

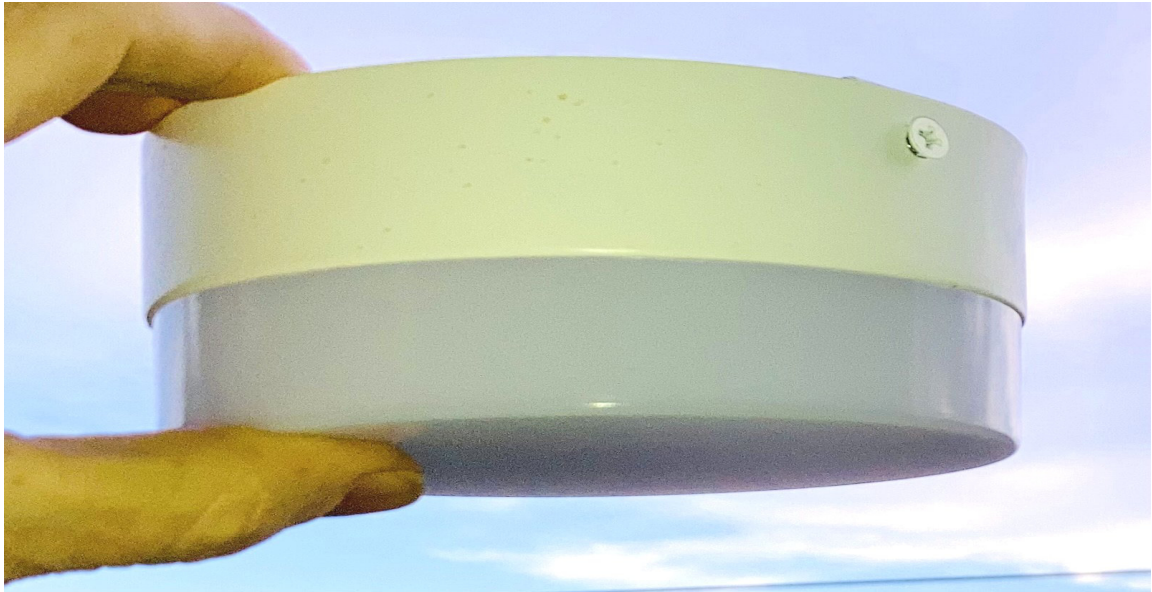
# ATX LED

**100% DC low voltage**

ATX LED Consultants Inc  
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**P023R6-F**  
Low Voltage, dimmable  
Flush Mounted LED  
Direct Current Controlled

**P023R6-F series**  
ETL 5005242 ( UL 1598 std)  
Bright LEDs, Cool Operation



## [Product Description - flush mount driverless LED fixture](#)

The F series of P023 LED fixtures are designed for fire rated ceiling projects in MDU applications – they require no large holes in the ceiling – and therefore preserve the fire protection offered by the ceiling itself.

Flush mounting hardware and 150 degree beam width provides ample light in low ceiling applications.

Very high CRI, lumen output, low heat, and no need for 120vac wire all insure the highest quality of light – critical in small rooms.

## Mechanical and Lighting specifications

|                       |  |
|-----------------------|--|
| Case Color            | Pure white – other colors on request   |
| Diameter              | 120mm 6 watt (5 inch)<br>120mm 8 watt (5 inch)<br>180mm 18 watt (7 inch)   |
| Height                | 57 mm (2.25 inches)  |
| Dimming Range         | 0 to 100%, flicker free, no artifacts  |
| CRI                   | CRI 90+  |
| Lm/watt               | Up to 120  |
| Color Temperature     | 6 fixed options available plus tunable white   |
| Operating Temperature | Ceiling mount, -20 to 50 Deg C non condensing  |
| IP Rating             | Suitable for Damp environments   |
| IC Rated              | Flush Mount - no contact with insulation   |
| LM-80 rated           | 10,000 hours   |
| LED type              | 2835 long life   |
| Closet Rated          | Suitable for use within Closet storage spaces when installed per NEC requirements. See <a href="https://atxled.com/Closets">https://atxled.com/Closets</a> for more info |
| Motion Sensor         | See P023R6-M for motion sensing  |
| Other Options         | Recessed ( DL-120)<br>Gimbal ( DL-125)<br>Surface ( P023R6-S)<br>Wafer ( P023R6)<br>Wet Rated ( P023R6-W)  |
| ETL listed            | Yes  |

