

Radiar DP5

5 Channel PWM Controller

Product Overview

Radiar DP5 is a 5-channel constant voltage dimming module. It provides excellent color adjustment performance and is based on manual input/automated control to adjust LED light color and brightness.

It can be monitored and controlled through mobile devices or cloud platforms and supports up to 11 PWM5 profiles. The Lumos Controls ecosystem comprises controllers, sensors, switches, modules, drivers, gateways, and analytical dashboards.

It is listed by the Design Lights Consortium (DLC), qualifying it for energy conservation incentive programs and rebates by utility companies

Specifications

Electrical

| Specifications | Value |
|--------------------|----------|
| Input voltage | 12-48VDC |
| Input current | <8A |
| Maximum load power | 189W |
| Power loss | <3W |
| Output voltage | 12-48VDC |
| Output current | <5A |

Features

- Supports 11 channel configurations for different applications
- Flexibility to choose channel configuration on the go
- BLE 5.0 based non-flooding intelligent communication
- Overload protection
- Zero downtime Over-the-Air (OTA) firmware updates

Bluetooth

| Specifications | Value |
|--------------------|--------------|
| Frequency range | 2400-2483MHz |
| RF transmit power | 8dBm |
| RF receiving power | -85dBm |

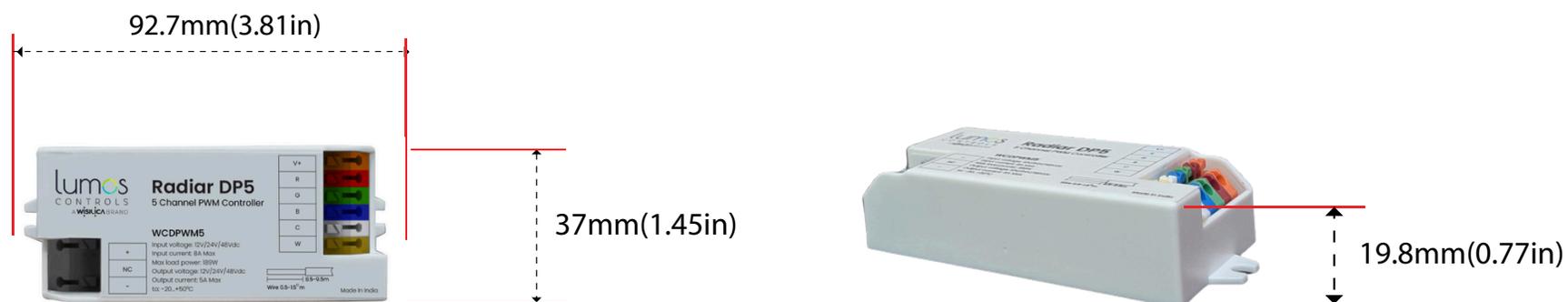
Environmental

| Specifications | Value |
|---------------------|----------------------------|
| Ambient temperature | -20 to 50°C (-4 to 122°F) |
| Storage temperature | -40 to 80°C (-40 to 176°F) |
| Relative humidity | 5% to 85% |

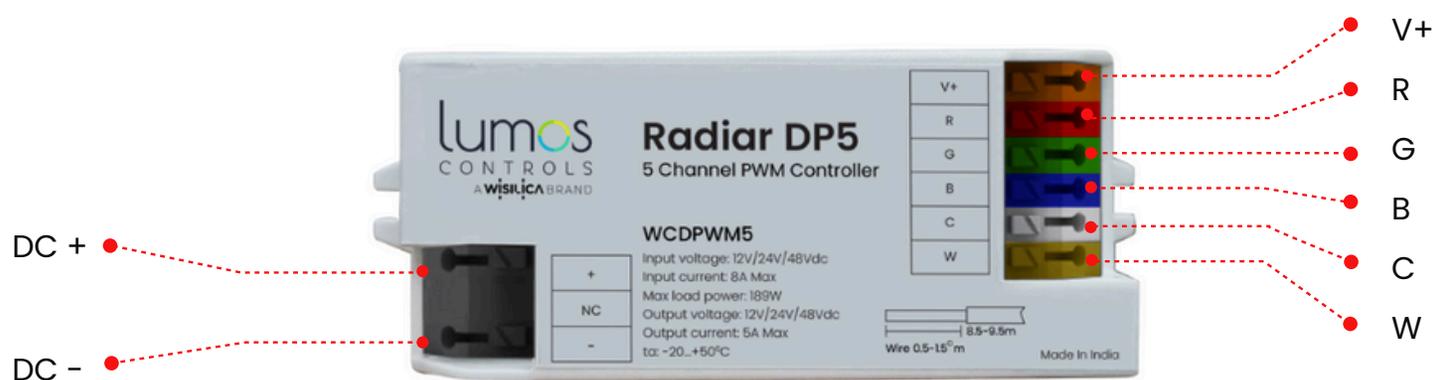
Mechanical

| Specifications | Value |
|----------------|----------------------------------------------|
| Dimension | 92.7 X 37 X 19.8mm (3.81 x 1.45 x 0.77in) |

