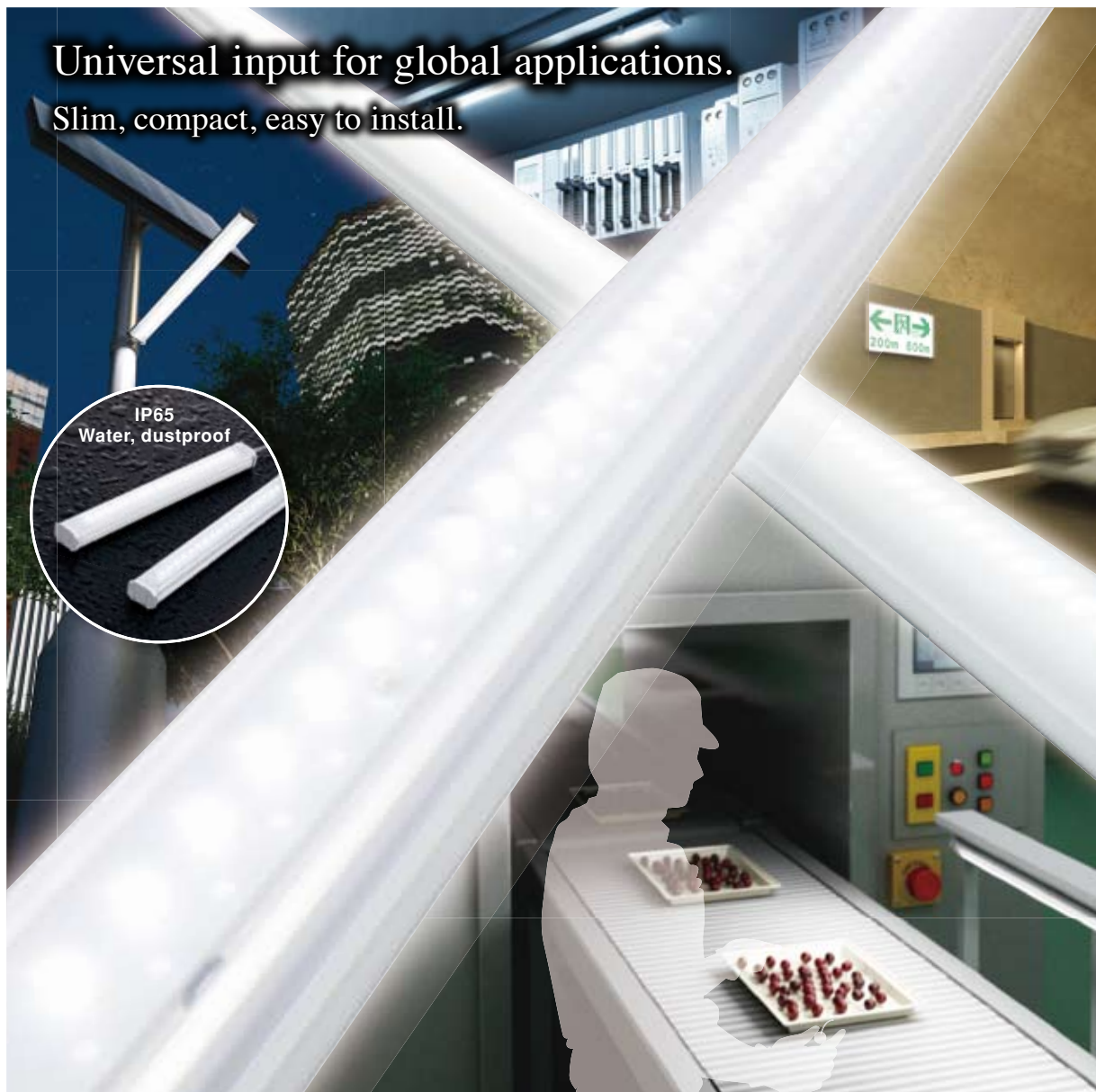


# LF2B

## LED Illumination Units



# Versatile Universal Input.

Universal input, slim, compact, and IP65.  
IDEC's unique optical and power supply technologies provide high brightness and high efficiency, while reducing power consumption.  
Available in five lengths.

## Slim & Compact

Universal input power supply is housed in a thin, 29-mm high housing. Clear or white cover is available.

Clear Cover

White Cover

## 1 Universal input for worldwide applications

### Universal Input

#### ■ 100 to 240V AC

Versatile universal input can be used worldwide in various applications.



### 12V/24V DC

#### ■ 12/24V DC input is suitable for battery-operated equipment

Ideal for battery-operated equipment or applications that are required to operate in emergency, such as solar power equipment.



