

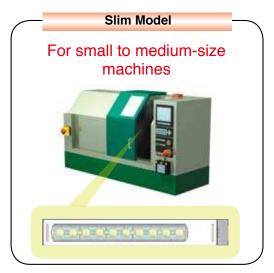
LF1D

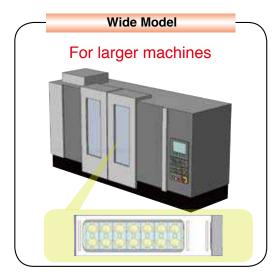


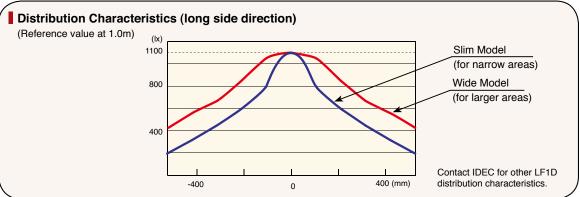
LED Illumination Units (water, dust, and oil-proof)



Excellent light distribution by combining different light-dispersing lenses







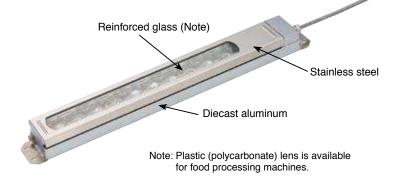
Durable and resistant to harsh environments

High durability

Constructed of diecast aluminum (base), stainless steel (front), and reinforced glass. Unit is resistant to flying debris.

Degree of protection IP69K

High pressure and high temperature washdown Can be used in environments with high-pressure water and that require steam cleaning,.



Easy maintenance

Spring-clamp terminal blocks

Removable direct plug-in terminal block and spring clamp connector ensures a high quality connection, making it easy to install or replace the LED illumination unit.

Flexible mounting

The LED illumination unit can be mounted using mounting holes on the back or ends of its housing.





Part Numbers





Model			Slim Model LF1D-E (10 LEDs × 1 row)		Wide Model LF1D-F (7 LEDs × 2 rows)	
Cable Gland	Cable	Mounting Bracket	Clear Reinforced Glass	Clear Polycarbonate	Clear Reinforced Glass	Clear Polycarbonate
Appearance						
Without (Cable gland hole on the side)	_		LF1D-E2F-2W LF1D-E2F-2W-101	LF1D-E3G-2W LF1D-E3G-2W-101	LF1D-F2F-2W LF1D-F2F-2W-101	LF1D-F3G-2W LF1D-F3G-2W-101
Without (Cable gland hole on the back)	_		LF1D-E2F-2W-200 LF1D-E2F-2W-201	LF1D-E3G-2W-200 LF1D-E3G-2W-201	LF1D-F2F-2W-200 LF1D-F2F-2W-201	LF1D-F3G-2W-200 LF1D-F3G-2W-201
With (Side)	_		LF1D-E2F-2W-300 LF1D-E2F-2W-301	LF1D-E3G-2W-300 LF1D-E3G-2W-301	LF1D-F2F-2W-300 LF1D-F2F-2W-301	LF1D-F3G-2W-300 LF1D-F3G-2W-301
	√		LF1D-E2F-2W-350 LF1D-E2F-2W-A	LF1D-E3G-2W-350 LF1D-E3G-2W-A	LF1D-F2F-2W-350 LF1D-F2F-2W-A	LF1D-F3G-2W-350 LF1D-F3G-2W-A
With (Back)	_		LF1D-E2F-2W-400 LF1D-E2F-2W-401	LF1D-E3G-2W-400 LF1D-E3G-2W-401	LF1D-F2F-2W-400 LF1D-F2F-2W-401	LF1D-F3G-2W-400 LF1D-F3G-2W-401
	√		LF1D-E2F-2W-450 LF1D-E2F-2W-451	LF1D-E3G-2W-450 LF1D-E3G-2W-451	LF1D-F2F-2W-450 LF1D-F2F-2W-451	LF1D-F3G-2W-450 LF1D-F3G-2W-451

Accessories

Addition						
Туре		Material	Part No.	Remarks	Package Qty	
Cable Gland		Brass	LF9Z-A11	M8, applicable wire size: ø3.5 to 5.5 mm (10 to 12AWG)	1	
	For Slim Type	Stainless steel	LF9Z-B11	With mounting screws	2	
Mounting Bracket	For Wide Type	Stainless steel	LF9Z-B12	With mounting screws	2	
Cable		PVC	LF9Z-C05	Length: 5m	1	

Specifications

· General Specifications

Туре	Slim	Wide		
Rated Voltage	24V DC			
Voltage Range	21.6 to 26.4V DC			
Rated Power (typ.)	9W	12.5W		
Insulation Resistance	1MΩ minimum (500V DC megger)			
Dielectric Strength	1000V AC, 50/60 Hz, 1 minute			
Vibration Resistance (damage limits)	Frequency 5 to 55 Hz, amplitude 0.5 mm			
Shock Resistance (damage limits)	1000 m/s ²			
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 gas			
Life (Note 1)	50,000 hours (The illumination duration in which the illuminance maintains a minimum of 70% of the initial value at 25°C.)			
Degree of Protection (Note 2)	IP69K High pressure and high temperature washdown			
Material	Housing: Diecast aluminum Front cover: Stainless steel Lens: Reinforced glass or polycarbonate			
Weight (approx.)	LF1D-E**-2W: 750g LF1D-E**-2W-A: 950g	LF1D-F**-2W: 800g LF1D-F**-2W-A: 1000g		

Note 1: LED life depends on the operating environment.

