

PLCC 2835 High Efficiency Lightbar IP20 Series Datasheet



Product description :

- 24 V constant voltage strip (SELV)
- The maximum light efficiency can reach 170LM/W

Features and benefits :

- Small color tolerance (Macadam 3-5), Ra > 80/90
- Color temperature 2700, 3000, 4000 and 5700 K
- Self-adhesive 3M tape at the backside for simple mounting on different surfaces
- 3-5-year guarantee

Typical Applications :

- Linear lighting
- Architectural Lighting

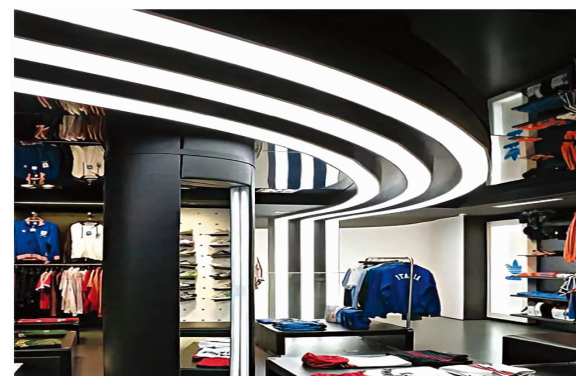
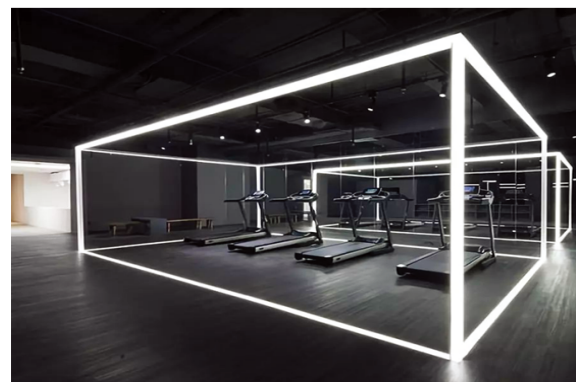


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General Information

Ordering Code Format

6 LBR1 xx J E0 S xxx xx
X1 X2 X3 X4 X5 X6 X7 X8

| X1 Item | X2 Series | X3 Emitting Color | X4 Driver | X5 Length | | | | |
|------------|--------------|----------------------|--------------|------------------------------------------------------------------------------------|---|--------|----|------|
| 6 | Module | LBR1 | FPC | CW Cool White NW Neutral White WW Warm White M6 CW+WW | J | CV 24V | E0 | 5.0M |

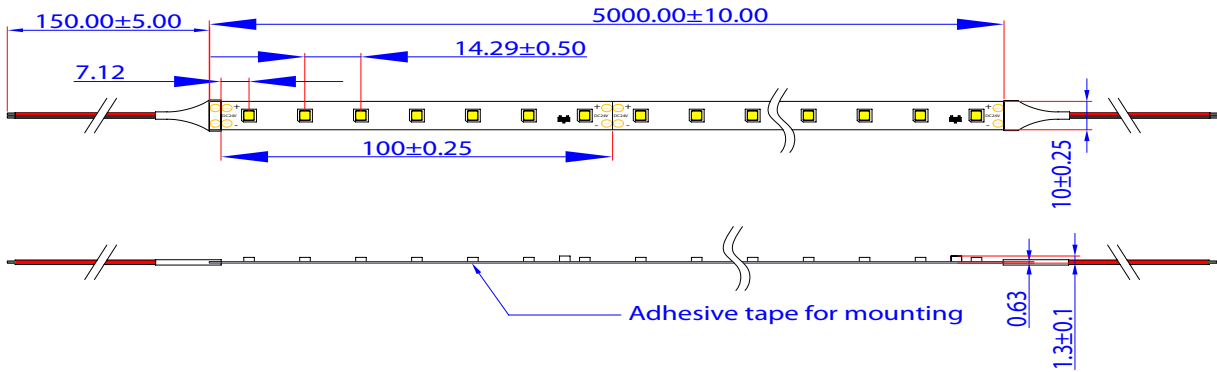
| X6 Emitter | X7 Number of LEDs(M) | X8 Serial No. | |
|---------------|-------------------------|-----------------------------------------------------|-----------|
| S | 2835 | 070 70pcs 080 80pcs 140 140pcs | xx - |

