

LED Illumination Units

LF2B

LUMIFA®



Universal input for global applications.
Slim, compact, easy to install.



- See website for details on approvals and standards.

Slim & Compact

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

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 batteryoperated equipment

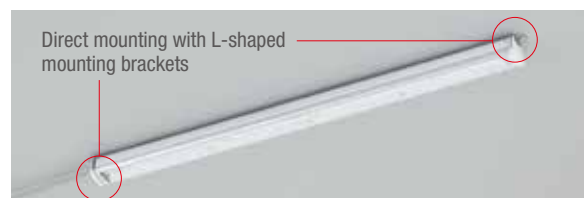
Ideal for battery-operated equipment or applications that are required to operate in emergency, such as solar power equipment.



Two easy mounting styles

Quick and easy installation

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



IP65 waterproof & dustproof



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).



Package quantity: 1

Illumination Color	Daylight			
	Clear Cover		White Cover	
Shape				
Rated Voltage	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 - ATHWW2 - 1M

Length ——— Cover ——— Rated Voltage
 B: 210mm 3: Clear A: 100 to 240V AC
 C: 330mm 4: White B: 12/24V DC (210, 330, and 580mm lengths only)
 D: 580mm
 E: 830mm
 F: 1,080mm

Accessories

Model	Part No.	Quantity	Remarks
U-shaped Mounting Bracket	LF9Z-1SB21	10	Supplied with 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-1SB22	10	Two brackets (for right and left) are required for alternate mounting of an LF2B.

APEM

Switches &
Pilot Lights

Control Boxes

Emergency
Stop Switches

Enabling
Switches

Safety Products

Explosion Proof

Terminal Blocks

Relays & Sockets

Circuit
Protectors

Power Supplies

LED Illumination

Controllers

Operator
Interfaces

Sensors

AUTO-ID

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) (*1)	100 to 240V AC	25 mA	49 mA	80 mA	128 mA	165 mA
	12/24V DC	215 mA	409 mA	880 mA		
Power Consumption (typ.) (at the rated voltage) (*1)	100 to 240V AC	2.2W	4.4W	7.8W	12.2W	15.9W
	12/24V DC	2.6W	4.9W	10.6W		
Insulation Resistance		100MΩ min. (500V DC meggar)				
Dielectric Strength	100 to 240V AC	2,000V AC, 1 minute (between live and dead parts)				
	12/24V DC	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 ² , 2 hours each in 3 axes				
Shock Resistance (damage limits)		300m/s ² , 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 (*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 (AWG18×2C)				
Weight (approx.)	100 to 240V AC	200g	255g	400g	520g	645g
	12/24V DC	175g	235g	370g		

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

*2) LED life depends on the operating environment.

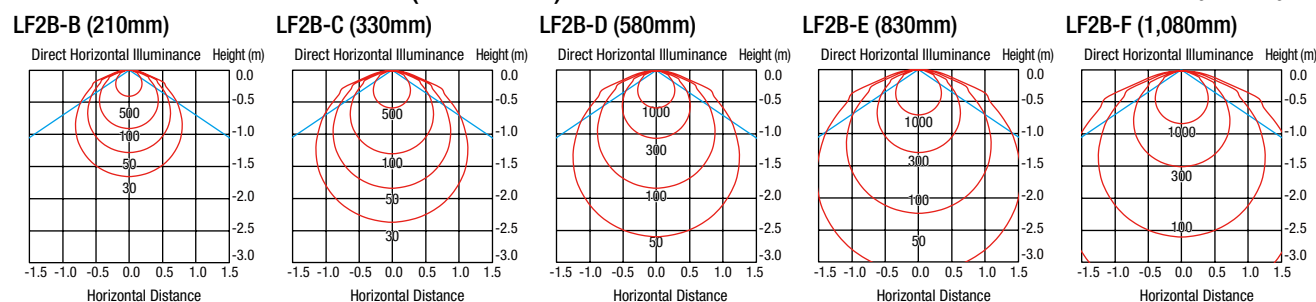
LED Optical Specifications

Illumination Color	Daylight								
Color Temperature	6,500K								
Model	LF2B-B (210mm)		LF2B-C (330mm)		LF2B-D (580mm)		LF2B-E (830mm)		LF2B-F (1,080mm)
Cover	Clear	White	Clear	White	Clear	White	Clear	White	Clear
Luminous Flux (typ.)	235 lm	215 lm	465 lm	425 lm	935 lm	860 lm	1,380 lm	1,270 lm	1,860 lm
Reference Illuminance (typ.) at 0.5m directly below	290 lx	265 lx	540 lx	500 lx	1,065 lx	980 lx	1,385 lx	1,275 lx	1,520 lx

