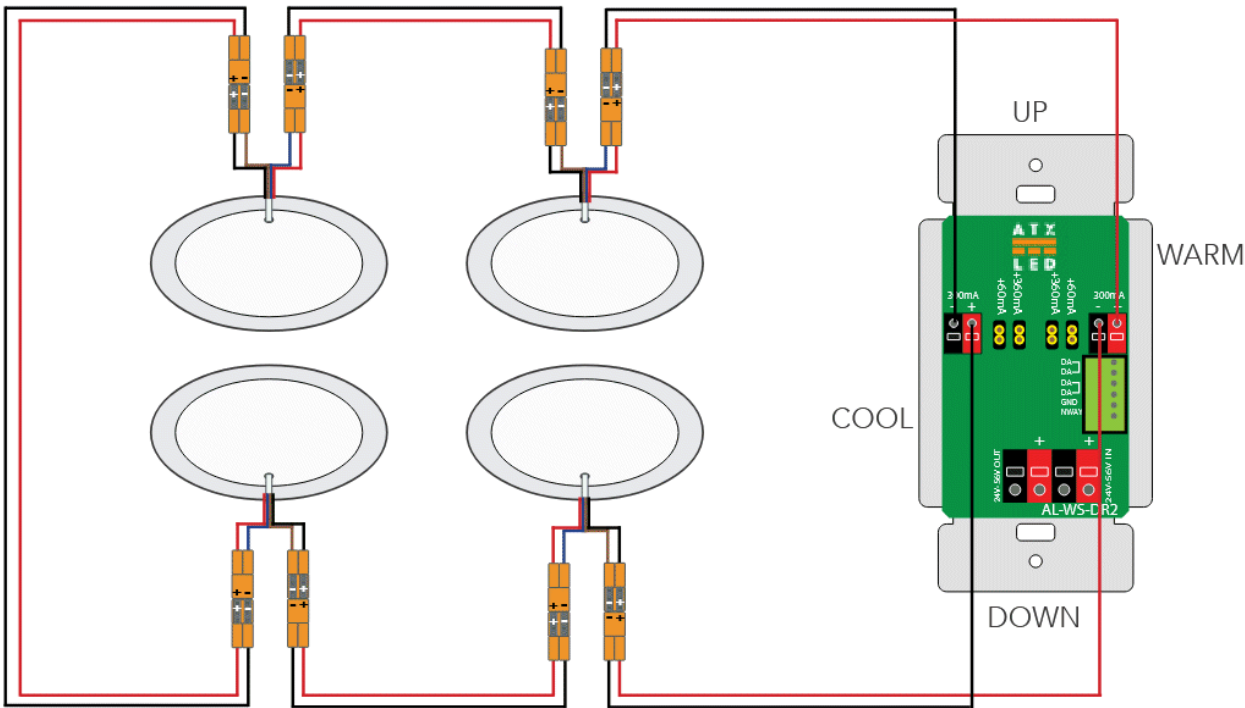


Tunable White (CCT) Wiring

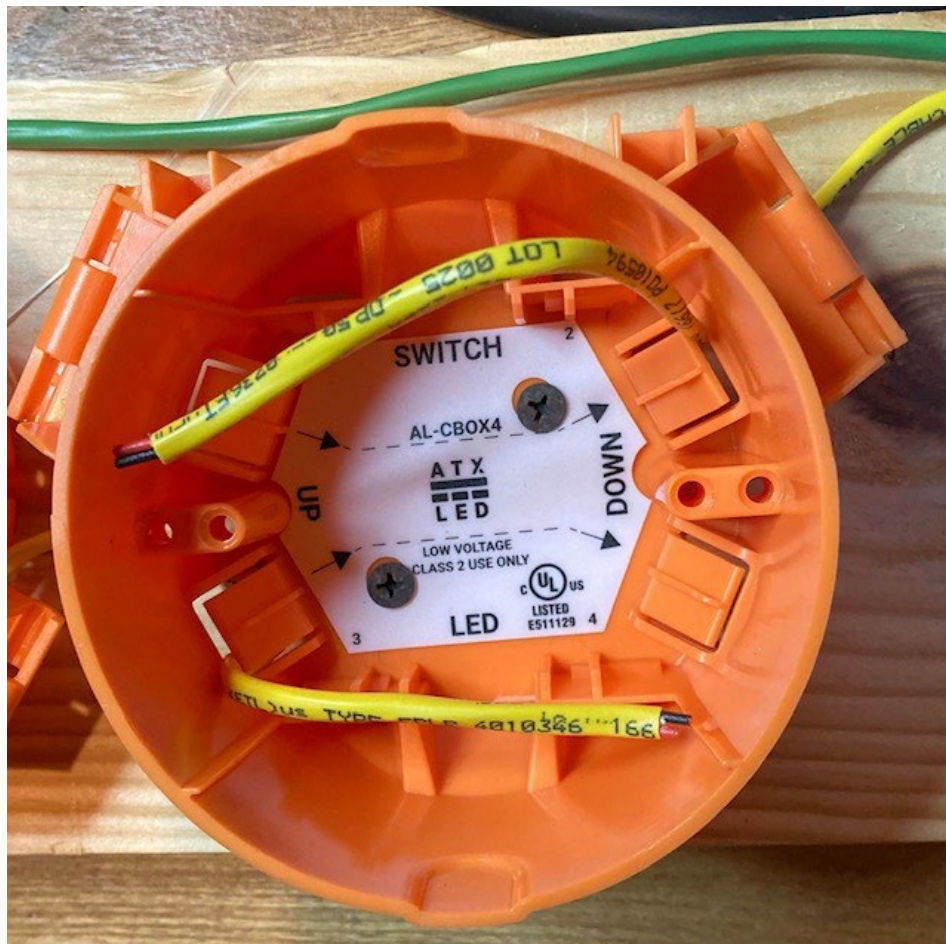
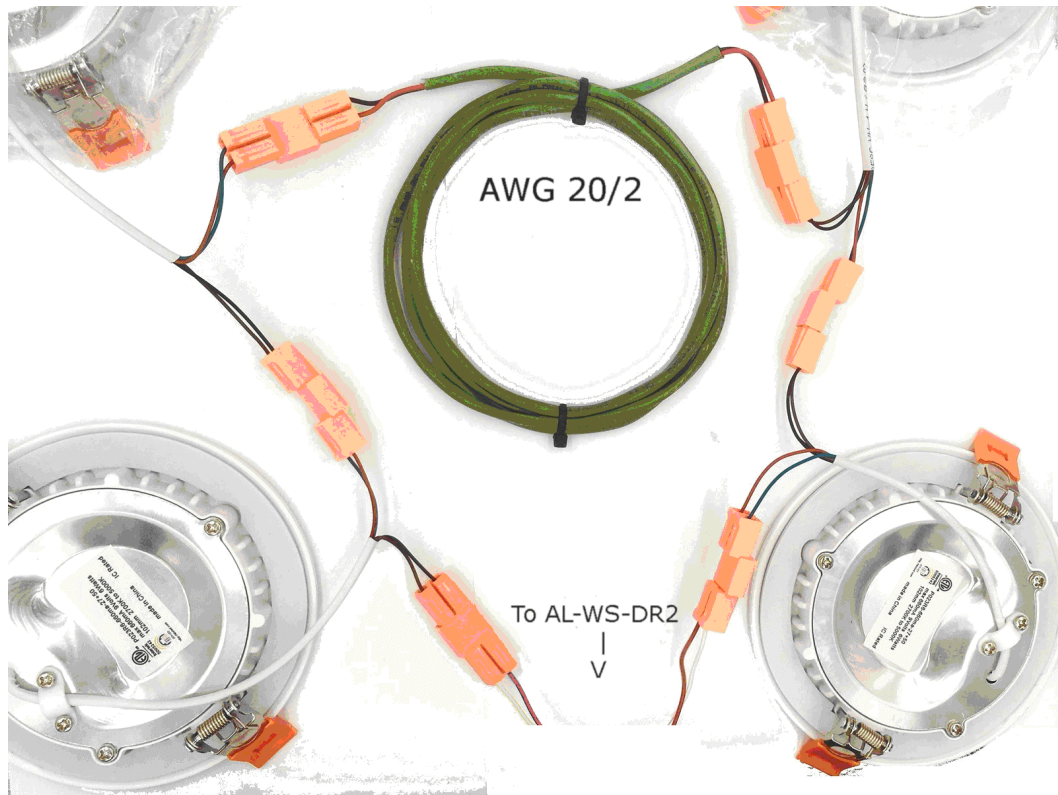
Tunable White series LED wiring is implemented with just one pair of awg20 OJ-606 type connector AWG 18 or 20 2 pin

