

LUMIFA LF1B-N

Control Panels • Industrial Equipment • Signage

LF1B-N Series (IP65)

The LF1B-N series LED light strips are slim and perfect for applications where space is a concern. They come in six different lengths and six distinct colors, making them a very flexible lighting solution.

- Compact design: 27.5mm wide, 16mm high, and 134 to 1,080mm long
- Improved brightness
- 6 Colors: cool white, warm white, yellow, red, blue, green
- 2 Cover colors: clear, white
- IP65 degree of protection (waterproof, dustproof), suitable for use in wet locations



Specifications

| Model | | LF1B-NA (134mm) | LF1B-NB (210mm) | LF1B-NC (330mm) | LF1B-ND (580mm) | LF1B-NE (830mm) | LF1B-NF (1,080mm) |
|--|----------------------------|---|--------------------|--------------------|--------------------|---|----------------------|
| Rated Voltage | | 24V DC (operating voltage range: 21.6 to 26.4V) | | | | | |
| Input Current (typ.) (at the rated current) | cool white/warm white/blue | 60mA | 120mA | 180mA | 360mA | 540mA | 720mA |
| | red/yellow/green | 40mA | 80mA | 120mA | 240mA | 360mA | 480mA |
| Power Consumption (typ.) (at the rated voltage) | cool white/warm white/blue | 1.5W | 2.9W | 4.4W | 8.7W | 13.0W | 17.3W |
| | red/yellow/green | 1.0W | 2.0W | 2.9W | 5.8W | 8.7W | 11.6W |
| Insulation Resistance | | 100MΩ minimum (500V DC megger) | | | | | |
| Dielectric Strength | | 1,000V AC, 1 minute (between live and dead parts) | | | | | |
| Vibration Resistance (damage limits) | | Frequency: 5 to 55 Hz, Amplitude 0.5mm Acceleration 60m/s ² (6G), 2 hours each in 3 axes | | | | Frequency: 5 to 55 Hz, Amplitude 0.17mm Acceleration 20m/s ² (2G), 2 hours each in 3 axes | |
| Shock Resistance (damage limits) | | 1,000m/s ² (100G), 5 shocks each in 6 axes | | | | 300m/s ² (30G), 5 shocks each in 6 axes | |
| Operating Temperature | | -30 to +55°C (no freezing) | | | | | |
| Operating Humidity | | 45 to 85% RH (no condensation) | | | | | |
| Storage Temperature | | -35 to +70°C (no freezing) | | | | | |
| Operating Atmosphere | | No corrosive gases | | | | | |
| Life (Note) | | 40,000 hours (Ta = 25°C) (The total illumination life in which the brightness maintains a minimum of 70% of the initial value.) | | | | | |
| Degree of Protection | | IP65 (IEC 60529) | | | | | |
| Material | | Cover: polycarbonate, End cover/cable gland: polyamide, Wire: PVC (24AWG) | | | | | |
| Weight (approx.) | | 95g | 125g | 165g | 255g | 430g | 740g |

Note: LED life depends on the operating environment.

