

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 manu- facturing equip. Darkroom experiments	Signage Decorative lighting	

Part Number Structure

LF1B - NC 3 P - 2 THWW2 - 3M

Length	Cover	Illumination Color		Cable Length
A: 134mm (5.28")	3: Clear	THWW2:	Cool white	3M: 3m
B: 210mm (8.27")	4: White	TLWW2:	Warm white	
C: 330mm (12.99")		SHY2:	Yellow	
D: 580mm (22.83")				SHR2: Red
E: 830mm (32.68")				THS2: Blue
F: 1,080mm (42.52")				SHG2: Green

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/s² (6G), 2 hours each in 3 axes				Frequency: 5 to 55 Hz, Amplitude 0.17mm Acceleration 20m/s² (2G), 2 hours each in 3 axes	
Shock Resistance (damage limits)		1,000m/s² (100G), 5 shocks each in 6 axes				300m/s² (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.

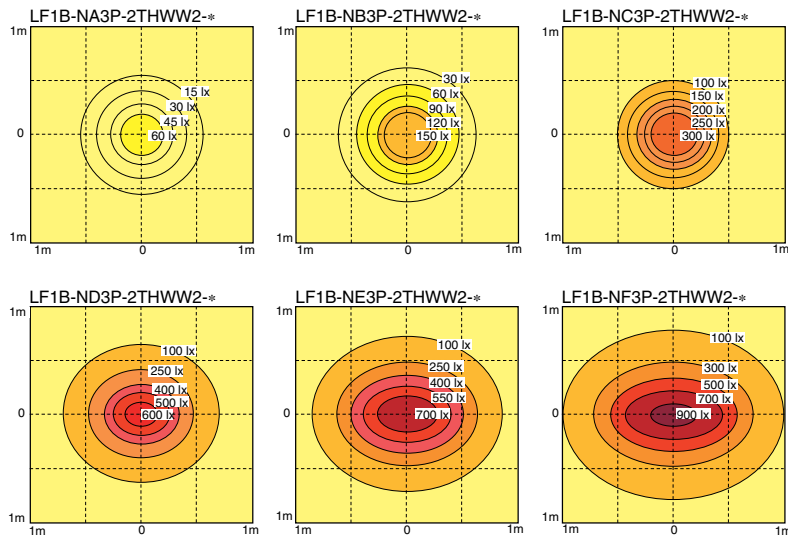
LED Optical Specifications

Illumination Color		Cool White		Warm White		Yellow		Red		Green		Blue	
Cover		Clear	White	Clear	White	Clear	White	Clear	White	Clear	White	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	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

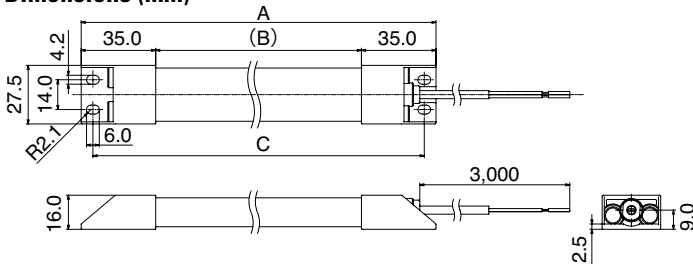


Note: LED modules and illumination units may vary in illumination colors and brightness.

Brilliance Distribution at 0.5m (reference value)



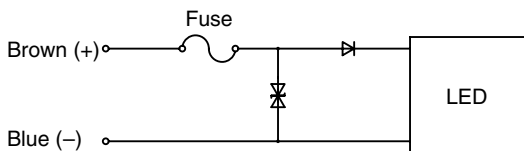
Dimensions (mm)



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