## Electrical specifications CV version

|  |   |                        |                        |
|--|---|------------------------|------------------------|
| Dimming Range  | 0 to 100%, flicker free, no artifacts   |                        |                        |
| Model  | P023R18-F-51v <b>18w</b>  | P023R6-F-51v <b>6w</b> | P023R8-F-51v <b>8w</b> |
| Watts  | 18<br>( can be 6, 12 or 18 watts )  | 6                      | 8                      |
| Lumens estimated<br>( IES files expected August 2023 ) | 1950  | 650                    | 900                    |
| Operating mode   | Voltage Controlled Dimming  |                        |                        |
| Operating Voltage @ full Brightness                    | 51 volts  |                        |                        |
| Maximum allowed voltage                                | 54 volts  |                        |                        |
| Internal Current Limiter                               | 350 mA  | 115 mA                 | 155 mA                 |
| Wiring Method  | Parallel  |                        |                        |
| Dimming methods  | Value ( On/Off switches)<br>Local ( 5% to 100% with AL-WS-DR1 )<br>Signature ( perfect dimming with AL-WS-DR2 ) |                        |                        |
| Color Temp   | 3000, 3500  |                        |                        |

| Model                         | Voltage | Current   | CCT   | CRI | Watts       |
|-------------------------------|---------|-----------|-------|-----|-------------|
| <b>P023R18-F-51v18w-XX00K</b> | 45-51v  | 0-350mA   | 3000K | 90+ | 6w          |
|                               |         |           | 3500K |     | 12w         |
|                               |         |           | 4000K |     | 18w<br>@51v |
| <b>P023R8-F-51v8w-XX00K</b>   | 45-51v  | 0-155 mA* | 3000K | 90+ | 8w          |
|                               |         |           | 3500K |     | @51v        |
|                               |         |           | 4000K |     |             |
| <b>P023R6-F-51v6w-XX00K</b>   | 45-51v  | 0-115 mA* | 3000K | 90+ | 6w          |
|                               |         |           | 3500K |     | @51v        |
|                               |         |           | 4000K |     |             |

