LUMIFA LED Light Strips

Long-lasting & so bright you gotta wear shades!

LF1A Series shown

As IDEC continues to move towards a green future, we are excited to announce the LUMIFA series of LED light strips, LF1A and LF1B.

LF1A and LF1B LED light strips give you a way to save time, energy and money. These environmentally-friendly light units pay for themselves, you recoup their cost with savings over time. Perfect for narrow areas, those not easily accessible or that are dangerous to access, these LEDs have a minimum lifespan of 40,000 hours. Once installed, you won't have to worry about maintenance issues for a long time! Plus these LED light strips provide a bright light source while producing very little heat (even less than a fluorescent lamp).

For more information, please contact IDEC at 1-800-262-IDEC (4332) or visit www.IDEC.com/usa/lumifa**.**

NEW! *LF1A* - see page 2

- Energy saving:
  One-third the power of fluorescent lamps

- Long life:
  Five times more than fluorescent lamps

- Colors: cool white (5500K),   warm white (2800K), yellow (590nm) and red (625nm)

- Vibration and shock resistant

- IP40 degree of protection

- RoHS compliant, mercury-free

NEW! *LF1A-D2F* - see page 4

- Energy saving:
  One-third the power of fluorescent lamps

- Long life:
  Five times more than fluorescent lamps

- IP67f protection: water, dust and oil resistant

- Stainless steel front bezel

- Reinforced glass front face

- RRoHS compliant, mercury-free
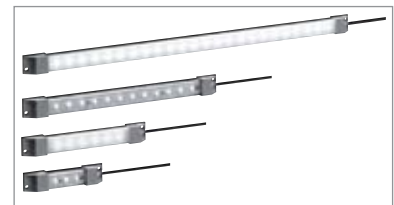
NEW! *LF1B* - see page 6

- Energy saving:
  One-third the power of fluorescent lamps

- Long life:
  Five times more than fluorescent lamps

- Space saving; width 27.5mm, thickness 16mm

- Four lengths to choose from

- Two cover colors: white or clear

- IP54 degree of protection: water & dust resistant

- RoHS compliant, mercury-free
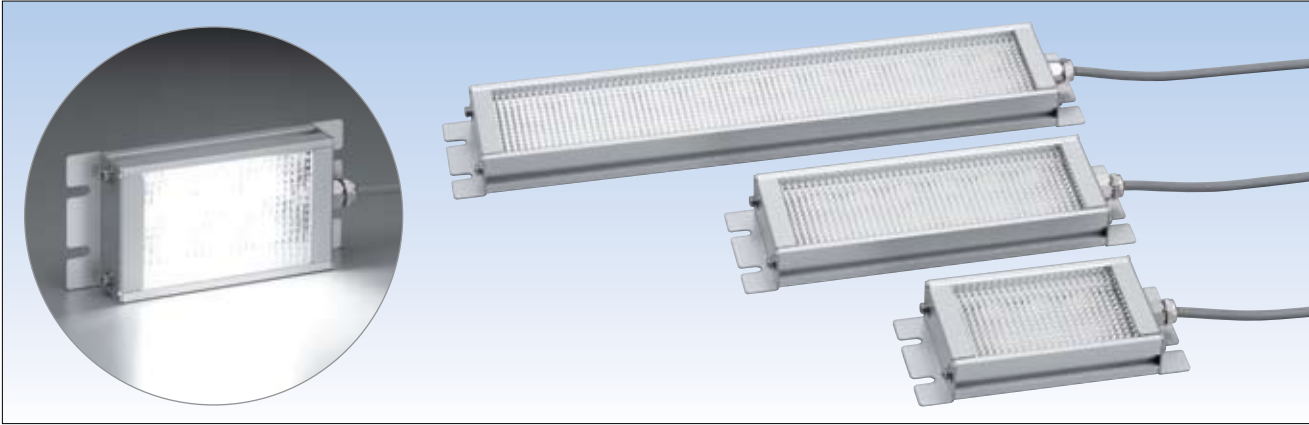
Call (800) 262.IDEC   **www.IDEC.com/usa/lumifa**

LF1A Series (IP40)

LED Module & High Heat-radiation Technology Create a Thin LED Housing

LF1A LED strips use super-bright multi-chip LEDs providing illumination equivalent of a 20W fluorescent lamp, while consuming only one third the power. They come in a thin housing, available in three sizes, with four color configurations (warm white, cool white, yellow and red). **LF1A light strips have a rated voltage of 24V DC.**

Features

Illumination Color	White	Warm White	Yellow	Red
Part No.	LF1A-*-2THWW6	LF1A-*-2TLWW6	LF1A-*-2SHY8	LF1A-*-2SHR8
Appearance				
Spectrum				
Features	Suppressing glare, the bright, white color lights up a target object very clearly.	Warm white is similar to that of an incandescent light bulb. This illumination color is 2800K.	Yellow gives off an emission spectrum with a dominant wavelength of 590nm.	Red gives off an emission spectrum with a long wavelength (dominant wavelength of 625nm).