LED Optical Specifications

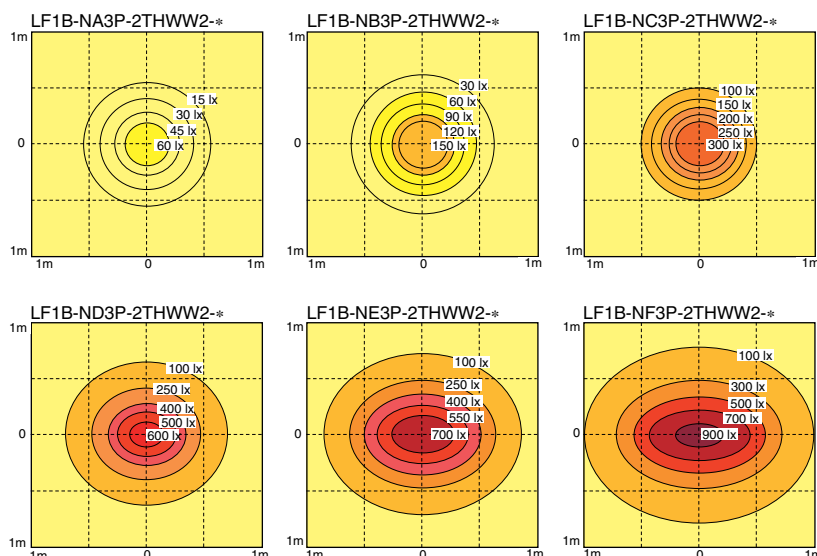
| Illumination Color | Cool White | | Warm White | | Yellow | | Red | | Green | | Blue | | |
|--|------------|-------|------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|------|
| | Cover | Clear | White | Cover | Clear | White | Cover | Clear | White | Cover | Clear | White | |
| Color Temperature/ Dominant Wavelength (typ.) | 5,500K | | 2,900K | | 590nm | | 620nm | | 525nm | | 455nm | | |
| Reference Brightness (typ.) at 0.5m | LF1B-NA | 90lx | 80lx | 60lx | 55lx | 60lx | 55lx | 20lx | 18lx | 30lx | 27lx | 10lx | 9lx |
| | LF1B-NB | 220lx | 200lx | 145lx | 130lx | 145lx | 130lx | 40lx | 36lx | 60lx | 55lx | 20lx | 18lx |
| | LF1B-NC | 400lx | 360lx | 250lx | 225lx | 250lx | 225lx | 75lx | 65lx | 110lx | 100lx | 30lx | 27lx |
| | LF1B-ND | 660lx | 600lx | 455lx | 410lx | 455lx | 410lx | 125lx | 110lx | 190lx | 170lx | 50lx | 45lx |
| | LF1B-NE | 820lx | 740lx | 560lx | 500lx | 560lx | 500lx | 160lx | 145lx | 260lx | 235lx | 60lx | 55lx |
| | LF1B-NF | 935lx | 850lx | 620lx | 555lx | 620lx | 555lx | 180lx | 160lx | 300lx | 270lx | 80lx | 70lx |

LED modules and illumination units may vary in illumination colors and brightness.