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

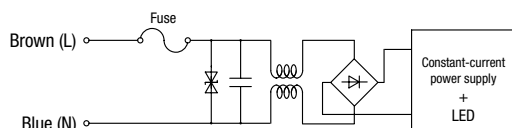
Illuminance Distribution at 0.5m (clear cover)

— Half value angle: 110 degrees

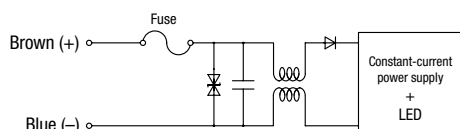


Internal Circuit

100 to 240V AC

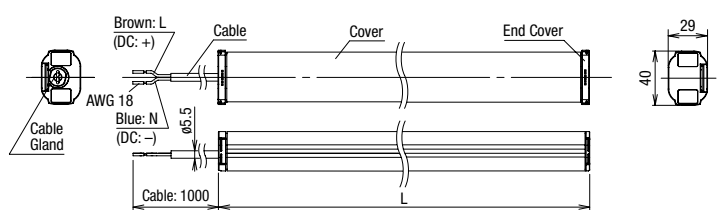


12/24V DC



Dimensions

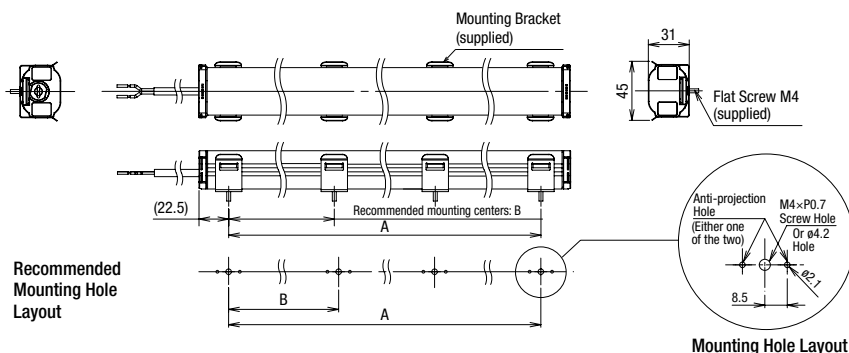
Without mounting bracket



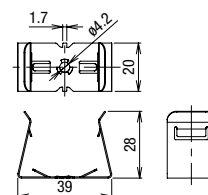
Part No.	L
LF2B-B*P-*THWW2-1M	210
LF2B-C*P-*THWW2-1M	330
LF2B-D*P-*THWW2-1M	580
LF2B-E*P-*THWW2-1M	830
LF2B-F*P-*THWW2-1M	1,080

All dimensions in mm.

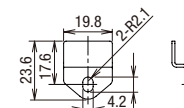
With mounting bracket LF9Z-1SB21 (U-shaped brackets supplied with LED)



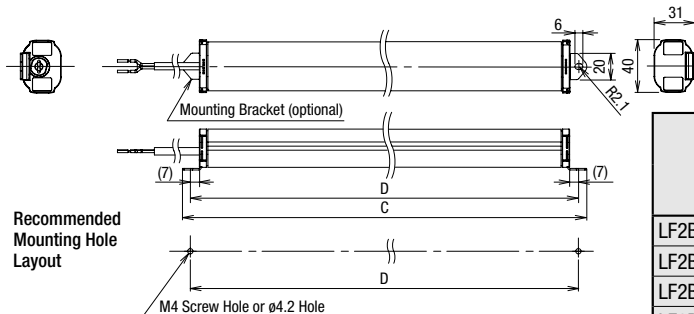
Mounting bracket LF9Z-1SB21



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 (*1)	LF9Z-1SB22
LF2B-B*P-*THWW2-1M	165	—	236	224	2	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	3	
LF2B-F*P-*THWW2-1M	1,035	345	1,106	1,094	4	

*1) Supplied with LF2B.

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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.

Operating 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.

Ordering Terms and Conditions

Thank you for using IDEC Products.

By purchasing products listed in our catalogs, datasheets, and the like (hereinafter referred to as "Catalogs") you agree to be bound by these terms and conditions. Please read and agree to the terms and conditions before placing your order.

1. Notes on contents of Catalogs

- (1) Rated values, performance values, and specification values of IDEC products listed in this Catalog are values acquired under respective conditions in independent testing, and do not guarantee values gained in combined conditions.
Also, durability varies depending on the usage environment and usage conditions.
- (2) Reference data and reference values listed in Catalogs are for reference purposes only, and do not guarantee that the product will always operate appropriately in that range.
- (3) The specifications / appearance and accessories of IDEC products listed in Catalogs are subject to change or termination of sales without notice, for improvement or other reasons.
- (4) The content of Catalogs is subject to change without notice.

