

Confirm that the delivered product is what you have ordered. Read this instruction sheet to make sure of correct operation. Make sure that the instruction sheet is kept by the end user.

Safety Precautions

In this operation instruction sheet, safety precautions are categorized in order of importance to Warning and Caution :

Warning notices are used to emphasize that improper operation may cause severe personal injury or death.

Caution notices are used where inattention might cause personal injury or damage to equipment.

- Before designing the final equipment and powering up the LF2B illumination unit, confirm the specifications described on this sheet. If there is any uncertainty in the description, contact IDEC before powering up the LF2B illumination unit.
- Do not disassemble, repair, or modify the LF2B illumination unit, otherwise severe accidents may result, such as electric shocks, damage, fire, or malfunction.
- Turn off the power to the LF2B illumination unit before wiring. Make sure of correct wiring, otherwise electric shocks or damage may result.
- Do not gaze into the LF2B illumination unit while it is lit, and do not project the light to other people, otherwise eyes may be injured.
- Make sure that the LF2B illumination unit does not fall during transportation, installation, and operation, otherwise damage may result.
- Do not pull out or push in the cable of the LF2B illumination unit, otherwise damage may result. Give a slack to the cable while wiring.
- The LF2B illumination unit is a general-purpose and industrial electronic device. Do not use the LF2B illumination unit for electronic equipment which may damage a human body or threaten a life in case a malfunction or failure occurs.

- LED modules and illumination units may vary in illumination colors and illuminance.
- Apply a voltage within the rated value, otherwise the LED elements may be damaged.
- The LF2B illumination unit is vulnerable to static electricity. Take a sufficient measure for protection against static electricity and surge voltages.
- Do not apply an excessive force to the LF2B illumination unit. Do not leave a damaged LF2B illumination unit unattended or use a damaged LF2B.
- Make sure of the correct operating temperature, which is the temperature around the LF2B illumination unit. Otherwise internal temperature rise may result in damage.
- Do not use or store the LF2B illumination unit in a place subjected to vibrations and shocks.
- Do not use the LF2B illumination unit in the following places:
Exposed to direct sunlight, near heaters, and at high temperatures
Subjected to chemicals, iron powder oil, and corrosive gases
Basements, greenhouses, and other humid places
When using in the place where freezing or condensation of LF2B illumination is anticipated, make sure that no freezing or condensation 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 illumination unit in the capillary action when water splashes directly to the edge.
- Do not repeat turning on/off the LF2B frequently. When turning on after turning off, wait at least 0.5s. Otherwise damage may result.

1 Types

LF2B-B3P-ATHWW2-1M	Rated Voltage
	A : 100-240V AC (AC)
	B : 12 / 24V DC (DC)
	Cover
	3 : Clear plastic
	4 : White plastic
	Size
	B : L = 210 mm
	C : L = 330 mm
	D : L = 580 mm
	E : L = 830 mm
	F : L = 1,080 mm

2 Specifications

Input Specifications

100-240V AC Type

Type	LF2B-B*P-ATHWW2-1M	LF2B-C*P-ATHWW2-1M	LF2B-D*P-ATHWW2-1M	LF2B-E*P-ATHWW2-1M	LF2B-F*P-ATHWW2-1M
Rated Voltage	100-240V AC 50/60Hz (Operating Voltage Range: 90-264V AC)				
Input Current (Input 100-240V AC)	Typ. 28-28mA	57-49mA	80-52mA	128-60mA	165-74mA
Max.	33-33mA	67-58mA	100-65mA	160-75mA	206-92mA
Input Power (Input 100-240V AC)	Typ. 2.2-3.2W	4.4-6.4W	7.8-8.5W	12.2-11.9W	15.9-15.8W
Max.	2.6-3.8W	5.2-7.5W	9.8-10.6W	15.2-14.8W	19.8-19.7W

12 / 24V DC Type

Type	LF2B-B*P-BTHWW2-1M	LF2B-C*P-BTHWW2-1M	LF2B-D*P-BTHWW2-1M
Rated Voltage	12 / 24V DC (Operating Voltage Range: 10.8-30V DC)		
Input Current (Input 12V DC)	Typ. 215mA	409mA	880mA
Max.	236mA	450mA	970mA
Input Power (Input 12V DC)	Typ. 2.6W	4.9W	10.6W
Max.	2.9W	5.4W	11.6W

Use Class 2 power supply when using the LF2B of 12 / 24V DC for electronic equipment to be used North America.