· LED Optical Specifications

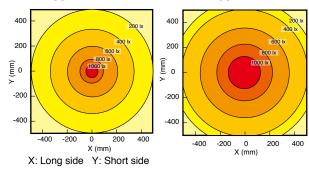
Туре	Slim	Wide	
Illumination Color	White		
Total Luminous Flux (typ.)	600 lm	840 lm	
Color Temperature (typ.)	5700K		
Reference Illuminance (typ.) at 1.0m	1100 lx		

LED modules and illumination units may vary in illumination colors and illuminance. Luminous flux, color temperature, and illuminance shown above are typical values.

Illuminance Distribution (at 1.0m)

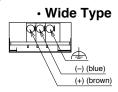
· Slim Type

Wide Type



Terminal Block Wiring

• Slim Type



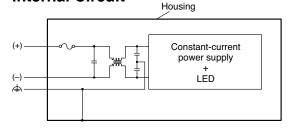
Applicable ferrules: 0.25 to 0.75 mm²

(+) (brown)

Recommended source:

Phoenix Contact: AI 0,25-12 BU, AI 0,34-12 TQ, AI 0,5-12 WH, AI 0,75-12 GY

Internal Circuit

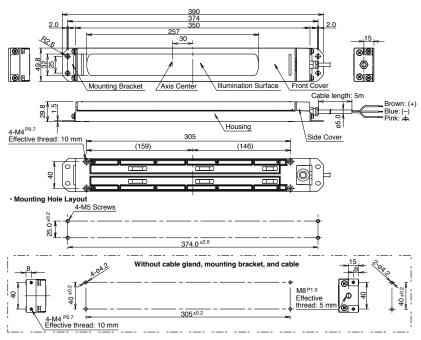




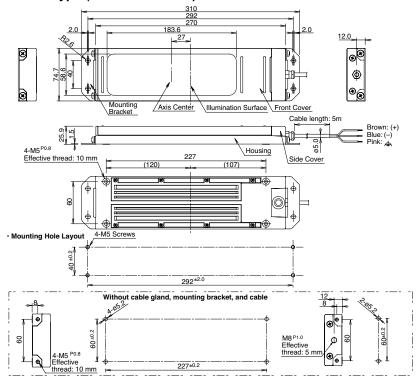
Dimensions

(w/cable gland, mounting bracket, and cable)

Slim Type (10 LEDs × 1 row)



Wide Type (7 LEDs × 2 rows)



Safety Precautions

- Do not disassemble, repair, or modify the LF1D illumination unit. Otherwise accidents may result, such as electric shock, fire, or malfunction.
- Turn off the power to the LF1D illumination unit before wiring. Make sure wiring is correct, otherwise electric shock or damage may result.
- Do not stare directly into the LF1D illumination unit while it is lit, and do not project the light to other people, otherwise eyes may be injured.
- The LF1D illumination unit is a general-purpose industrial electric device. Do not use the LF1D illumination unit for electronic equipment that may cause personal injury or death if a malfunction or failure should occur.

Instructions

- Before designing the final equipment and powering up the LF1D illumination unit, confirm that the specifications described on the instruction sheet have been met. If there is any uncertainty, contact IDEC before powering up the LF1D illumination unit.
- Apply voltage within the rated range, otherwise the LED elements may be damaged.
- The illumination unit is vulnerable to static electricity. Take sufficient precautions for protection against static electricity and voltage surges.
- Make sure that the LF1D illumination unit is not dropped during transportation, installation, and operation, otherwise damage may result.
- Do not pull or push the cable of the LF1D illumination unit, otherwise damage may result. Allow sufficient slack to the cable while wiring.
- Do not apply excessive force to the LF1D illumination unit. Do not leave a damaged LF1D illumination unit unattended or use a damaged LF1D
- Ensure the correct operating temperature around the LF1D illumination unit. Otherwise internal temperature rise may result in damage.
- Do not use or store the LF1D illumination unit in a place subject to vibration and shock.
- Do not use the LF1D illumination unit in the following situations:
- exposure to direct sunlight, heaters, or high temperatures
- subject to chemicals, or corrosive gases (Plastic lens types: Iron powder and oil)
- basements, greenhouses, or other humid locations
- cold storage warehouses or cooler exhaust outlets (make sure that no freezing occurs)
- Do not loosen screws, otherwise the protection characteristics will be impaired.

All dimensions in mm.

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



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