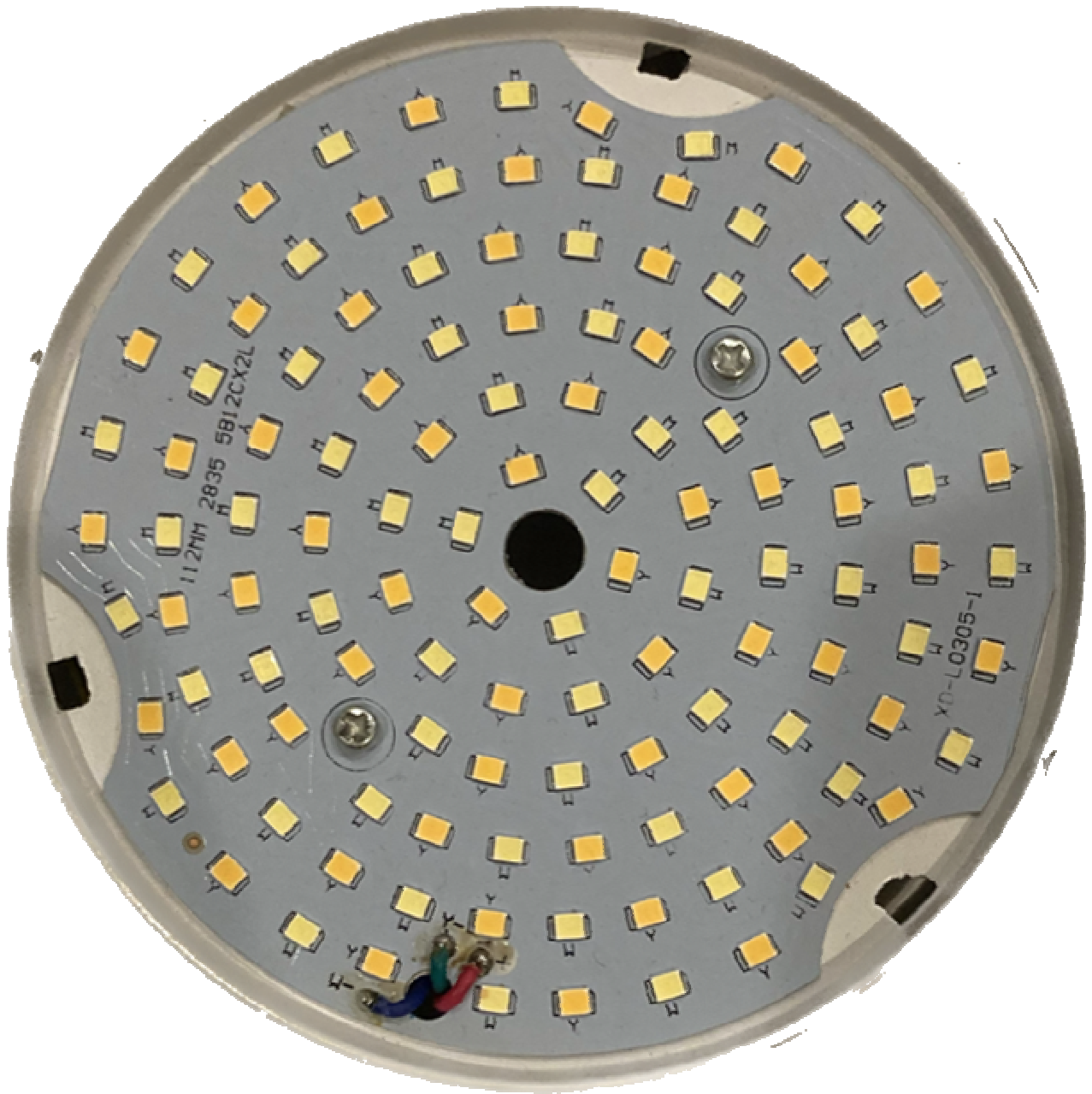
## Electrical specifications CC version

|  |  |                  |                    |                   |
|--|--|------------------|--------------------|-------------------|
| Dimming Range  | 0 to 100%, flicker free, no artifacts                |                  |                    |                   |
| Model  | P023R18-F-27/5000K                                   |                  | P023R8-F-27/5000K  |                   |
| Diameter   | 7 inch ( 180 mm)                                     |                  | 5 inches ( 120 mm) |                   |
| Watts  | 12 w   | 20 w             | 5.5 w              | 8 w               |
| Lumens estimated<br>( IES files expected August 2023 ) | 1300   | 2200             | 650                | 1200              |
| Operating Voltage @ full Brightness                    | 16v<br>@ 660 mA                                      | 17v<br>@ 1200 mA | 8v<br>@ 660 mA     | 8.3v<br>@ 1000 mA |
| Operating mode   | Current Controlled Dimming<br>Signature product line |                  |                    |                   |
| Wiring Method  | Series   |                  |                    |                   |
| Dimming methods  | AL-WS-DR2<br>AL-PSE-DR8                              |                  |                    |                   |
| Color Temp   | 3000, 3500   |                  |                    |                   |
| Reverse Polarity indicator                             | Red LED  |                  |                    |                   |

| Model                        | Voltage | Current  | CCT                 | CRI | Lumens           | Watts Max       |
|------------------------------|---------|----------|---------------------|-----|------------------|-----------------|
| <b>P023R18-F-mA-27/5000K</b> | 15-16   | 0-1200mA | 2700K<br> <br>5000K | 90+ | 1500<br>@ 1200mA | 20w<br>@1200 mA |
| <b>P023R8-F-mA-XX00K</b>     | 7.5-8.5 | 0-1200mA | 2700K<br> <br>5000K | 90+ | 1000             | 8w<br>@1000 mA  |
| <b>P023R6-F-mA-XX00K</b>     | 7.5-8.5 | 0-660mA  | 2700K<br> <br>5000K | 90+ | 600              | 5w<br>@660 mA   |