*A1 = 3 LEDs, B1 - 6 LEDs, D1 = 12 LEDs

Application Examples

- Machine Tools
- Control Panel/Plant Equipment
- Inspection/Test Equipment
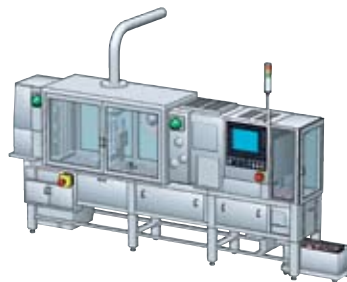
- Food Processing Machines
- Cosmetic Plants
- Chemical Plants

- Semiconductor Manufacturing Equipment
- IC Plants

- Application Equipment for Photosensitive Materials
- Semiconductor Manufacturing Equipment

Specifications
General Specifications

Part No.	LF1A-*-2THWW6	LF1A-*-2TLWW6	LF1A-*-2SHY8	LF1A-*-2SHR8
Rated Voltage	24V DC (non-polarized)			
Input Current (typ.) (at rated voltage) — 3 LEDs x 2 rows	75mA		90mA	
Input Current (typ.) (at rated voltage) — 6 LEDs x 2 rows	150mA		180mA	
Input Current (typ.) (at rated voltage) — 12 LEDs x 2 rows	300mA		360mA	
Rated Power (typ.) (at rated voltage) — 3 LEDs x 2 rows	1.8W		2.2W	
Rated Power (typ.) (at rated voltage) — 6 LEDs x 2 rows	3.6W		4.4W	
Rated Power (typ.) (at rated voltage) — 12 LEDs x 2 rows	7.2W		8.7W	
Dielectric Strength	Between live and dead parts: 1000V AC, 1 minute			
Insulation Resistance	Between live and dead parts: 100MΩ (500V DC megger)			
Operating Temperature	-20 to +50ºC			
Storage Temperature	-25 to +70ºC			
Operating/Storage Humidity	45 to 85% RH (no condensation)			
Life (half luminance)	40,000 hours			
Weight (approx.)	LF1A-A1: 190g, LF1A-B1: 270g, LF1A-D1: 470g			
Degree of Protection	IP40			

*A1 = 3 LEDs, B1 - 6 LEDs, D1 = 12 LEDs

LED Optical Specifications

Part No.	LF1A-*-2THWW6	LF1A-*-2TLWW6	LF1A-*-2SHY8	LF1A-*-2SHR8
Illumination Color	Cool White	Warm White	Yellow	Red
Luminous Intensity (typ.) (Single LED module)	6000mcd	4000mcd	4000mcd	2500mcd
Color Temperature (typ.) / Dominant Wavelength (typ.)	5500K	2800K	590nm	625nm
Reference Illuminance (typ.) at 500 mm — 3 LEDs x 2 rows	190lx	130lx	130lx	85lx
Reference Illuminance (typ.) at 500 mm — 6 LEDs x 2 rows	380lx	260lx	260lx	170lx
Reference Illuminance (typ.) at 500 mm — 12 LEDs x 2 rows	760lx	520lx	520lx	340lx

