

# LF1B-N LED Illumination Units

Thin and slim styles fit into compact spaces.

IP65 (waterproof, dustproof). 6 different lengths and 3 distinct colors.

- Compact design (27.5mm wide, 16mm high, and 134 to 1,080mm long) fits into narrow spaces.
- Improved brightness with white illumination color.
- Daylight, warm white, yellow illumination colors.
- Two cover colors: clear and white.

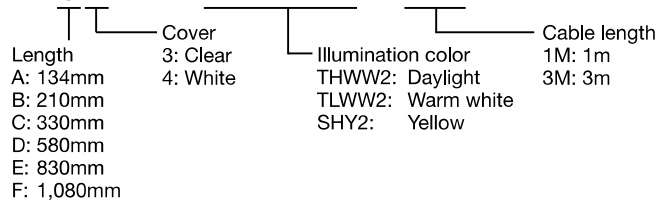


Illumination Color		Daylight	Warm White	Yellow
Appearance	Clear cover			
	White cover			
LF1B-NA (134mm)	Clear cover	LF1B-NA3P-2THWW2-*	LF1B-NA3P-2TLWW2-*	LF1B-NA3P-2SHY2-*
	White cover	LF1B-NA4P-2THWW2-*	LF1B-NA4P-2TLWW2-*	LF1B-NA4P-2SHY2-*
LF1B-NB (210mm)	Clear cover	LF1B-NB3P-2THWW2-*	LF1B-NB3P-2TLWW2-*	LF1B-NB3P-2SHY2-*
	White cover	LF1B-NB4P-2THWW2-*	LF1B-NB4P-2TLWW2-*	LF1B-NB4P-2SHY2-*
LF1B-NC (330mm)	Clear cover	LF1B-NC3P-2THWW2-*	LF1B-NC3P-2TLWW2-*	LF1B-NC3P-2SHY2-*
	White cover	LF1B-NC4P-2THWW2-*	LF1B-NC4P-2TLWW2-*	LF1B-NC4P-2SHY2-*
LF1B-ND (580mm)	Clear cover	LF1B-ND3P-2THWW2-*	LF1B-ND3P-2TLWW2-*	LF1B-ND3P-2SHY2-*
	White cover	LF1B-ND4P-2THWW2-*	LF1B-ND4P-2TLWW2-*	LF1B-ND4P-2SHY2-*
LF1B-NE (830mm)	Clear cover	LF1B-NE3P-2THWW2-*	LF1B-NE3P-2TLWW2-*	LF1B-NE3P-2SHY2-*
	White cover	LF1B-NE4P-2THWW2-*	LF1B-NE4P-2TLWW2-*	LF1B-NE4P-2SHY2-*
LF1B-NF (1,080mm)	Clear cover	LF1B-NF3P-2THWW2-*	LF1B-NF3P-2TLWW2-*	LF1B-NF3P-2SHY2-*
	White cover	LF1B-NF4P-2THWW2-*	LF1B-NF4P-2TLWW2-*	LF1B-NF4P-2SHY2-*
Application		<ul style="list-style-type: none"> <li>• Machine tools</li> <li>• Plant equipment</li> <li>• Inspection/test equipment</li> <li>• Control panel</li> </ul>	<ul style="list-style-type: none"> <li>• Food processing machines</li> <li>• Cosmetic plants</li> <li>• Chemical plants</li> <li>• Showcases</li> </ul>	<ul style="list-style-type: none"> <li>• Semiconductor manufacturing equipment</li> <li>• IC foundries</li> </ul>

• Specify cable length in place of \* in Part No. 1M: 1m, 3M: 3m

## Part No. Development

### LF1B - NC3P - 2THWW2 - 1M



# LF1B-N LED Illumination Units

## 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)	daylight/warm white	60mA	120mA	180mA	360mA	540mA	720mA
	yellow	40mA	80mA	120mA	240mA	360mA	480mA
Power Consumption (typ.) (at the rated voltage)	daylight/warm white	1.5W	2.9W	4.4W	8.7W	13.0W	17.3W
	yellow	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> , 2 hours each in 3 axes				Frequency: 5 to 55 Hz, Amplitude 0.5mm Acceleration 20m/s <sup>2</sup> , 2 hours each in 3 axes		
Shock Resistance (damage limits)	1,000m/s <sup>2</sup> , 5 shocks each in 6 axes				300m/s <sup>2</sup> , 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 illuminance 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 × 2C)						
Weight (approx.)	95g	125g	165g	255g	430g	740g	

Note: LED life depends on the operating environment.

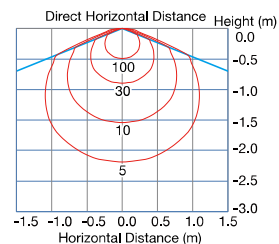
## LED Optical Specifications

Color Temperature/ Dominant Wavelength (typ.)	Daylight	Warm White	Yellow
	6,500K	3,000K	592nm
Reference Illuminance (typ.) at 0.5m directly below	LF1B-NA	Clear: 95 lx White: 85 lx	Clear: 24 lx White: 21 lx
	LF1B-NB	Clear: 240 lx White: 215 lx	Clear: 48 lx White: 43 lx
	LF1B-NC	Clear: 455 lx White: 410 lx	Clear: 90 lx White: 78 lx
	LF1B-ND	Clear: 840 lx White: 750 lx	Clear: 150 lx White: 132 lx
	LF1B-NE	Clear: 1,100 lx White: 995 lx	Clear: 1,065 lx White: 960 lx
	LF1B-NF	Clear: 1,350 lx White: 1,210 lx	Clear: 1,300 lx White: 1,170 lx

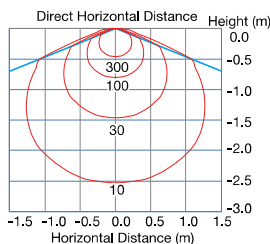
• LED modules and illumination units may vary in illumination colors and illuminance.