## Light Engine - 120 LED chips for the most light

shown without diffuser

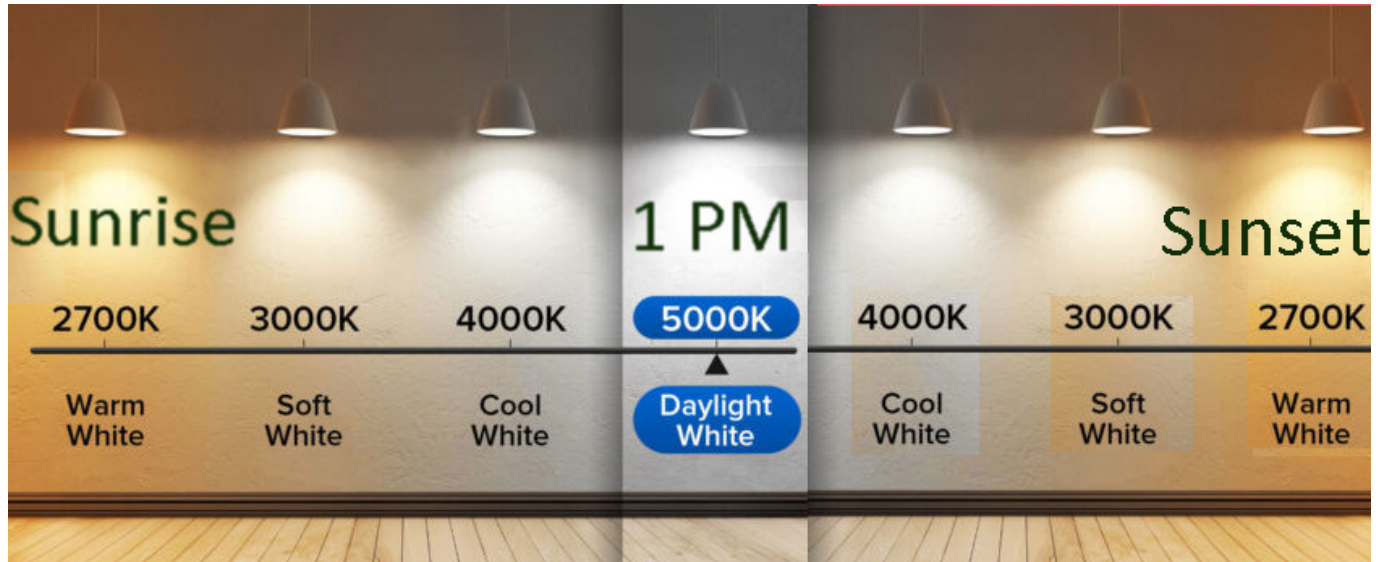




**Flush Mounted – no penetrations**

**( except the wire )**

## Color Temperature options



## Optional Time of Day lighting rhythm

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. .

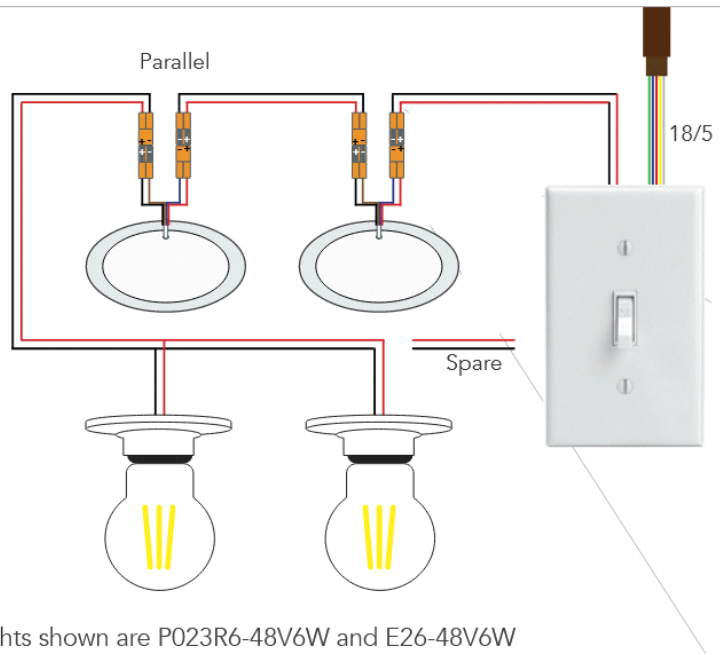
X= Stock, \* = on request, X<sup>2</sup> = wiring option of CCT

| Model | 2700           | 3000 | 3500 | 3850           | 4000 | 5000           |
|-------|----------------|------|------|----------------|------|----------------|
| CCT   | X -----> X     |      |      |                |      |                |
| Fixed | X <sup>2</sup> | X    | X    | X <sup>2</sup> | *    | X <sup>2</sup> |

