

### LF2B Series

**Key features:**

Wide range of input voltages (100 - 240V AC) and DC-battery compatible 12/24V DC are available. Slim units can be used in many applications and installations where space is limited. Rated IP65 (protection from water and dust) LF2B is great for environments where water is sprayed.

- Slim units: 40mm (w) x 29mm (h). Using mounting brackets, one-step installation in a narrow space is possible.
- Five Lengths (210/330/580/830/1,080mm) are offered to meet space requirements and illumination coverages.
- Bright and clear white LED illuminates the shapes and colors of target objects. (LF2B illuminance is approximately 25% higher than the LF1B.)
- Two covers: clear or white

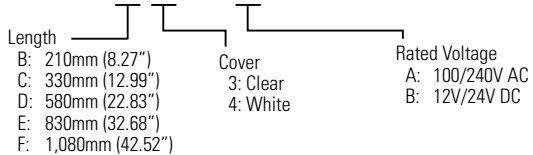


**Part Numbers**

Illumination Color	White			
	Clear Cover		White Cover	
External appearance				
Rated Voltage	100 - 240V AC		12V/24V DC	
LF2B-B (210mm)	LF2B-B3P-ATHWW2-1M	LF2B-B3P-BTHWW2-1M	LF2B-B4P-ATHWW2-1M	LF2B-B4P-BTHWW2-1M
LF2B-C (330mm)	LF2B-C3P-ATHWW2-1M	LF2B-C3P-BTHWW2-1M	LF2B-C4P-ATHWW2-1M	LF2B-C4P-BTHWW2-1M
LF2B-D (580mm)	LF2B-D3P-ATHWW2-1M	LF2B-D3P-BTHWW2-1M	LF2B-D4P-ATHWW2-1M	LF2B-D4P-BTHWW2-1M
LF2B-E (830mm)	LF2B-E3P-ATHWW2-1M		LF2B-E4P-ATHWW2-1M	
LF2B-F (1,080mm)	LF2B-F3P-ATHWW2-1M		LF2B-F4P-ATHWW2-1M	

**Part Number Structure**

**LF2B - C 3 P - ATHWW2 - 1M**



DC12V/24V Length: B (210mm), C (330mm), D (580mm) only

## Accessories

Item	Part Number	Remarks
Mounting Bracket (U-shape)	LF9Z-1SB21	Comes with the product (see Note below)
Mounting Bracket (L-shape)	LF9Z-1SB22	Order separately



LF2B-B and -C includes 2 pieces of brackets each; LF2B-E 3 pieces, and LF2B-F 4 pieces each.

## General Specifications

Model	LF2B-B (210mm)	LF2B-C (330mm)	LF2B-D (580mm)	LF2B-E (830mm)	LF2B-F (1,080mm)	
Rated Voltage	100-240V AC 50/60Hz (Voltage range: 90-264V AC) 12V/24V DC (Voltage range: 10.8-30V DC)					
Input Current (typical) (at the rated voltage) <sup>1</sup>	AC100~240V DC12V/24V	33mA 215mA	67mA 409mA	96mA 880mA	149mA —	226mA
Rated Power (at the rated voltage)	AC100~240V DC12V/24V	3.8W 2.6W	7.5W 4.9W	9.2W 10.6W	14.3W —	21.8W
Insulation Resistance	100MΩ minimum (500V DC megger)					
Dielectric Strength	AC100~240V DC12V/24V	AC2,000V AC1,000V			—	
Vibration Resistance	Frequency 5 - 55 Hz, Amplitude 0.17mm, speed acceleration 20m/s <sup>2</sup> , 3 directions, 2 hours each					
Shock Resistance	300m/s <sup>2</sup> , 6 directions, 5 times each					
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 <sup>2</sup>	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	Front Cover: Polycarbonate Resin; End Cover/Cable Gland: Polyamide Resin; Cable: PVC sheathing (24AWG)					
Weight (approx.)	AC100~240V DC12V/24V	200g 175g	255g 235g	400g 370g	520g —	645g



1. AC100V input for AC100 - 240V; DC12V input for DC12V/24V
2. LED life is dependent on the operating environment and conditions.

## LED Optical Specifications

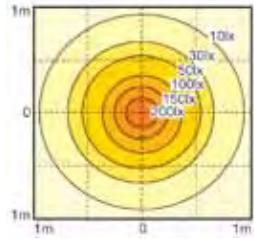
Illumination Color	White									
Color Temperature/ Dominant Wavelength (typ.)	5,500K									
Part Number	LF2B-B (210mm)		LF2B-C (330mm)		LF2B-D (580mm)		LF2B-E (830mm)		LF2B-F (1,080mm)	
Luminous Flux	180 lm		360 lm		720 lm		1,080 lm		1,440 lm	
Illumination Surface	Clear	Diffused	Clear	Diffused	Clear	Diffused	Clear	Diffused	Clear	Diffused
Reference Brightness (typ.) at 0.5m	230 lx	215 lx	425 lx	390 lx	710 lx	645 lx	930 lx	835 lx	1,160 lx	1,040 lx



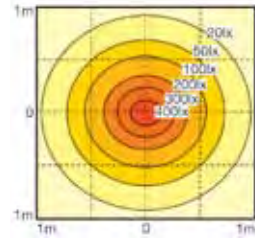
Note: Due to the variability of LED modules, products with same model number may vary slightly in illumination color and luminance.