Product Dimensions



Connector Description

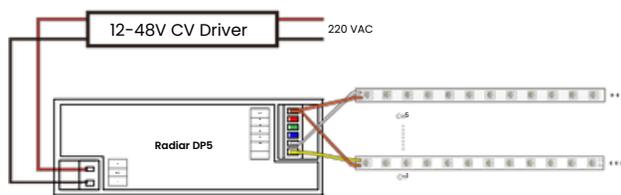


Supported PWM5 profiles

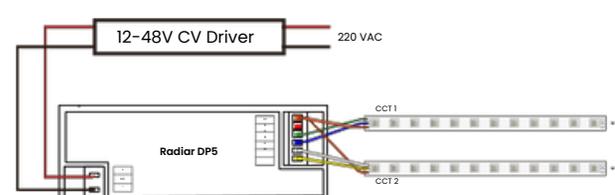
| | | |
|--------------------|---------------|-------------|
| 1 dimming channel | 1 CCT channel | RGB |
| 2 dimming channels | 2 CCT channel | RGB and W |
| 3 dimming channels | | RGB and CCT |
| 4 dimming channels | | RGB or CCT |
| 5 dimming channels | | |

Recommended load power table for different flexible light strips

| Flexible LED strip | Max Load rating @12VDC | Max Load rating @24VDC | Max Load rating @48VDC |
|-------------------------|---------------------------------|-----------------------------------|-----------------------------------|
| Single channel flex | 90W Total | 180W Total | 300W Total |
| 2 to 5 dimming channels | 90W Total(Upto 60W per channel) | 180W Total(Upto 120W per channel) | 300W Total(Upto 200W per channel) |
| Single CCT strip | 90W Total | 180W Total | 300W Total |
| 2 CCT strips | 90W Total(Upto 60W per channel) | 180W Total(Upto 120W per channel) | 300W Total(Upto 200W per channel) |
| RGB flex | 90W Total(Upto 60W per channel) | 180W Total(Upto 120W per channel) | 300W Total(Upto 200W per channel) |
| RGBW flex | 90W Total(Upto 60W per channel) | 180W Total(Upto 120W per channel) | 300W Total(Upto 200W per channel) |
| RGB-CCT flex | 90W Total(Upto 60W per channel) | 180W Total(Upto 120W per channel) | 300W Total(Upto 200W per channel) |