### Two easy mounting styles

Direct mounting with L-shaped mounting brackets



### ■ Quick and easy installation

L-shaped (optional) or U-shaped (supplied) mounting brackets available for mounting.

Direct mounting with U-shaped mounting brackets



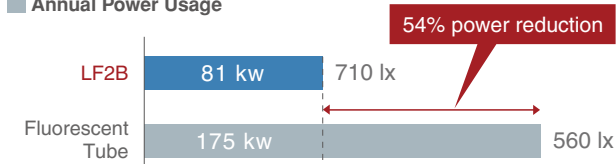
# Suitable for Various Applications.

## 2 LED advantages

### 54% less power consumption

Power consumption reduced by approx. 54%.  
(Note) compared with fluorescent tubes.

#### Annual Power Usage

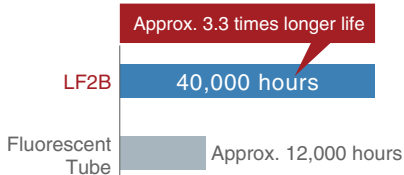


Note: Comparison of LF2B-D3 (580mm) and fluorescent tube (580mm).

### Long LED life reduces maintenance

40,000 hours of maintenance-free service life. (Ta=25°C)  
(The total illumination life in which the illuminance maintains a minimum of 70% of the initial value.)

#### Service Life Comparison



40,000 hours is equivalent to:

Lighting hours/day	LED life
12 hours	9 years, 2 months
16 hours	6 years, 9 months
24 hours	4 years, 6 months

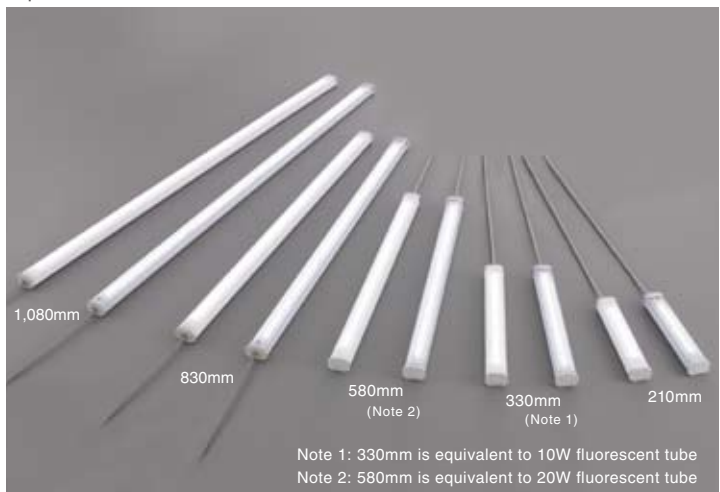
## 3 IDEC's Control & LED Technologies

### IP65 waterproof & dustproof



### Various locations and applications

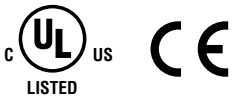
Available in five lengths (210, 330, 580, 830, and 1,080mm).  
Suitable for illuminating various machines and equipment, including visual inspection lines.



# LF2B LED Illumination Units

**Universal input (100 to 240V AC) and 12/24V DC input models are available. Compact and slim design suitable for installing in various applications and also in narrow spaces. IP65 (waterproof, dustproof).**

- Slim design (40mm wide, 29mm high). Can be installed in narrow spaces easily using mounting brackets.
- Five different lengths (210, 330, 580, 830, and 1,080 mm) available.
- Bright and clear white LED illuminates the target object clearly and brightly.
- Choice of two cover colors: clear and white.



(12/24V DC model only)

Package quantity: 1

Illumination Color	White			
	Clear Cover		White Cover	
Shape				
Rated Voltage	100 to 240V AC	12/24V DC	100 to 240V AC	12/24V 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	

• Use Class 2 power supply when using the LF2B as UL/c-UL listed LED illumination unit (12/24V DC only).

## Part No. Development

LF2B- C 3 P - A THWW2 - 1M

**Length**

- B: 210mm
- C: 330mm
- D: 580mm
- E: 830mm
- F: 1,080mm

**Cover**

- 3: Clear
- 4: White

**Rated Voltage**

- A: 100 to 240V AC
- B: 12/24V DC (210, 330, and 580mm lengths only)

## Accessories

Model	Part No.	Package Quantity	Remarks
U-shaped Mounting Bracket	LF9Z-1SB21PN10	10	Supplied with the LF2B. LF2B-B, -C, and D: Two brackets are supplied. LF2B-E: Three brackets are supplied. LF2B-F: Four brackets are supplied.
L-shaped Mounting Bracket	LF9Z-1SB22PN10	10	Two brackets (for right and left) are required for alternate mounting of an LF2B.