| | | | |
|---|------------|-----------------------------|-------------------------------------|
|  | LED Color | Wire to DR2 Red Terminal | Wire to DR2 Black or White Terminal |
| | 2700K Warm | Red Up OJ-606 Female + | Red Down OJ-606 Male + |
| | 5000K Cool | Black Down OJ-606 Male - | Black Up OJ-606 Female - |

Series



Physical examples



Recommended DC Drivers with dimming*

N = # of LEDs

| DC drivers * | Fixed Color | Tunable White | WiFi | DALI |
|--------------|-------------|---------------|------|------|
| AL-WS-DR1 | 5 | | | |
| AL-WS-DR2 | 10 | 5 | | X |
| AL-WS-DR2C | 10 | 5 | | |
| AL-WS-DR2W | 10 | 5 | X | |
| AL-WS-Bath | 5 | | | |
| LDD-600H | 5 | | | |
| LDD-600HDA | 5 | | | X |

*51 volt DC input ** no dimming function

Examples of AC Drivers with Dimming

N = # of LEDs

| AC drivers from 120 / 240 vac to DC currents | Fixed Color | Tunable White | 0-10v | DALI | DMX |
|--|----------------|---------------|-------|------|-----|
| SMT-086-0700CM | 9 | | | X | |
| SR-2309-75CCT | | 5 | | X | |
| WP-80-40A-2AM | 8 | 4 | X | | |
| DMX-50-500-1750 | 6 | | | | X |

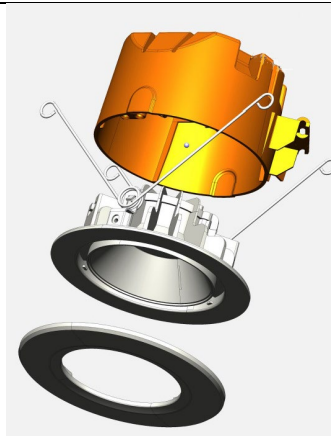
Hundreds of models of AC to DC constant current drivers exist.

Other LED Products from ATX LED

| Model | Hole in Ceiling | Drill Size | Finished Outside Diameter | Watts | Volts | Lm/W | mA | Wiring* |
|----------------|-----------------|------------|---------------------------|-------|-------|------|------|---------|
| P023R6-660 | mm | Inch | mm | | | | | |
| P023R6-660 | 102 | 4" | 120 | 6 | 9 | 90 | 660 | S |
| P023R6-48v6w | 102 | 4" | 120 | 6 | 48 | 90 | 120 | P |
| P023R11-1440 | 169 | 6 5/8" | 188 | 12 | 9 | 100 | 1440 | S |
| P023R11-48v12W | 169 | 6 5/8" | 188 | 12 | 48 | 100 | 240 | P |
| DL-98B | 68 | 2 3/4" | 88 | 6 | 9 | 130 | 600 | S |
| DL-120 | 102 | 4" | 120 | 6 | 9 | 130 | 660 | S |
| E26-A60 | Bulb | - | - | 6 | 9 | 80 | 660 | S |
| E26-A60-48v6w | Bulb | - | - | 6 | 48 | 80 | 120 | P |
| E12-C35 | Bulb | - | - | 6 | 9 | 80 | 660 | S |
| E12-C35-48v6w | Bulb | - | - | 6 | 48 | 80 | 120 | P |
| P023S2 | Strip | 3/4" | | 2/ft | 45 | 120 | 660 | S |
| P023S4 | Strip | 3/4" | | 4/ft | 45 | 120 | 660 | S |
| P023S8 | Strip | 3/4" | | 8/ft | 45 | 120 | 1440 | S |

*S is serial

*P is parallel



DL-120



DL-98B



RL-E12



ATX-E26



RL-E26



MS31008