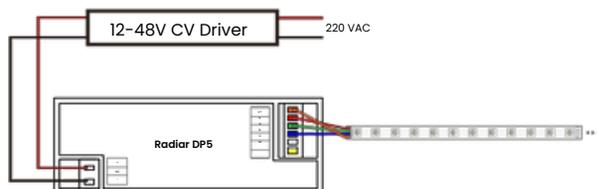


For up to 5 dimming channels

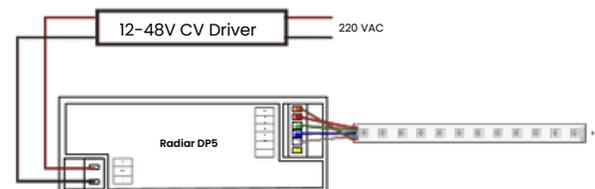


For tunable white control

Wiring

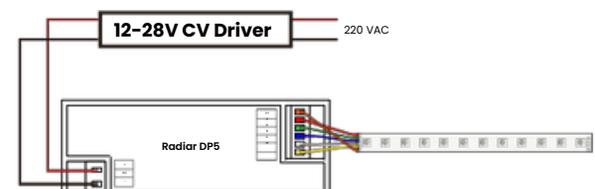


For RGB control



For RGBW control

For RGB and CCT/
RGB or CCT control



Wiring type and cross section

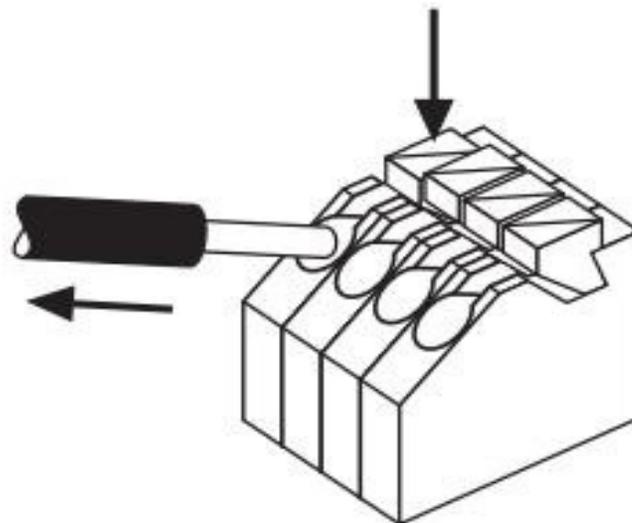
The wire can be a copper stranded wire with a rubber sheath, or a cross-section of 0.75–1.5 mm² the solid line. stripped from the wire 8.5–9.5mm Insulation layer to ensure perfect contact with the plug-in terminal. Use only one wire per patch terminal.

How to pull out the wire

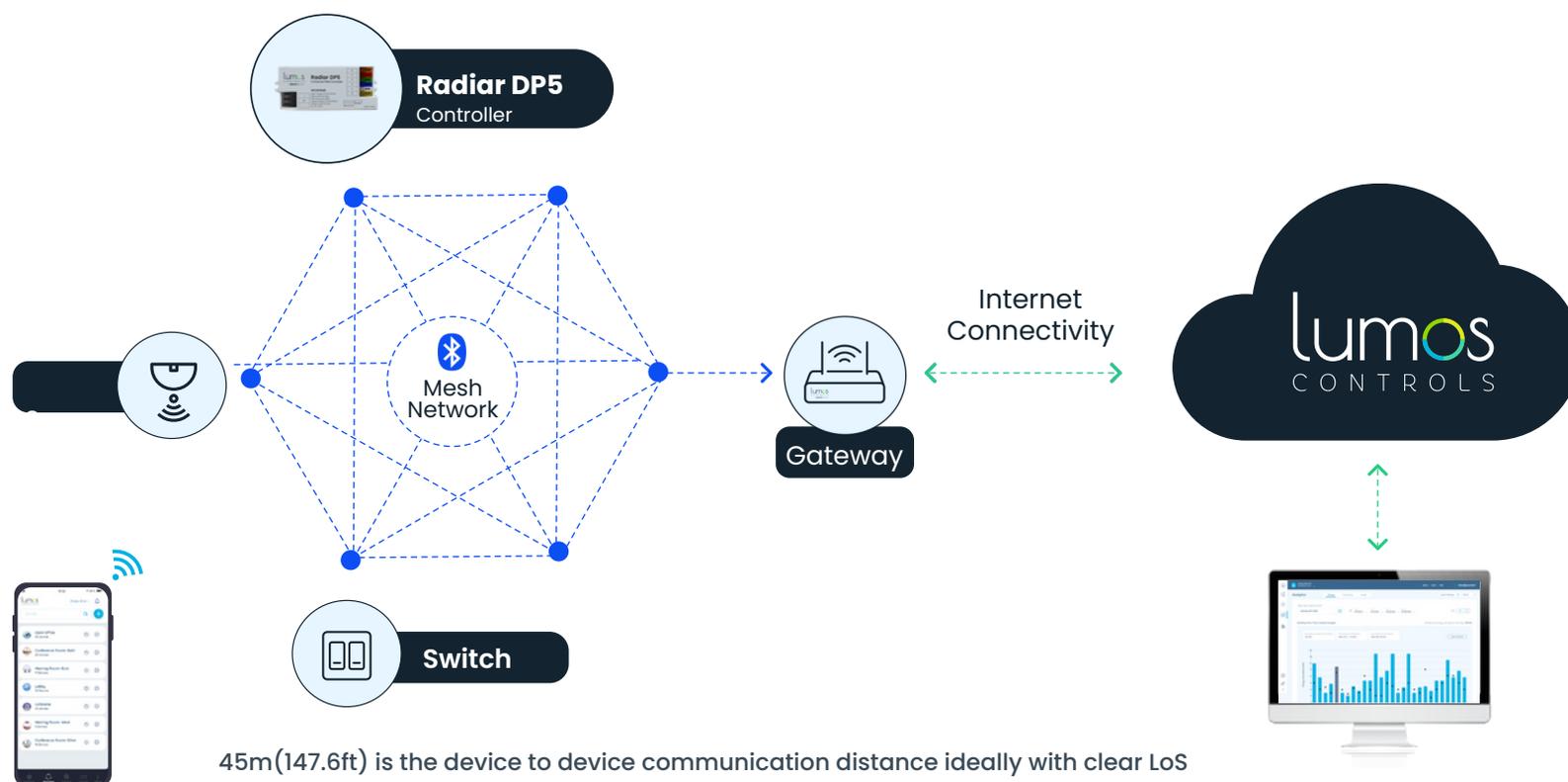
Press down the “push button” and remove the cable from front.