2. Note on applications

- (1) If using IDEC products in combination with other products, confirm the applicable laws / regulations and standards.
Also, confirm that IDEC products are compatible with your systems, machines, devices, and the like by using under the actual conditions. IDEC shall bear no liability whatsoever regarding the compatibility with IDEC products.
- (2) The usage examples and application examples listed in Catalogs are for reference purposes only. Therefore, when introducing a product, confirm the performance and safety of the instruments, devices, and the like before use. Furthermore, regarding these examples, IDEC does not grant license to use IDEC products to you, and IDEC offers no warranties regarding the ownership of intellectual property rights or non-infringement upon the intellectual property rights of third parties.
- (3) When using IDEC products, be cautious when implementing the following.
 - i. Use of IDEC products with sufficient allowance for rating and performance
 - ii. Safety design, including redundant design and malfunction prevention design that prevents other danger and damage even in the event that an IDEC product fails
 - iii. Wiring and installation that ensures the IDEC product used in your system, machine, device, or the like can perform and function according to its specifications
- (4) Continuing to use an IDEC product even after the performance has deteriorated can result in abnormal heat, smoke, fires, and the like due to insulation deterioration or the like. Perform periodic maintenance for IDEC products and the systems, machines, devices, and the like in which they are used.
- (5) IDEC products are developed and manufactured as general-purpose products for general industrial products. They are not intended for use in the following applications, and in the event that you use an IDEC product for these applications, unless otherwise agreed upon between you and IDEC, IDEC shall provide no guarantees whatsoever regarding IDEC products.
 - i. Use in applications that require a high degree of safety, including nuclear power control equipment, transportation equipment (railroads / airplanes / ships / vehicles / vehicle instruments, etc.), equipment for use in outer space, elevating equipment, medical instruments, safety devices, or any other equipment, instruments, or the like that could endanger life or human health
 - ii. Use in applications that require a high degree of reliability, such as provision systems for gas / waterworks / electricity, etc., systems that operate continuously for 24 hours, and settlement systems
 - iii. Use in applications where the product may be handled or used deviating from the specifications or conditions / environment listed in the Catalogs, such as equipment used outdoors or applications in environments subject to chemical pollution or electromagnetic interference
If you would like to use IDEC products in the above applications, be sure to consult with an IDEC sales representative.

3. Inspections

We ask that you implement inspections for IDEC products you purchase without delay, as well as thoroughly keep in mind management/maintenance regarding handling of the product before and during the inspection.

4. Warranty

(1) Warranty period

The warranty period for IDEC products shall be one (1) year after purchase or delivery to the specified location. However, this shall not apply in cases where there is a different specification in the Catalogs or there is another agreement in place between you and IDEC.

(2) Warranty scope

Should a failure occur in an IDEC product during the above warranty period for reasons attributable to IDEC, then IDEC shall replace or repair that product, free of charge, at the purchase location / delivery location of the product, or an IDEC service base. However, failures caused by the following reasons shall be deemed outside the scope of this warranty.

- i. The product was handled or used deviating from the conditions / environment listed in the Catalogs
- ii. The failure was caused by reasons other than an IDEC product
- iii. Modification or repair was performed by a party other than IDEC
- iv. The failure was caused by a software program of a party other than IDEC
- v. The product was used outside of its original purpose
- vi. Replacement of maintenance parts, installation of accessories, or the like was not performed properly in accordance with the user's manual and Catalogs
- vii. The failure could not have been predicted with the scientific and technical standards at the time when the product was shipped from IDEC
- viii. The failure was due to other causes not attributable to IDEC (including cases of force majeure such as natural disasters and other disasters)

Furthermore, the warranty described here refers to a warranty on the IDEC product as a unit, and damages induced by the failure of an IDEC product are excluded from this warranty.

5. Limitation of liability

The warranty listed in this Agreement is the full and complete warranty for IDEC products, and IDEC shall bear no liability whatsoever regarding special damages, indirect damages, incidental damages, or passive damages that occurred due to an IDEC product.

6. Service scope

The prices of IDEC products do not include the cost of services, such as dispatching technicians. Therefore, separate fees are required in the following cases.

- (1) Instructions for installation / adjustment and accompaniment at test operation (including creating application software and testing operation, etc.)
- (2) Maintenance inspections, adjustments, and repairs
- (3) Technical instructions and technical training
- (4) Product tests or inspections specified by you

The above content assumes transactions and usage within your region. Please consult with an IDEC sales representative regarding transactions and usage outside of your region. Also, IDEC provides no guarantees whatsoever regarding IDEC products sold outside your region.

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.

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