Technical data

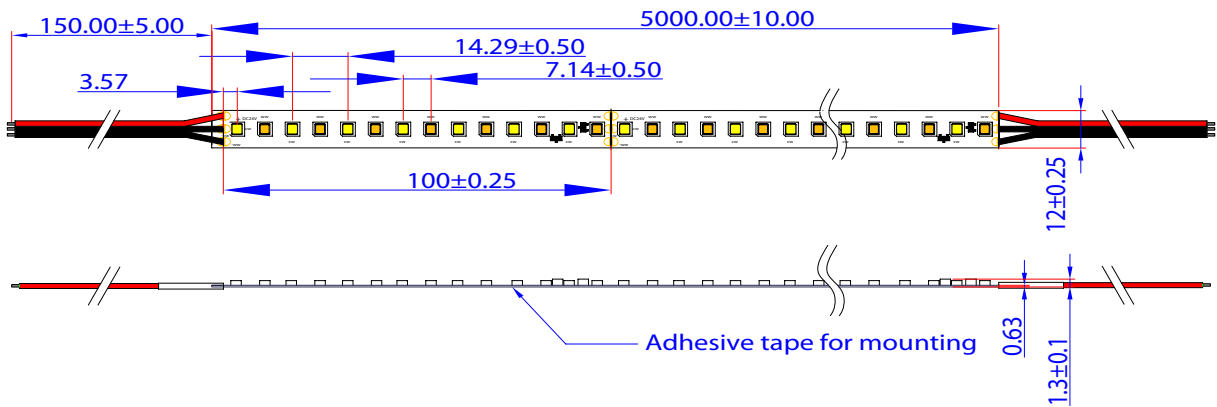
| Parameter | Value | Units |
|---------------------------|--------------|-------|
| Beam characteristic | 120 | °C |
| Ambient temperature range | -25~ +45 | °C |
| Tp rated | 65 | °C |
| Tc | 75 | °C |
| Type of protection | IP20 | |
| Color Temperature | 2700 | K |
| | 3000 | K |
| | 4000 | K |
| | 5700 | K |
| Number of connection | 5 | M |
| Risk group(EN62778) | 1 | |
| Classification acc. to | IEC62031 | |
| | IEC62778 | |
| | IEC62717 | |
| | IEC61000-4-2 | |

Product Dimensions

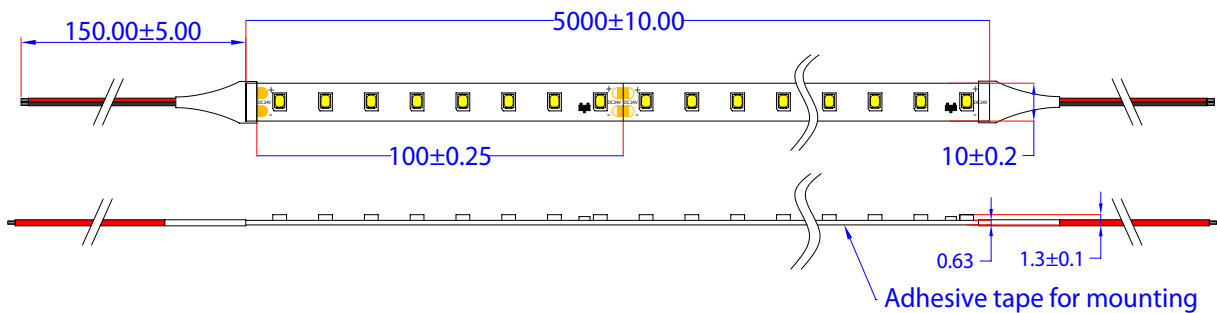
2835-70LEDs/M Series Dimensions (CV 24V IP20)



2835-140LEDs/M Series Dimensions (CV 24V IP20)