**Illuminance Charts (Clear light at 0.5m)**

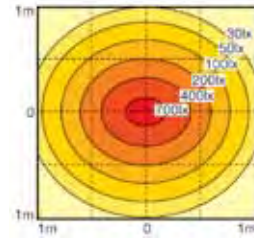
**LF2B-B (210mm)**



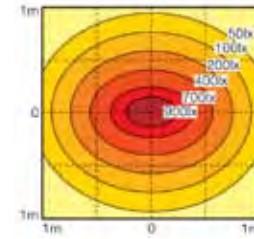
**LF2B-C (330mm)**



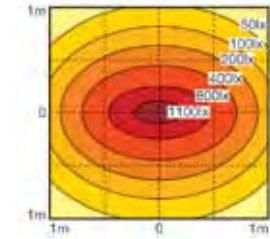
**LF2B-D (580mm)**



**LF2B-E (830mm)**

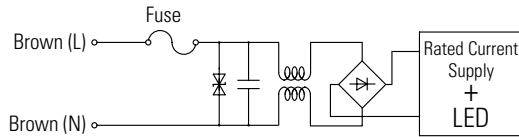


**LF2B-F (1,080mm)**

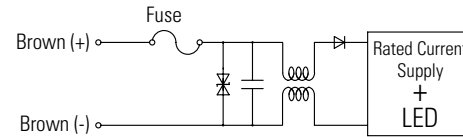


**Circuit Diagram**

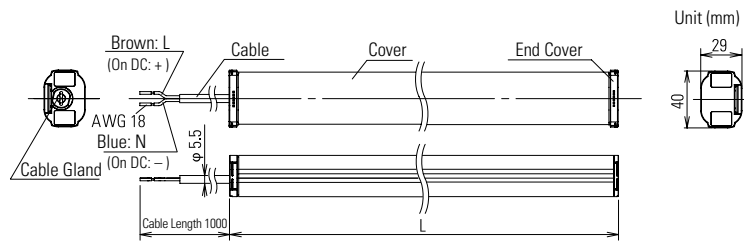
**AC100~240V**



**DC12V/24V**

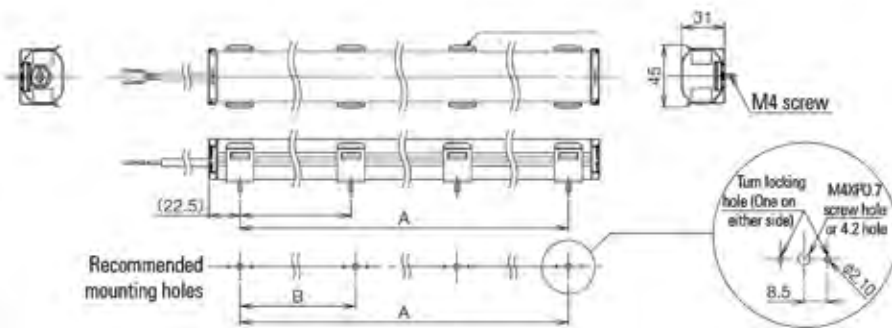


**Dimensions (mm)**

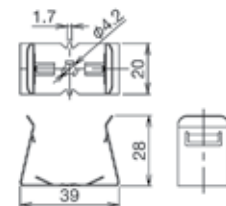


Part Number	L (mm)	Inch
LF2B-B□P-◇THWW2-1M	210	8.27
LF2B-C□P-◇THWW2-1M	330	12.99
LF2B-D□P-◇THWW2-1M	580	22.83
LF2B-E□P-◇THWW2-1M	830	32.68
LF2B-F□P-◇THWW2-1M	1,080	42.52

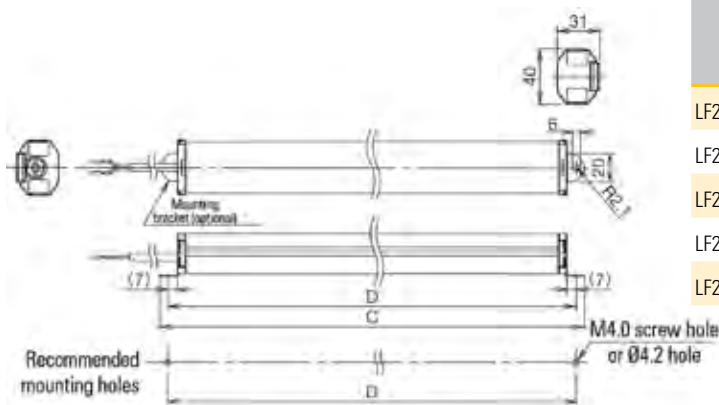
**With Mounting Bracket (U-shape): LF9Z-1SB21 (Included in each unit)**