Dimensions (mm)
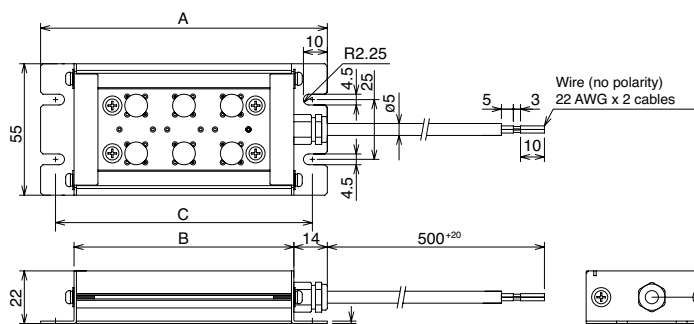
Dimensions

Part No.	A	B	C
LF1A-A1-*	120	92	108
LF1A-B1-*	180	152	168
LF1A-D1-*	300	272	288

Internal Circuit
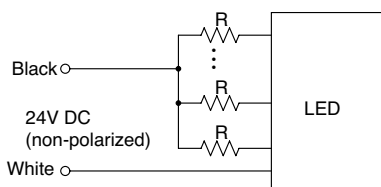
Part Numbers

Length (mm)	LEDs	Color	Part Number
120	3 x 2 rows	Cool White	LF1A-A1-2THWW6
		Warm White	LF1A-A1-2TLWW6
		Yellow	LF1A-A1-2SHY8
		Red	LF1A-A1-2SHR8
180	6 x 2 rows	Cool White	LF1A-B1-2THWW6
		Warm White	LF1A-B1-2TLWW6
		Yellow	LF1A-B1-2SHY8
		Red	LF1A-B1-2SHR8
300	12 x 2 rows	Cool White	LF1A-D1-2THWW6
		Warm White	LF1A-D1-2TLWW6
		Yellow	LF1A-D1-2SHY8
		Red	LF1A-D1-2SHR8

LF1A-D2F Series (IP67f)

Safe for Industrial Enviroments Where Water/Oil Splatter May Occur

An internal waterproof gasket and transparent panel with thick reinforced glass make LF1A-D2F LED light strips perfect for use in a food processing line or outdoors where they might be immersed or sprayed with water or oil. These light strips are also RoHS compliant, mercury free. **LF1A-D2F light strips have a rated voltage of 24V DC.**

Degree of protection (IP67f)
Water-proof, dust-proof, oil-proof models that use special rubber (fluorinated elastomer) as an internal waterproof gasket.

The LF1A series can be used on a food processing line that needs to be washed or in a machine tool where the unit may be splashed with oil.

Easy installation
Equipped with a standard 5m cable (metal protection tube can be mounted).

Safe
The front transparent panel uses reinforced glass with a thickness of 4mm, ensuring safety against shavings or filings.

Compact body
Low-profile design unique to LED illumination.

Allows for installation in a machine where space is limited.

Environmental-proof housing
The front housing panel is made of stainless steel (SUS304), ensuring high strength and corrosion resistance.

Other features
- Energy-saving: Power consumption is approx. one third that of fluorescent lamps.
- Long life: Maintenance not needed for approx. 40,000 hrs.
- Clean: Compliant with RoHS directive, mercury-free.
- Vibration/Impact resistance: Unlike fluorescent lamps, an LED unit with no electric contact, is resistant to vibration.
- Low heat: The LED unit gives off less heat than a fluorescent lamp.
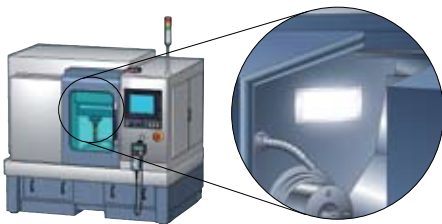- Noiseless: The LED unit can be used in a location near electronic equipment.

Bright
With the extremely bright multi-chip LED modules, the LF1A series provides illumination equivalent to a 20W fluorescent lamp.

Easy to see
The cool white LED gives off a color of 5500K, allowing for clear lighting conditions in any workplace.

Application Examples

- Machine Tools
- Food Processing Lines
- Automotive/Outdoor Equipment, etc.

- Semiconductor Manufacturing Equipment

Specifications

General Specifications

|	
Rated Voltage	24V DC (non-polarized)
Input Current (typ.)	300mA (at rated voltage)
Rated Power (typ.)	7.2W (at rated voltage)
Operating Temperature	-20 to +50ºC
Storage Temperature	-25 to +70ºC
Operating/Storage Humidity	45 to 85% RH (no condensation)
Life (half luminance)	40,000 hours
Insulation Resistance	100MΩ minimum (500V DC megger)
Dielectric Strength	1000V AC, 1 minute (between live and dead parts)
Vibration Resistance (damage limits)	5 to 55Hz, amplitude 0.5mm, 20 m/s^2
Shock Resistance (damage limits)	980m/s^2
Material	Housing: Stainless Steel (SUS304) Glass: Reinforced glass Rear panel: Aluminum Electric wire: 24 AWG, 2 conductors
Weight (approx.)	850g
Degree of Protection	IP67f