2835-80LED/M Series Dimensions (CV 24V IP20)



Notes:

1. All dimensions are in millimeters.
2. Tolerance is ± 0.20 mm

Electric-Optical Characteristics

2835-24V-70LEDS/M

| Order code | CCT (K/) | Voltage (CV) | Luminous flux TP25°C | Luminous flux TP65°C | Efficacy TP25°C | Efficacy TP65°C | Power (W/M) | Ra |
|------------------|----------|--------------|----------------------|----------------------|-----------------|-----------------|-------------|-----|
| 6LBR1CWJE0S07001 | 5700 | 24 | 2160 lm/M | 1944 lm/M | 150 lm/W | 135 lm/W | 14.4 | >80 |
| 6LBR1NWJE0S07001 | 4000 | 24 | 2160 lm/M | 1944 lm/M | 150 lm/W | 135 lm/W | 14.4 | >80 |
| 6LBR1WWJE0S07001 | 3000 | 24 | 2015 lm/M | 1814 lm/M | 140 lm/W | 126 lm/W | 14.4 | >80 |
| | 2700 | 24 | 1915 lm/M | 1723 lm/M | 133 lm/W | 120 lm/W | 14.4 | >80 |
| 6LBR1CWJE0S07010 | 5700 | 24 | 1800 lm/M | 1620 lm/M | 125 lm/W | 113 lm/W | 14.4 | >90 |
| 6LBR1NWJE0S07010 | 4000 | 24 | 1800 lm/M | 1620 lm/M | 125 lm/W | 113 lm/W | 14.4 | >90 |
| 6LBR1WWJE0S07010 | 3000 | 24 | 1655 lm/M | 1490 lm/M | 115 lm/W | 103 lm/W | 14.4 | >90 |
| | 2700 | 24 | 1572 lm/M | 1415 lm/M | 109 lm/W | 98 lm/W | 14.4 | >90 |

2835-24V-140LEDS/M Series

| Order code | CCT (K/) | Voltage (CV) | Luminous flux TP25°C | Luminous flux TP65°C | Efficacy TP25°C | Efficacy TP65°C | Power (W/M) | Ra |
|------------------|----------|--------------|----------------------|----------------------|-----------------|-----------------|-------------|-----|
| 6LBR1CWJE0S14001 | 5700 | 24 | 4320 lm/M | 3890 lm/M | 150 lm/W | 135 lm/W | 28.8 | >80 |
| 6LBR1NWJE0S14001 | 4000 | 24 | 4320 lm/M | 3890 lm/M | 150 lm/W | 135 lm/W | 28.8 | >80 |
| 6LBR1WWJE0S14001 | 3000 | 24 | 4030 lm/M | 3627 lm/M | 140 lm/W | 126 lm/W | 28.8 | >80 |
| | 2700 | 24 | 3600 lm/M | 3240 lm/M | 125 lm/W | 113 lm/W | 28.8 | >80 |
| 6LBR1CWJE0S14010 | 5700 | 24 | 3600 lm/M | 3240 lm/M | 125 lm/W | 113 lm/W | 28.8 | >90 |
| 6LBR1NWJE0S14010 | 4000 | 24 | 3600 lm/M | 3240 lm/M | 125 lm/W | 113 lm/W | 28.8 | >90 |
| 6LBR1WWJE0S14010 | 3000 | 24 | 3310 lm/M | 2980 lm/M | 115 lm/W | 104 lm/W | 28.8 | >90 |
| | 2700 | 24 | 3160 lm/M | 2844 lm/M | 110 lm/W | 90 lm/W | 28.8 | >90 |