# LF2B LED Illumination Units

## Specifications

Model	LF2B-B (210mm)	LF2B-C (330mm)	LF2B-D (580mm)	LF2B-E (830mm)	LF2B-F (1,080mm)
Rated Voltage	100 to 240V AC, 50/60 Hz (voltage range: 90 to 264V AC) 12/24V DC (voltage range: 10.8 to 30V DC)				
Input Current (typ.) (at the rated current) (Note 1)	100 to 240V AC 12/24V DC	33 mA 215 mA	67 mA 409 mA	96 mA 880 mA	149 mA 226 mA
Power Consumption (typ.) (at the rated voltage)	100 to 240V AC 12/24V DC	3.8W 2.6W	7.5W 4.9W	9.2W 10.6W	14.3W 21.8W
Insulation Resistance	100MΩ min. (500V DC meggar)				
Dielectric Strength	100 to 240V AC 12/24V DC	2,000V AC, 1 minute (between live and dead parts)			1,000V AC, 1 minute (between live and dead parts)
Vibration Resistance (damage limits)	Frequency: 5 to 55 Hz, Amplitude 0.17 mm Acceleration 20m/s <sup>2</sup> , 2 hours each in 3 axes				
Shock Resistance (damage limits)	300m/s <sup>2</sup> , 5 shocks each in 6 axes				
Operating Temperature	-30 to +55°C (no condensation)				
Operating Humidity	45 to 85% (no freezing)				
Storage Temperature	-35°C to +70°C (no condensation)				
Operating Atmosphere	No corrosive gas				
Life (Note 2)	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 (AWG24×2C)				
Weight (approx.)	100 to 240V AC 12/24V DC	200g 175g	255g 235g	400g 370g	520g 645g

Note 1: 100 to 240V AC: at 100V AC, 12/24V DC: 12V DC

Note 2: LED life depends on the operating environment.

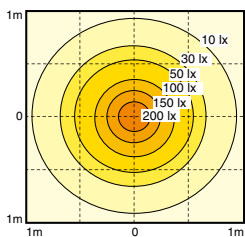
## LED Optical Specifications

Illumination Color	White									
Color Temperature	5,500K									
Model	LF2B-B (210mm)		LF2B-C (330mm)		LF2B-D (580mm)		LF2B-E (830mm)		LF2B-F (1,080mm)	
Luminous Flux (typ.)	180 lm		360 lm		720 lm		1,080 lm		1,440 lm	
Cover	Clear	White	Clear	White	Clear	White	Clear	White	Clear	White
Reference Illuminance (typ.) at 0.5m directly below	230 lx	215 lx	425 lx	390 lx	710 lx	645 lx	930 lx	835 lx	1,160 lx	1,040 lx

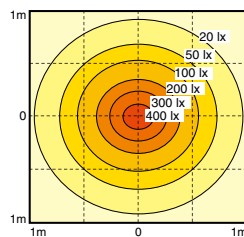
• LED modules and illumination units may vary in illumination colors and illuminance.

## Illuminance Distribution at 0.5m (clear cover)

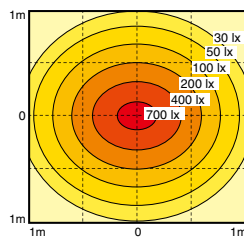
LF2B-B (210mm)



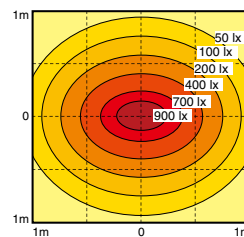
LF2B-C (330mm)



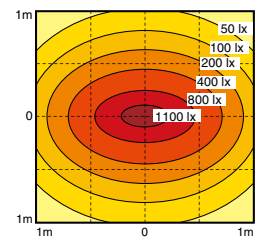
LF2B-D (580mm)



LF2B-E (830mm)

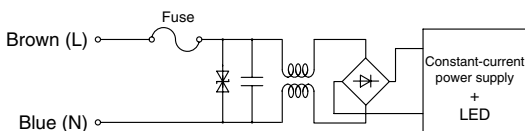


LF2B-F (1,080mm)