Part Numbers

| Illumination Color | | Cool White | Warm White | Yellow | Red | Blue | Green |
|--------------------|-------------|---|---|--|--|--------------------------------|--------------------|
| Appearance | Clear cover | | | | | | |
| | White cover | | | | | | |
| LF1B-NA (134mm) | Clear cover | LF1B-NA3P-2THWW2-3M | LF1B-NA3P-2TLWW2-3M | LF1B-NA3P-2SHY2-3M | LF1B-NA3P-2SHR2-3M | LF1B-NA3P-2THS2-3M | LF1B-NA3P-2SHG2-3M |
| | White cover | LF1B-NA4P-2THWW2-3M | LF1B-NA4P-2TLWW2-3M | LF1B-NA4P-2SHY2-3M | LF1B-NA4P-2SHR2-3M | LF1B-NA4P-2THS2-3M | LF1B-NA4P-2SHG2-3M |
| LF1B-NB (210mm) | Clear cover | LF1B-NB3P-2THWW2-3M | LF1B-NB3P-2TLWW2-3M | LF1B-NB3P-2SHY2-3M | LF1B-NB3P-2SHR2-3M | LF1B-NB3P-2THS2-3M | LF1B-NB3P-2SHG2-3M |
| | White cover | LF1B-NB4P-2THWW2-3M | LF1B-NB4P-2TLWW2-3M | LF1B-NB4P-2SHY2-3M | LF1B-NB4P-2SHR2-3M | LF1B-NB4P-2THS2-3M | LF1B-NB4P-2SHG2-3M |
| LF1B-NC (330mm) | Clear cover | LF1B-NC3P-2THWW2-3M | LF1B-NC3P-2TLWW2-3M | LF1B-NC3P-2SHY2-3M | LF1B-NC3P-2SHR2-3M | LF1B-NC3P-2THS2-3M | LF1B-NC3P-2SHG2-3M |
| | White cover | LF1B-NC4P-2THWW2-3M | LF1B-NC4P-2TLWW2-3M | LF1B-NC4P-2SHY2-3M | LF1B-NC4P-2SHR2-3M | LF1B-NC4P-2THS2-3M | LF1B-NC4P-2SHG2-3M |
| LF1B-ND (580mm) | Clear cover | LF1B-ND3P-2THWW2-3M | LF1B-ND3P-2TLWW2-3M | LF1B-ND3P-2SHY2-3M | LF1B-ND3P-2SHR2-3M | LF1B-ND3P-2THS2-3M | LF1B-ND3P-2SHG2-3M |
| | White cover | LF1B-ND4P-2THWW2-3M | LF1B-ND4P-2TLWW2-3M | LF1B-ND4P-2SHY2-3M | LF1B-ND4P-2SHR2-3M | LF1B-ND4P-2THS2-3M | LF1B-ND4P-2SHG2-3M |
| LF1B-NE (830mm) | Clear cover | LF1B-NE3P-2THWW2-3M | LF1B-NE3P-2TLWW2-3M | LF1B-NE3P-2SHY2-3M | LF1B-NE3P-2SHR2-3M | LF1B-NE3P-2THS2-3M | LF1B-NE3P-2SHG2-3M |
| | White cover | LF1B-NE4P-2THWW2-3M | LF1B-NE4P-2TLWW2-3M | LF1B-NE4P-2SHY2-3M | LF1B-NE4P-2SHR2-3M | LF1B-NE4P-2THS2-3M | LF1B-NE4P-2SHG2-3M |
| LF1B-NF (1,080mm) | Clear cover | LF1B-NF3P-2THWW2-3M | LF1B-NF3P-2TLWW2-3M | LF1B-NF3P-2SHY2-3M | LF1B-NF3P-2SHR2-3M | LF1B-NF3P-2THS2-3M | LF1B-NF3P-2SHG2-3M |
| | White cover | LF1B-NF4P-2THWW2-3M | LF1B-NF4P-2TLWW2-3M | LF1B-NF4P-2SHY2-3M | LF1B-NF4P-2SHR2-3M | LF1B-NF4P-2THS2-3M | LF1B-NF4P-2SHG2-3M |
| Applications | | Industrial Machines Plant equip. Inspection/test equip. Control panels | Food processing machines Cosmetic plants Chemical plants Showcases | Semiconductor manufacturing equip. IC foundries | Photosensitive materials Semiconductor manufacturing equip. Darkroom experiments | Signage Decorative lighting | |

Brilliance Distribution at 0.5m (reference value)



Part Number Structure

LF1B - NC 3 P - 2 THWW2 - 3M

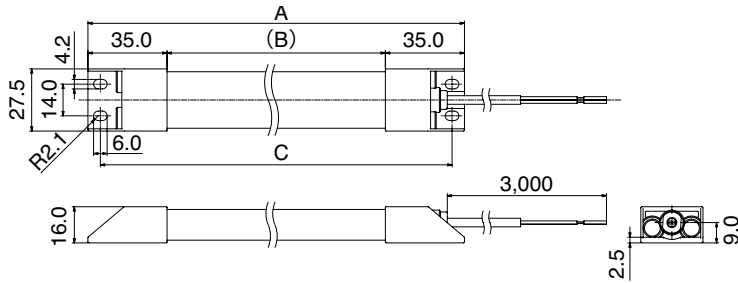
| | | |
|----------------------|--------------------|--------------|
| Length | Cover | Cable Length |
| A: 134mm (5.275") | 3: Clear | 3M: 3m |
| B: 210mm (8.267") | 4: White | |
| C: 330mm (12.992") | | |
| D: 580mm (22.834") | | |
| E: 830mm (32.677") | | |
| F: 1,080mm (42.519") | | |
| | Illumination Color | |
| | THWW2: Cool white | |
| | TLWW2: Warm white | |
| | SHY2: Yellow | |
| | SHR2: Red | |
| | THS2: Blue | |
| | SHG2: Green | |

