

### LF1B-N Series

**Key features:**

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
- 6 Colors: cool white, warm white, yellow, red, blue, green
- All units come standard with 3 meter connection cables
- 2 Cover options: clear, white
- IP65 degree of protection (waterproof, dustproof), suitable for use in wet locations

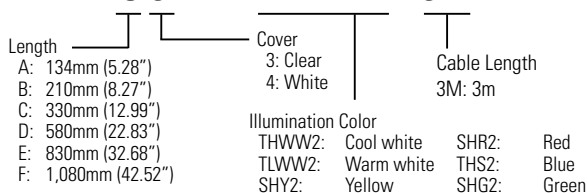


**Part Numbers**

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	


**Part Number Structure**

**LF1B - NC 3 P - 2 THWW2 - 3M**




**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 <sup>2</sup> (6G), 2 hours each in 3 axes				Frequency: 5 to 55 Hz, Amplitude 0.17mm Acceleration 20m/s <sup>2</sup> (2G), 2 hours each in 3 axes	
Shock Resistance (damage limits)		1,000m/s <sup>2</sup> (100G), 5 shocks each in 6 axes				300m/s <sup>2</sup> (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

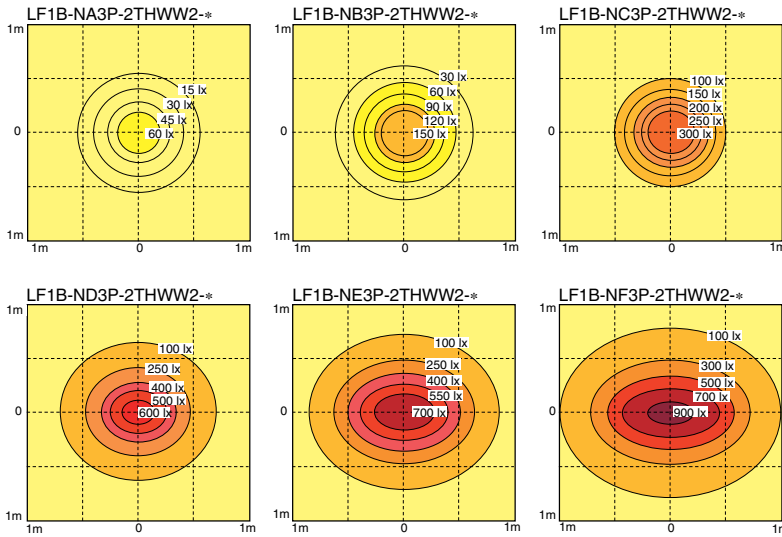
 Note: LED life depends on the operating environment.

**LED Optical Specifications**

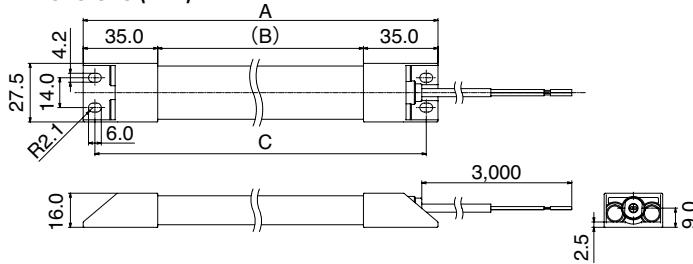
Illumination Color	Cool White		Warm White		Yellow		Red		Green		Blue		
	Clear	White	Clear	White	Clear	White	Clear	White	Clear	White	Clear	White	
Cover													
Color Temperature/ Dominant Wavelength (typ.)	5,500K		2,900K		590nm		620nm		525nm		455nm		
Reference Brightness (typ.) at 0.5m	LF1B-NA	90lx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

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

**Brilliance Distribution at 0.5m (reference value)**



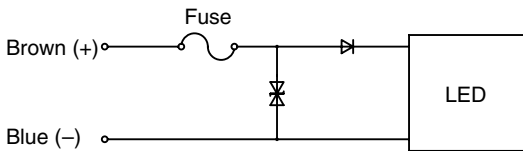
**Dimensions (mm)**



**Instructions**

- Before designing equipment and powering up units, confirm the specifications described in the instruction sheet.
- Apply voltage within the rated values, otherwise the LED modules 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 a 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 oil, metal, dust, 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.

**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.

**Dimension Table**

Model	A		B		C	
	mm	inch	mm	inch	mm	inch
LF1B-NA	134	5.28	64	2.52	123	4.84
LF1B-NB	210	8.27	140	5.51	199	7.83
LF1B-NC	330	12.99	260	10.24	319	12.56
LF1B-ND	580	22.83	510	20.08	569	22.40
LF1B-NE	830	32.68	760	29.92	819	32.24
LF1B-NF	1080	42.52	1010	39.76	1069	42.09