2835-24V-140LEDS/M Series(CCT)

| Order code | CCT (K/) | Voltage (CV) | Luminous flux TP25°C | Luminous flux TP65°C | Efficacy TP25°C | Efficacy TP65°C | Power (W/M) | Ra |
|------------------|-----------|--------------|----------------------|----------------------|------------------|------------------|-------------|-----|
| 6LBR1M6JE0S07001 | 2700~5700 | 24 | 2160 lm/M (5700k) | 1944 lm/M (5700k) | 150 lm/W (5700k) | 135 lm/W (5700k) | 14.4 | >80 |
| | | | 2015 lm/M (3000k) | 1814 lm/M (3000k) | 140 lm/W (3000k) | 126 lm/W (3000k) | 14.4 | >80 |
| | | | 1870 lm/M (2700k) | 1683 lm/M (2700k) | 130 lm/W (2700k) | 117 lm/W (2700k) | 14.4 | >80 |
| 6LBR1M6JE0S07010 | 2700~5700 | 24 | 1800 lm/M (5700k) | 1620 lm/M (5700k) | 125 lm/W (5700k) | 113 lm/M (5700k) | 14.4 | >90 |
| | | | 1655 lm/M (3000k) | 1490 lm/M (3000k) | 115 lm/W (3000k) | 104 lm/M (3000k) | 14.4 | >90 |
| | | | 1505 lm/M (2700k) | 1355 lm/M (2700k) | 105 lm/W (2700k) | 95 lm/M (2700k) | 14.4 | >90 |

2835-24V-80LEDS/M Series

| Order code | CCT (K/) | Voltage (CV) | Luminous flux TP25°C | Luminous flux TP65°C | Efficacy TP25°C | Efficacy TP65°C | Power (W/M) | Ra |
|------------------|----------|--------------|----------------------|----------------------|-----------------|-----------------|-------------|-----|
| 6LBR1CWJE0S08001 | 5700 | 24 | 1835 lm/M | 1652 lm/M | 170 lm/W | 153 lm/W | 10.8 | >80 |
| 6LBR1NWJE0S08001 | 4000 | 24 | 1835 lm/M | 1652 lm/M | 170 lm/W | 153 lm/W | 10.8 | >80 |
| 6LBR1WWJE0S08001 | 3000 | 24 | 1730 lm/M | 1557 lm/M | 160 lm/W | 144 lm/W | 10.8 | >80 |
| | 2700 | 24 | 1510 lm/M | 1359 lm/M | 140 lm/W | 126 lm/W | 10.8 | >80 |
| 6LBR1CWJE0S08010 | 5700 | 24 | 1565 lm/M | 1410 lm/M | 145 lm/W | 130 lm/W | 10.8 | >90 |
| 6LBR1NWJE0S08010 | 4000 | 24 | 1565 lm/M | 1410 lm/M | 145 lm/W | 130 lm/W | 10.8 | >90 |
| 6LBR1WWJE0S08010 | 3000 | 24 | 1460 lm/M | 1314 lm/M | 135 lm/W | 122 lm/W | 10.8 | >90 |
| | 2700 | 24 | 1260 lm/M | 1134 lm/M | 117 lm/W | 105 lm/W | 10.8 | >90 |

Standards

Energy classification

| Type | CCT | Energy Classification |
|--------------------------|------------|-----------------------|
| 2835-24v-70LED/M Series | 2700/3000K | A+ |
| | 4000/5700K | A+ |
| 2835-24v-80LED/M Series | 2700/3000K | A+ |
| | 4000/5700K | A+ |
| 2835-24v-140LED/M Series | 2700/3000K | A+ |
| | 4000/5700K | A+ |

Thermal details

Storage and humidity

Storage temperature:-35 ... +70 °C

Operation only in non condensing environment.

Humidity during processing of the module should be between 0 to 70 %

Life time

Life-time, lumen maintenance and failure rate

1. The light output of an LED Module decreases over the life-time, this is characterized with the L value.
2. L70 means that the LED module will give 70 % of its initial luminous flux. This value is always related to the number of operation hours and therefore defines the life-time of an LED module.
3. As the L value is a statistical value and the lumen maintenance may vary over the delivered LED modules value defines the amount of modules which are below the specific L value, e.g. L70B10 means 10 % of the LED modules are below 70 % of the initial luminous flux, respectively 90 % will be above 70 % of the initial value. In addition the percentage of failed modules (fatal failure) is characterized by the C value.
4. The F value is the combination of the B and C value. That means for F degradation and complete failures are considered, e.g. L70F10 means 10 % of the LED Modules may fail or below 70% of the initial luminous flux.