Optional Mounting Bracket



| | |
|----------|------------------------|
| Part No. | LF9Z-1MB1 |
| Material | Stainless Steel |
| Note | 1 pair, Left and Right |

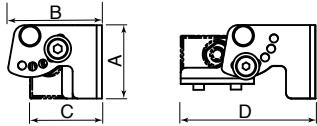
Dimensions (mm)



Dimension Table

| Model | A | | B | | C | |
|---------|------|--------|------|--------|------|--------|
| | mm | inch | mm | inch | mm | inch |
| LF1B-NA | 134 | 5.275 | 64 | 2.519 | 123 | 4.842 |
| LF1B-NB | 210 | 8.267 | 140 | 5.511 | 199 | 7.834 |
| LF1B-NC | 330 | 12.992 | 260 | 10.236 | 319 | 12.559 |
| LF1B-ND | 580 | 22.834 | 510 | 20.078 | 569 | 22.401 |
| LF1B-NE | 830 | 32.677 | 760 | 29.921 | 819 | 32.244 |
| LF1B-NF | 1080 | 42.519 | 1010 | 39.763 | 1069 | 42.086 |

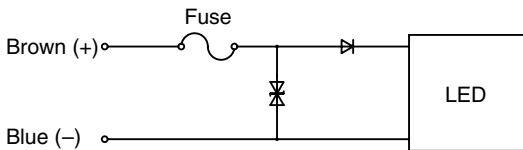
Mounting Bracket



Dimension Table

| A | | B | | C | | D | |
|------|-------|------|-------|----|-------|------|-------|
| mm | inch | mm | inch | mm | inch | mm | inch |
| 27.5 | 1.082 | 35.2 | 1.385 | 27 | 1.062 | 50.5 | 1.988 |

Internal Circuit



! Safety Precautions

- To avoid electric shock, fire, or malfunction do not disassemble, repair, or modify the unit.
- Turn power off before wiring. To prevent electric shock or damage, ensure wiring is correct.
- Do not stare directly into the LF1B-N unit while it is lit, and do not project the light towards other people, as their eyes may be injured.
- The LF1B-N is a general-purpose industrial electric device. Do not use with electronic equipment which may cause harm or injury to anyone in case a malfunction or failure occurs.

Instructions

- LED modules may vary in color and brightness.
- Before designing equipment and powering up units, confirm the specifications described in the instruction sheet.
- Apply voltage within the rated values, otherwise the LED elements may be damaged.
- The unit is vulnerable to static electricity. Take sufficient measures for protection against static electricity and voltage surges.
- Make sure that the unit is not dropped during transportation, installation, and operation, otherwise damage may result.
- Do not pull or push the cable, otherwise damage may result. Allow sufficient slack to the cable while wiring.
- Do not apply excessive force. Do not leave a damaged unit unattended or use a damaged unit.
- Ensure the correct operating temperature, as rise in internal temperature may result in damage to the unit.
- Do not use or store in a location subject to vibration and shock.
- Do not use in the following locations:
 - Exposure to direct sunlight, near heaters, high temperatures
 - Subject to chemicals, and corrosive gases
 - Cold storage warehouses (make sure that no freezing occurs)
- Do not loosen screws, otherwise, the protection characteristics will be impaired.
- To clean the cover use a soft cloth with water or neutral detergent. Do not use solvents such as thinners, benzene, or alkaline, otherwise discoloration, deterioration, or decrease in strength may occur.
- The edge of the cable sheath is not waterproof. Moisture may be drawn in to the unit if water splashes directly onto the cable sheath.



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