Wiring guide

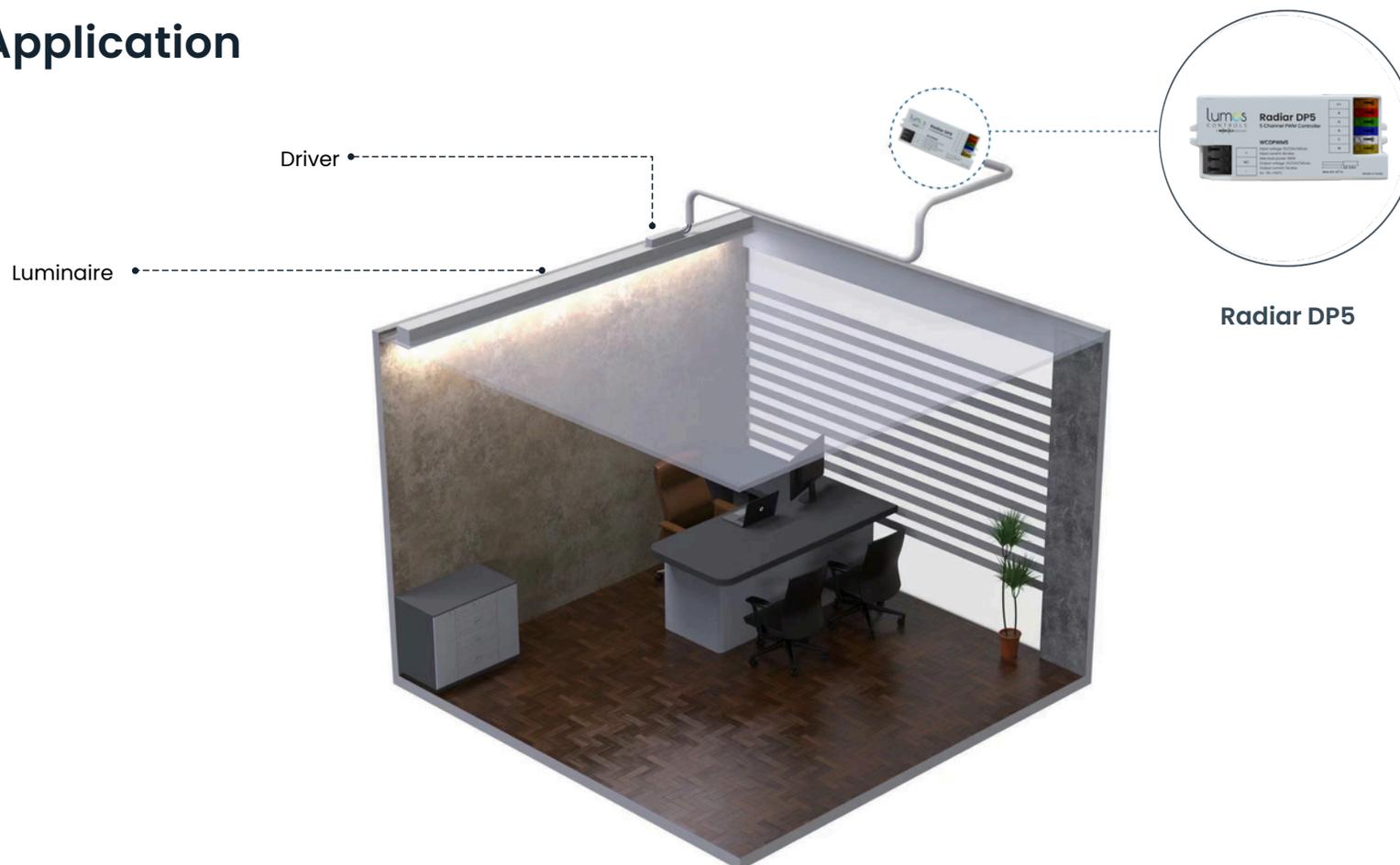
- All wiring must be as short as possible to ensure good EMI
- Secondary switching is not allowed
- Incorrect wiring can destroy LED module



Smart Ecosystem



Application



Ordering Information

| Product Code | Product Name | Product Description | Communication | Voltage Rating |
|--------------|--------------|--------------------------|---------------|----------------|
| WCDPWM5 | Radiar DP5 | 5 Channel PWM Controller | BLE 5.0 | 12-48VDC |

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