Lumen maintenance for 2835-24v-70LED/M Series

| Supply Voltage | Tp temperature | L90/F10 | L90/F50 | L80/F10 | L80/F50 | L70/F10 | L70/F50 |
|----------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|
| 24V | 40 | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h |
| 24V | 45 | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h |
| 24V | 55 | >41,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h |
| 24V | 65 | >22,000 h | >50,000 h | >42,000 h | >50,000 h | >50,000 h | >50,000 h |
| 24V | 75 | >13,000 h | >22,000 h | >23,000 h | >50,000 h | >50,000 h | >50,000 h |

Lumen maintenance for 2835-24v-140LED/M Series

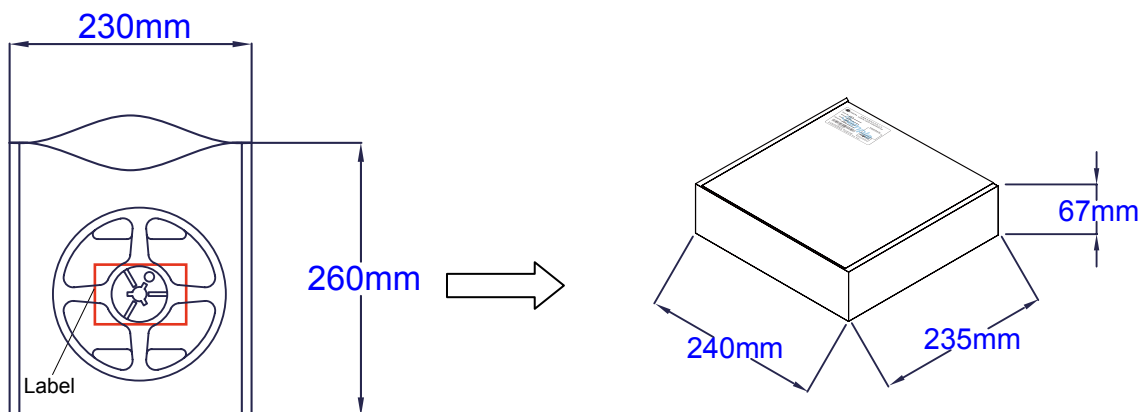
| Supply Voltage | Tp temperature | L90/F10 | L90/F50 | L80/F10 | L80/F50 | L70/F10 | L70/F50 |
|----------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|
| 24V | 40 | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h |
| 24V | 45 | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h |
| 24V | 55 | >40,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h |
| 24V | 65 | >22,000 h | >50,000 h | >40,000 h | >50,000 h | >50,000 h | >50,000 h |
| 24V | 75 | >12,000 h | >22,000 h | >23,000 h | >50,000 h | >50,000 h | >50,000 h |

Lumen maintenance for 2835-24v-80LED/M Series


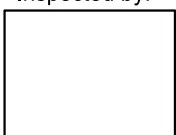
| Supply Voltage | Tp temperature | L90/F10 | L90/F50 | L80/F10 | L80/F50 | L70/F10 | L70/F50 |
|----------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|
| 24V | 40 | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h |
| 24V | 45 | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h |
| 24V | 55 | >41,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h |
| 24V | 65 | >22,000 h | >50,000 h | >40,000 h | >50,000 h | >50,000 h | >50,000 h |
| 24V | 75 | >13,000 h | >22,000 h | >23,000 h | >50000 h | >50,000 h | >50,000 h |

Product Packaging Information

| Type | Anti-static bag size(mm) | Anti-static bags/ inner box(pcs) | Inner box/carton(pcs) | Outside Carton size(mm) | GW±5% (kg) |
|--------------------------|--------------------------|----------------------------------|-----------------------|-------------------------|------------|
| 2835-24V-70LED/M Series | 260x230x10 | 4 | 10 | 488x261x364 | 6.8 |
| 2835-24V-80LED/M Series | 260x230x10 | 4 | 10 | 488x261x364 | 6.8 |
| 2835-24V-140LED/M Series | 260x230x10 | 4 | 10 | 488x261x364 | 6.8 |