General Specifications

Applicable Standards	UL2108, UL8750, CSA C22.2 No.250.0 (12 / 24V DC only) *1 EN55015, EN61547, EN60598-1, EN62471 FCC Part15 SubpartB/ClassB				
Type No.	LF2B-B*P	LF2B-C*P	LF2B-D*P	LF2B-E*P	LF2B-F*P
Operating Temperature	-30 to +55°C (no freezing)				
Storage Temperature	-35 to +70°C (no freezing)				
Operating Humidity	45 to 85% RH (no condensation)				
Storage Humidity	20 to 90% RH (no condensation)				
Color Temperature (typ.)	6,500K				
Reference Illuminance (typ.) at 0.5m	Clear 290 lx	540 lx	1,065 lx	1,385 lx	1,520 lx
White	265 lx	500 lx	980 lx	1,275 lx	1,400 lx
Life Expectancy *2	40,000 hours (until the brightness reduces to 70% the initial value in 25°C and 45% RH environment)				
Insulation Voltage	100M minimum (500V DC megger)				
Dielectric Strength	100-240V AC: 2,000V AC (between live and dead metal parts) 12 / 24V DC: 1,000V AC (between live and dead metal parts)				
Vibration Resistance (damage limits)	5 to 55Hz amplitude 0.17 mm				
Shock Resistance (damage limits)	300m/s ²				
Material	End Cover, Cable Gland: Polyamide Cover: Polycarbonate, Cable: Chloroethene Mounting Bracket: Stainless Steel (LF9Z-1SB21, LF9Z-1SB22)				
Weight (approx)	AC 200g	255g	400g	520g	645g
DC	175g	235g	370g	-	-
Degree of Protection *3	IP65				

*1 Use Class 2 Power supply when using the LF2B as UL / c-UL Listed Low-voltage Luminaire (12 / 24V DC only).

*2 LED life depends on the operating environment and conditions.

*3 Waterproof characteristics are guaranteed for conditions specified by IEC 60529. requirements and do not assure protection against all actual operating conditions.

3 Installation / Removal

Installation

Installation using the mounting brackets supplied with the LF2B illumination unit (see Dimensions)

Install the LED illumination unit on a panel using the mounting brackets (LF9Z-1SB21) and mounting screws (supplied).

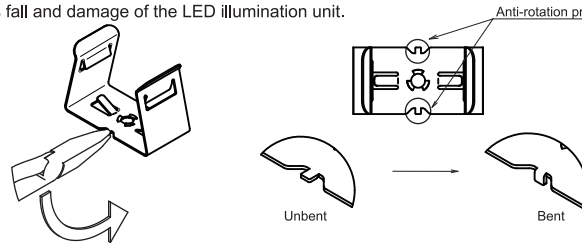
Recommended tightening torque: 1.4 to 2.0 N·m

When using screws commercially available, use M4 screws with screwhead of 1.0 mm maximum.

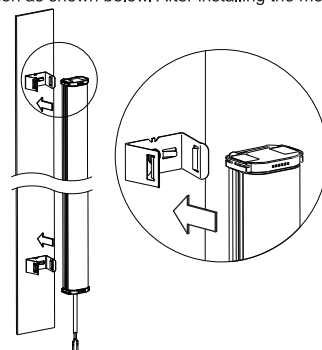
See dimensions for the required quantity of mounting bracket, recommended mounting centers, and mounting hole layout. Note that the LED illumination unit may fall if less mounting brackets than specified are used.

When anti-rotation is needed on the mounting brackets, bend one of the anti-rotation projections at 90 degrees using pliers.

When installing the mounting brackets on a panel by welding, ensure to provide the sufficient welding strength to support the weight of the LED illumination unit. Insufficient welding strength causes fall and damage of the LED illumination unit.



Install the LED illumination as shown below. After installing the mounting brackets on a panel.



Removal

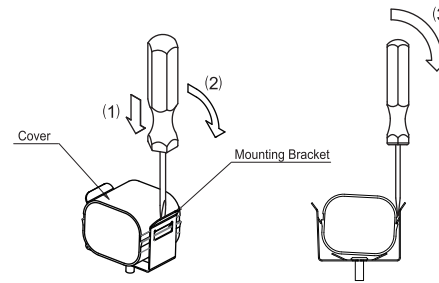
Remove the LED illumination unit using a flat screwdriver as shown below.

(1) Insert the screwdriver between the mounting bracket and cover.