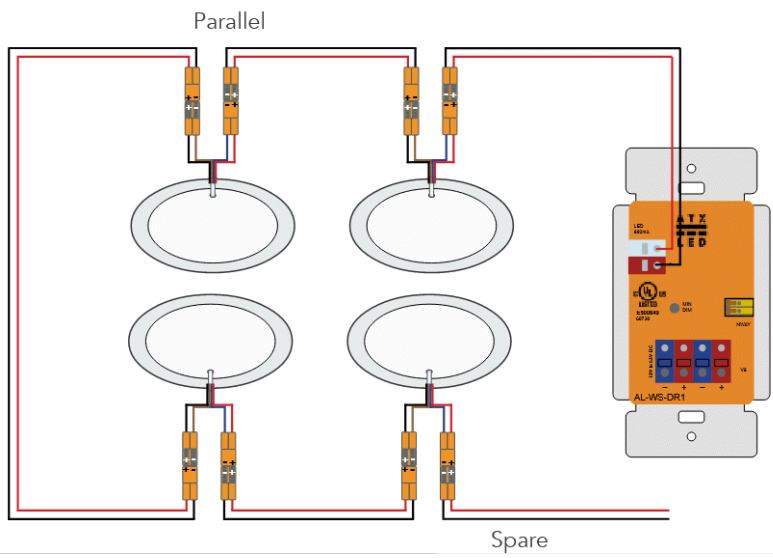
### 360 mA operation

|   |  |
|---|--|
| <p>The CCT model 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 8v to</p> |  |
|---|--|

16v in this method.