**Mounting Bracket LF9Z-1SB21**



**With Mounting Bracket (L-shape): LF9Z-1SB22 (order separately)**



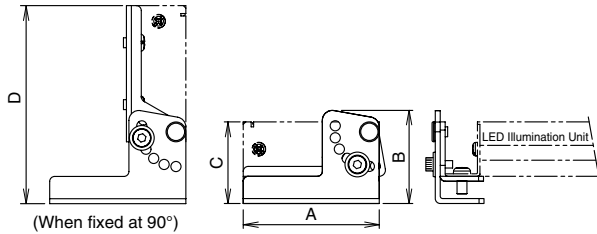
Part Number	A		B		C		D		Mounting Bracket Qty. Incl.
	mm	inch	mm	inch	mm	inch	mm	inch	
LF2B-B□P-◇THWW2-1M	165	6.50	-	-	236	9.29	224	8.82	2
LF2B-C□P-◇THWW2-1M	285	11.22	-	-	356	14.02	344	13.54	2
LF2B-D□P-◇THWW2-1M	535	21.06	-	-	606	23.86	594	23.39	2
LF2B-E□P-◇THWW2-1M	785	30.91	393	15.47	856	33.70	844	33.23	3
LF2B-F□P-◇THWW2-1M	1,035	40.75	345	13.58	1,106	43.54	1,094	43.07	4

Accessories

Item	Mounting Bracket							Cable Gland	Cable
Part No.	LF9Z-1MB1	LF9Z-1MA1	LF9Z-B12	LF9Z-B11	LF9Z-1MDE1	LF9Z-1MDF1	LF9Z-1SE1	LF9Z-A11	LF9Z-C05
Applicable Unit	LF1B-NA, -B, -C (-D not applicable)	LF1A-A, -B, -D	LF1D (Slim)		LF1D (Wide)		LF1E	LF1D	LF1D
Material	Stainless Steel							Brass	PVC
Notes	1 pair Left and Right						1 piece	M8, applicable wire size (10-12 AWG)	Length: 5m

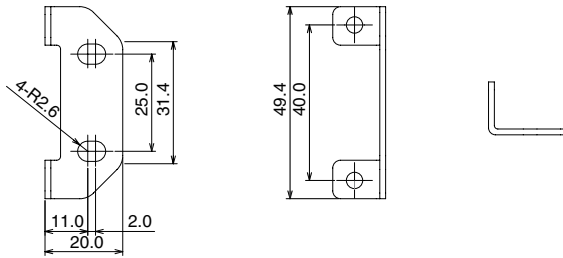
Dimensions (mm)

LF9Z-1MB1/1MA1

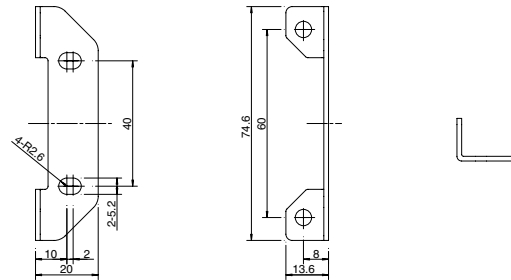


Part No.	A		B		C		D	
	mm	inch	mm	inch	mm	inch	mm	inch
LF9Z-1MB1	27.5	1.08	35.2	1.39	27	1.06	50.5	1.99
LF9Z-1MA1	55	2.17	37.9	1.49	33	1.30	80	3.15

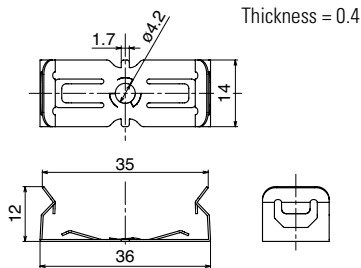
LF9Z-B11



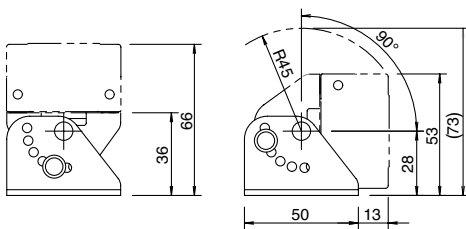
LF9Z-B12



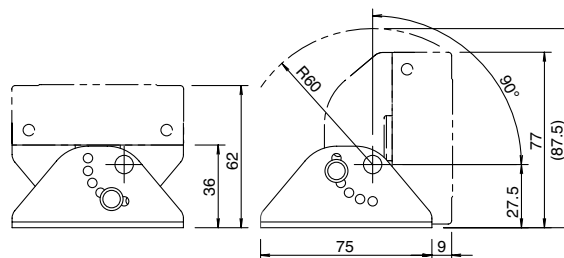
LF9Z-1SE1



LF9Z-1MDE1



LF9Z-1MDF1



**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.
- Please adhere to the operating temperature specification. A rise in internal temperature may damage the product.

**Instructions**

- LED modules may vary slightly 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)
  - Places with high humidity such as basements and greenhouses
- 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.