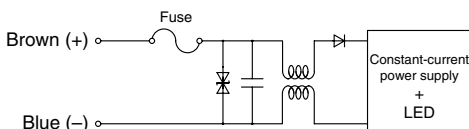


## Internal Circuit

### 100 to 240V AC

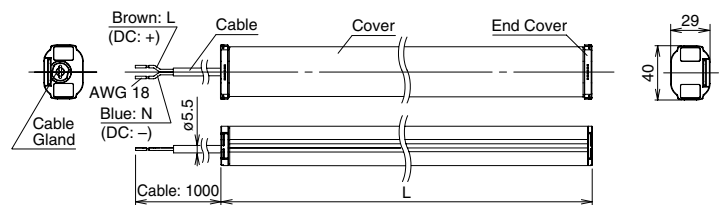


### 12/24V DC



## Dimensions

### Without mounting bracket

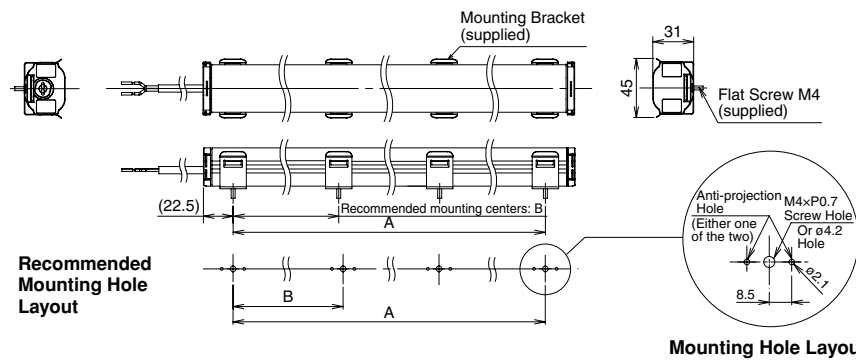


Part No.	L
LF2B-B*P-*THWW2-1M	210
LF2B-C*P-*THWW2-1M	330
LF2B-D*P-*THWW2-1M	580
LF2B-E*P-*THWW2-1M	830
LF2B-F*P-*THWW2-1M	1,080

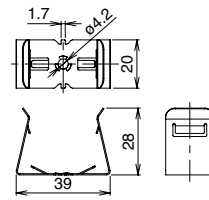
All dimensions in mm.

# LF2B LED Illumination Units

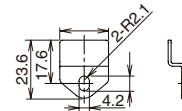
## With mounting bracket LF9Z-1SB21 (U-shaped brackets supplied with LED)



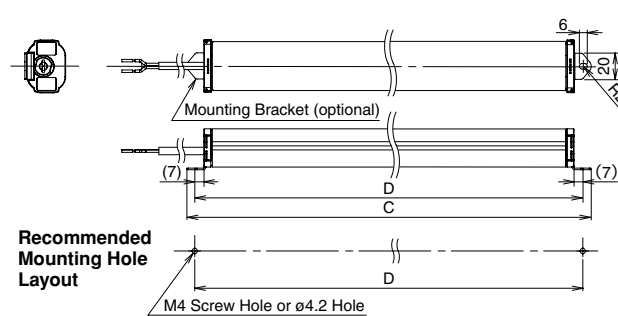
## Mounting bracket LF9Z-1SB21



## Mounting bracket LF9Z-1SB22



## With mounting bracket LF9Z-1SB22 (L-shaped bracket purchased separately from LED)



Part No.	A	B	C	D	Required No. of Mounting Bracket	
					LF9Z-1SB21	LF9Z-1SB22
LF2B-B*P-*THWW2-1M	165	—	236	224	2	
LF2B-C*P-*THWW2-1M	285	—	356	344		
LF2B-D*P-*THWW2-1M	535	—	606	594		
LF2B-E*P-*THWW2-1M	785	393	856	844		
LF2B-F*P-*THWW2-1M	1,035	345	1,106	1,094	4	

## ! Safety Precautions

- Do not disassemble, repair, or modify LF2B. Otherwise electric shock, fire, or malfunction may occur.
- Turn off power before wiring. To prevent electric shock or damage, ensure that the wiring is correct.
- Do not stare directly into the LF2B while it is lit, and do not project the light towards other people, otherwise their eyes may be injured.
- The LF2B is general-purpose industrial electric device. Do not use with electronic equipment which may cause harm or injury to anyone 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 units, confirm the specifications described in the instruction sheet.
- Apply voltage within the rated values, otherwise the LED elements may be damaged.
- The LF2B 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.
- Do not use or store in a location subjected to vibration and shock.
- Do not use in the following locations:
  - \* Exposure to direct sunlight, near heaters, high temperatures
  - \* Subject to oil, metal powder, chemicals, and corrosive gases (Plastic illumination surface: avoid iron powder and oil)
  - \* Places with high humidity such as basements and greenhouses
  - \* 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 LF2B in a capillary action when water splashes directly onto the cable sheath.

Specifications and other descriptions in this catalog are subject to change without notice.



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