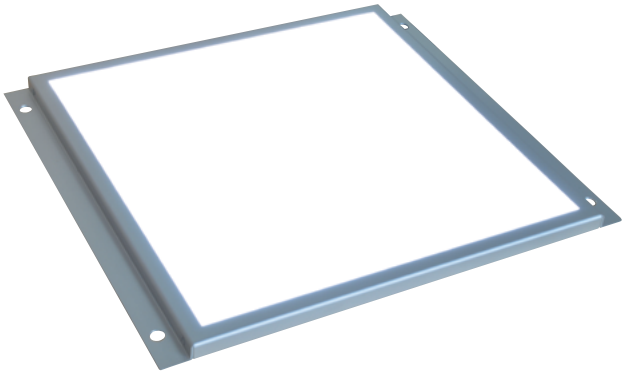
LF1F Series

Visual Inspection Lighting • Elevator Ceiling Lighting

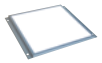
Key features

Unlike fluorescent lights, LED lights do not flicker and therefore illuminate objects evenly. Uneven surfaces, such as scratches and flaws, are more visible providing more accurate inspections. The LF1F provides steady light regardless of ambient temperature and the narrow profile saves space allowing mounting flexibility.

- Energy saving
- Long operating life
- Maintenance free
- 12mm-thin bezel saves space
- 300mm square illuminated surface
- Wider operating temperature range than fluorescent lighting



Part Numbers

Appearance	Model	Cable Length	Size	Color Temperature
	LF1F-B4-2D1	1m	300mm square	8,500K
	LF1F-B4-2D3	3m		

Specifications

LED Optical Specifications

Model	LF1F
Color Temperature	8,500K
Reference Illuminance at 1.0m	5,800lx minimum (panel center)

Operating Specifications

Model	LF1F
Operating Voltage Range	21.6 ~ 26.4V DC
Wattage (typ.)	11W
Insulation Resistance	100MΩ minimum
Dielectric Strength	1,000V, 50/60Hz, 1 minute
Vibration Resistance	5 ~ 55Hz, amplitude 0.5mm, 60m/s^2 (3 directions, 2 hours each)
Shock Resistance	1,000m/s^2
Operating Temperature	-10° ~ 60 (no freezing)
Operating Humidity	45 ~ 85% RH (no condensation)
Storage Temperature	-20° ~ 70°C (no freezing)
Operating Environment	No corrosive gases, no harmful dust
Life [1]	40,000 hours
Degree of Protection	IP20 (IEC60529)
Materials	Housing: Aluminum Light emitting part: acrylic; Cover: acrylic
Weight (approx.)	1.1kg

1. LED life depends upon operating environment.

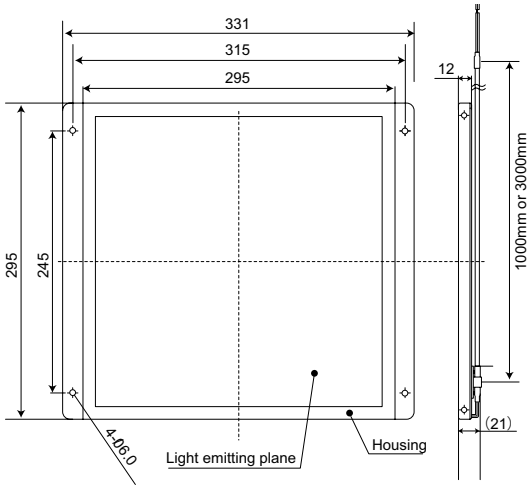
Applications

Ideal for visual inspection, as the LF1F makes it easy to see even the slightest surface flaws.

Application examples for product inspections

- Detect uneven plastic and rubber part surfaces
- Detect dust on glass or plastic plates
- Illuminate marks on metal surfaces during cutting and marking
- Detect flaws on painted or plated surfaces
- Detect scratches and unevenness on embossed materials
- Detect scratches and foreign materials on silicon wafers
- Elevator illumination

Dimensions (mm)



(Light emitting plane: 271 x 271)

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.