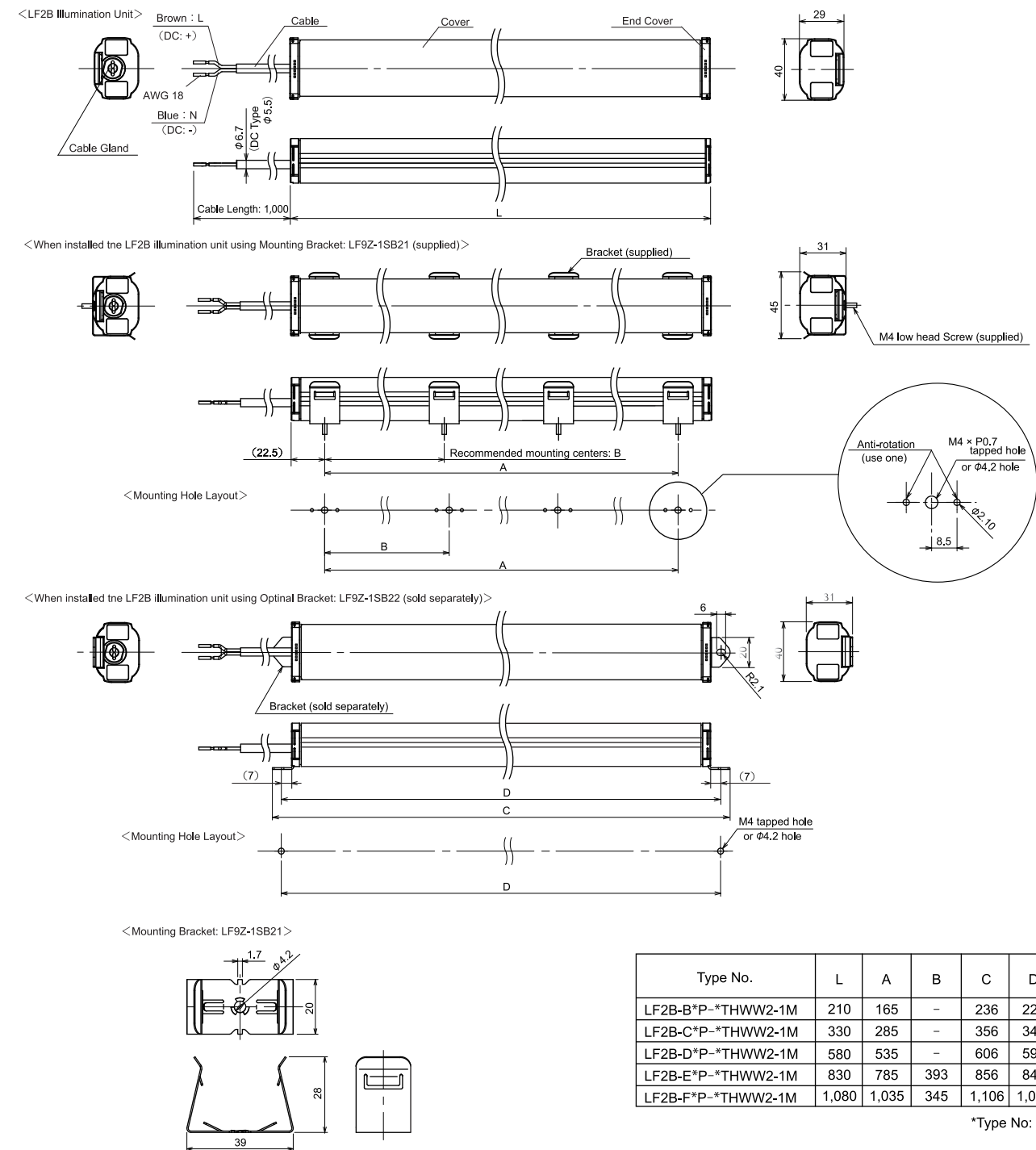
(2) Tilt the screwdriver to the cover side, to detach the mounting bracket from the cover.

Do not force to open the mounting bracket excessively, otherwise the mounting bracket will be disfigured.

(3) Operate the other side like (1), (2).

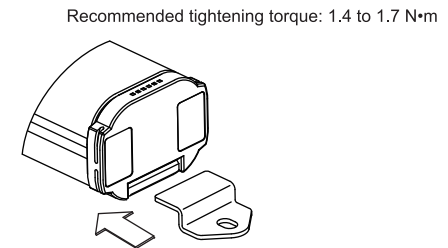


4 Dimensions



Installation using optional brackets (sold separately).

When installing the LF2B illumination unit using optional brackets (LF9Z-1SB22), insert the brackets into the slots at both ends of the end cover, as shown below.



Note: M4 mounting screws are not supplied and must be provided by the user.

Note: Use spring washer (M4) and plain washer (M4) if necessary, in order to prevent the screws from loosening.

(Dimensions: mm)

Type No.	L	A	B	C	D	Q'ty of Mounting Bracket *
LF2B-B*P-*THWW2-1M	210	165	-	236	224	2
LF2B-C*P-*THWW2-1M	330	285	-	356	344	2
LF2B-D*P-*THWW2-1M	580	535	-	606	594	2
LF2B-E*P-*THWW2-1M	830	785	393	856	844	3
LF2B-F*P-*THWW2-1M	1,080	1,035	345	1,106	1,094	4

*Type No: LF9Z-1SB21 (supplied)

IDEC CORPORATION

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