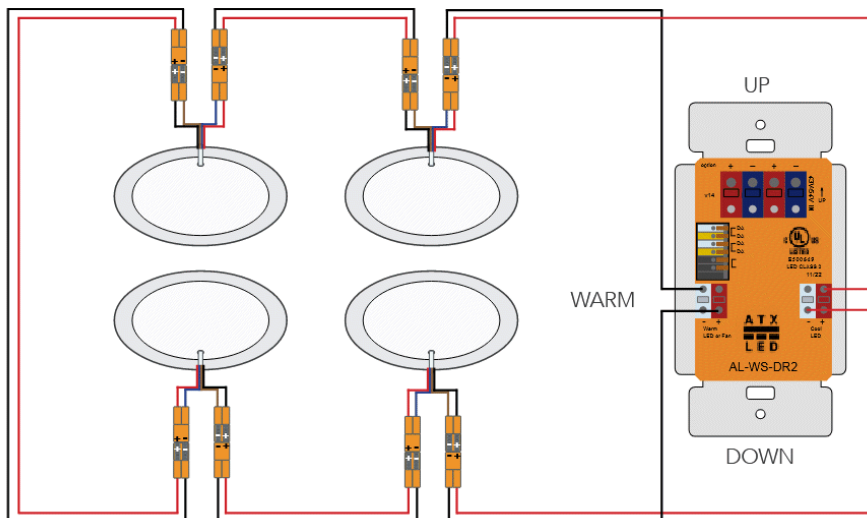
Value  
On/OFF  
parallel



Local /  
Upgrade  
Dimming  
Series  
or  
Parallel



Series



Signature

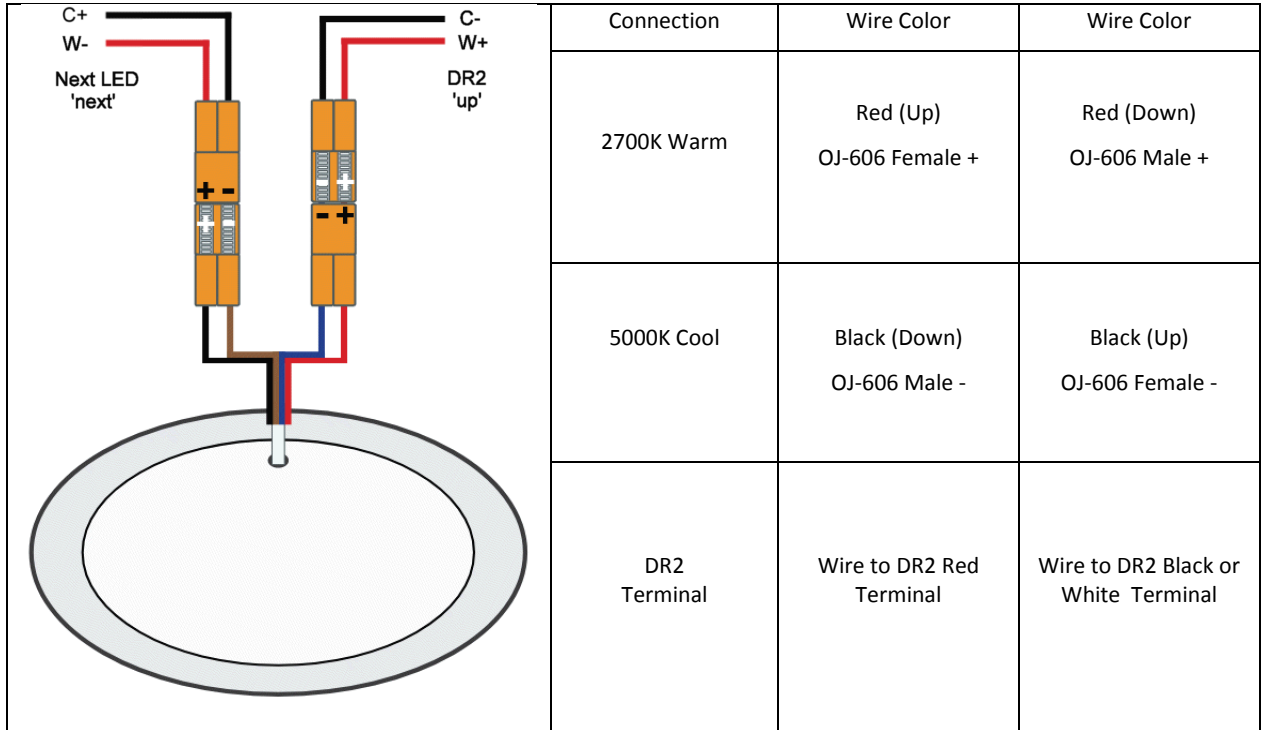
Perfect  
Dimming

660 mA

Series

## Tunable White ( CCT ) Wiring detail

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



## Recommended DC 660 mA Drivers with dimming\*

N = # of P023R6-F

| DC drivers * | Fixed Color | Tunable White | WiFi       | DALI       |
|--------------|-------------|---------------|------------|------------|
| AL-WS-DR1    | 5           |               |            |            |
| AL-WS-DR1P/D | 5           |               |            |            |
| AL-WS-DR2    | 10          | 5             |            | <b>Yes</b> |
| AL-WS-DR2C   | 10          | 5             |            |            |
| AL-WS-DR2W   | 10          | 5             | <b>Yes</b> |            |
| LDD-600H     | 5           |               |            |            |
| LDD-600HDA   | 5           |               |            | <b>Yes</b> |

\*51 volt DC input to the AL-WS-DRx

## Examples of AC Drivers with Dimming

**N = # of current mode LEDs**

| AC drivers from 120 / 240 vac to DC currents | Fixed Color | Tunable White | 0-10v    | DALI     | DMX      |
|--|-------------|---------------|----------|----------|----------|
| SRP-2305-75                                  | <b>10</b>   |               |          | <b>X</b> |          |
| SRP-2309-75CCT                               |             | <b>5</b>      |          | <b>X</b> |          |
| WP-80-40A-2AM                                | <b>8</b>    | <b>4</b>      | <b>X</b> |          |          |
| DP4-EC / DP5-E                               | <b>16</b>   | <b>5</b>      |          |          | <b>X</b> |

## Examples of AC Drivers without Dimming

**N = # of 51v6w LEDs**

| AC drivers from 120 / 240 vac to DC currents | Fixed Color | Tunable White | 0-10v | DALI | DMX |
|--|-------------|---------------|-------|------|-----|
| AL-PS-51v96w                                 | <b>16</b>   |               |       |      |     |

## Other LED Products from ATX LED