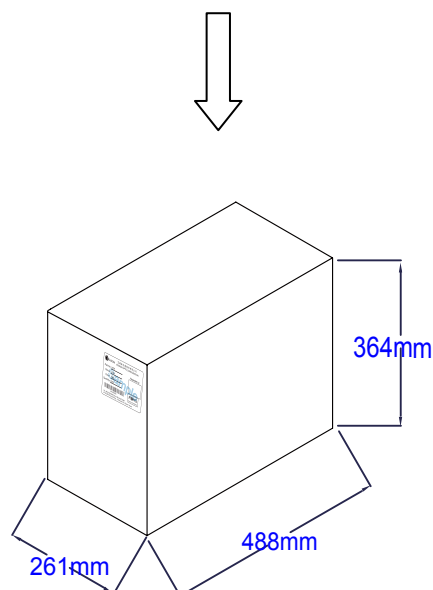


EX:

| | |
|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  艾笛森光電股份有限公司 EDISON OPTO CORPORATION | |
| Part No. : <u>6LBR1CWJE0S08001</u> | Inspected by: |
| Color : <u>Cool White(34W3FVB2)</u> | |
| Quantity : <u>1 Reel(5M)</u> |  |
| Lot No. : <u>D1201-12110022</u> | |
|  A410000005 | |
| Tel +86-2-82276996 Fax +86-2-8227-6997 4F No.800 Chung-Cheng .. Chung-Ho City Taipei. Taiwan | |
|  | |

Label information

Part NO. : Order code
 Color : Color(Emitter BIN color)
 Quantity : The number of packing
 Lot NO. : Date code



Precaution for Use

1. DO NOT use the products with materials has Sulfur.
2. DO NOT assemble in humid environment or the conditions of containing oxidizing gas such as C1, H₂S, NH₃, SO₂, NOX, etc.
3. DO NOT add or change wires while the circuit of Module is active. Long time exposure to sunlight or UV should be avoided.
4. DO NOT press the product; even a slight pressure may damage the product. The environments such as high temperatures, high humidity or direct expose to sunlight should be avoided since the product is sensitive to these conditions.
5. Installation of LED modules (with power supplies) needs to be made with regard to all applicable and safety standards. Only qualified personnel should be allowed to perform installations.
6. Assembly must not damage or destroy conducting paths on the circuit board.
7. Please ensure that the power supply is of adequate power to operate the total load.
8. The maximum run length from any power feed should be limited to 5000 mm.

Environmental Compliance

PLCC lightbar FPC series are compliant to the Restriction of Hazardous Substances Directive or RoHS. The restricted materials including lead, mercury cadmium hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ether (PBDE) are not used in PLCC lightbar FPC series to provide an environmentally friendly product to the customers.

Application Notes

PLCC Lightbar series are available in red, yellow, green, blue, white, neutral white and warm white for application such as under-cabinet lighting, cove lighting and wall washing. Moreover, additional fine-tuned high color rendering index (CRI) version of white, neutral white and warm white all make PLCC Lightbar the ideal lighting choice for vividly building or decoration products, presenting the products outline.

Revision History

| Versions | Description | Release Date |
|----------|------------------------------------------------------|--------------|
| 1 | Establish order code information | 2017/05/16 |
| 2 | Add Lightbar Series CRI90 Information | 2018/10/18 |
| 3 | Upgrade version | 2019/08/30 |
| 4 | Revise Features and benefits Revise the Life time | 2020/01/21 |
| 4.1 | Add safety icon | 2020/06/29 |

About Edison Opto

Edison Opto is a leading manufacturer of high power LED and a solution provider experienced in LDMS. LDMS is an integrated program derived from the four essential technologies in LED lighting applications- Thermal Management, Electrical Scheme, Mechanical Refinement, Optical Optimization, to provide customer with various LED components and modules. More Information about the company and our products can be found at www.edison-opto.com

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