## Illuminance Distribution (lx)

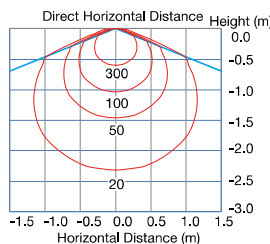
LF1B-NA3P-2THWW2-\*



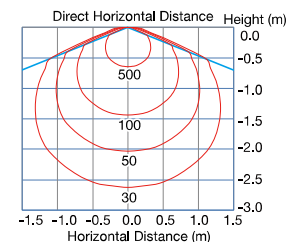
LF1B-NB3P-2THWW2-\*



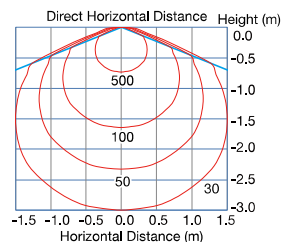
LF1B-NC3P-2THWW2-\*



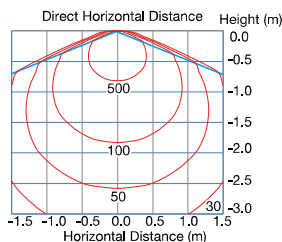
LF1B-ND3P-2THWW2-\*



LF1B-NE3P-2THWW2-\*

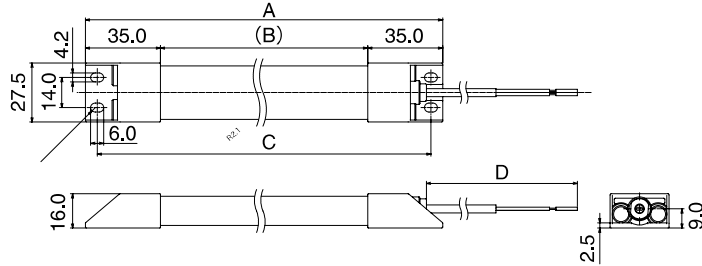


LF1B-NF3P-2THWW2-\*



# LF1B-N LED Illumination Units

## Dimensions

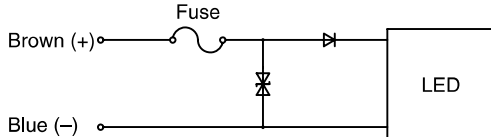


Model	A	B	C
LF1B-NA	134	64	123
LF1B-NB	210	140	199
LF1B-NC	330	260	319
LF1B-ND	580	510	569
LF1B-NE	830	760	819
LF1B-NF	1,080	1,010	1,069

Model	D
LF1B-N*-2*-1M	1,000
LF1B-N*-2*-3M	3,000

All dimensions in mm.

## Internal Circuit



## Safety Precautions

- Do not disassemble, repair, or modify the LF1B-N. Otherwise electric shock, fire, or malfunction may occur.
- Turn off power before wiring. Make sure of correct wiring, otherwise electric shock or damage may result.
- Do not stare directly into the LF1B-N unit while it is lit, and do not project the light to other people, otherwise eyes may be injured.
- The LF1B-N is a general-purpose industrial electric device. Do not use for electronic equipment which may damage the human body or threaten life in case a malfunction or failure occurs.

## Instructions

- LED modules may vary in illumination colors and illuminance.
- Before designing equipment and powering up illumination units, confirm the specifications described in the instruction sheet.
- Apply voltage within the rated value, otherwise the LED elements may be damaged.
- The illumination unit is vulnerable to static electricity. Take sufficient measure for protection against static electricity and voltage surges.
- Make sure that the illumination unit does not fall during transportation, installation, and operation, otherwise damage may result.
- Do not pull or push the cable of the illumination unit, otherwise damage may result. Allow sufficient slack to the cable while wiring.
- Do not apply excessive force. Do not leave a damaged illumination unit unattended or use a damaged illumination unit.
- Ensure the correct operating temperature. Otherwise internal temperature rise may result in damage.
- Do not use or store in a place subjected to vibration and shock.
- Do not use in the following places:
  - Exposed to direct sunlight, near heaters, high temperatures
  - Subject to chemicals, and corrosive gases (Plastic illumination surface types: Iron powder and oil)
  - Basements, greenhouses, or other humid places
  - 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 construction. Water may invade the LF1B-N in a capillary action when water splashes directly onto the cable sheath.

# IDEC CORPORATION

Head Office 6-64, Nishi-Miyahara-2-Chome, Yodogawa-ku, Osaka 532-0004, Japan

USA IDEC Corporation  
EMEA APEM SAS

Singapore IDEC Izumi Asia Pte. Ltd.  
Thailand IDEC Asia (Thailand) Co., Ltd.  
India IDEC Controls India Private Ltd.

China IDEC (Shanghai) Corporation  
IDEC Izumi (H.K.) Co., Ltd.  
Taiwan IDEC Taiwan Corporation

 [www.idec.com](http://www.idec.com)

Japan IDEC Corporation

Specifications and other descriptions in this brochure are subject to change without notice. Information in this brochure is current as of July, 2023. 2023 IDEC Corporation, All Rights Reserved.

EP1510-5