LED Optical Specifications

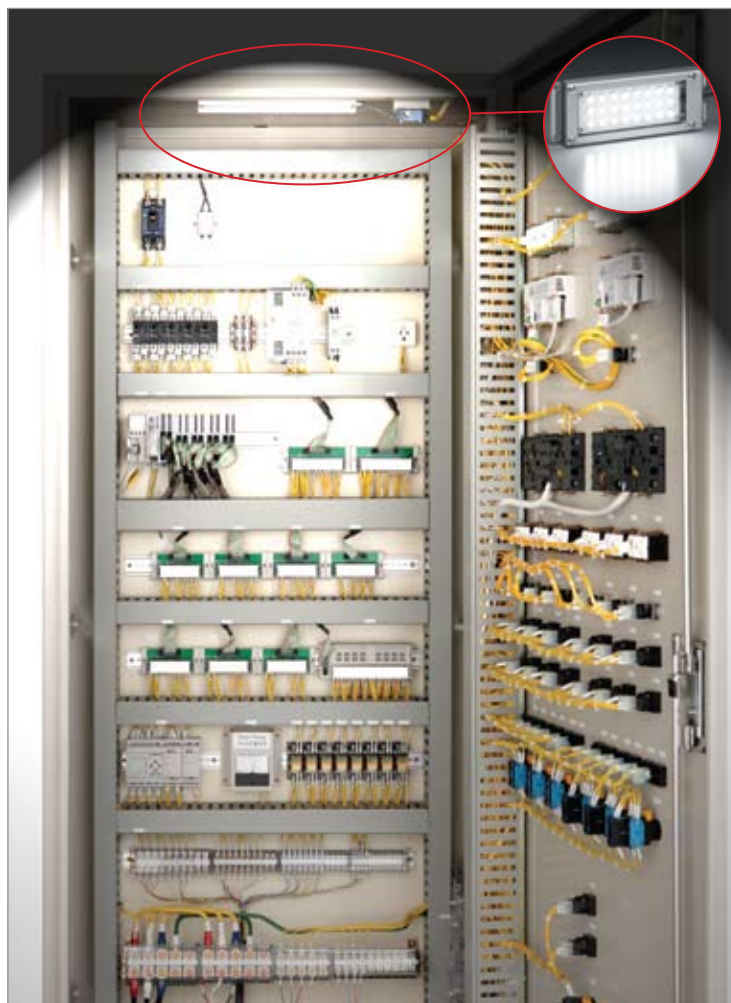|	
Illumination Color	White
Chromaticity Coordinate Value (typ.)	X: 033,Y: 0.33
Luminous Intensity (typ.)	6000mcd
Color Temperature (typ.)	5500K
Reference Illuminance (typ.) at 500mm	600lx

Internal Circuit
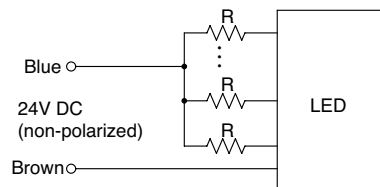
Dimensions (mm)
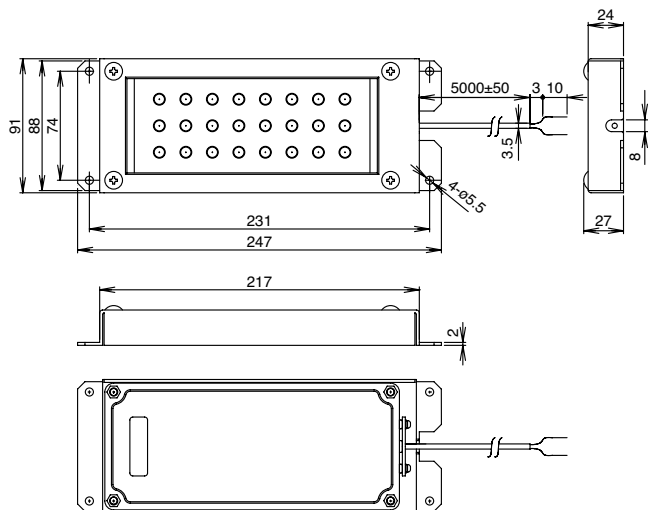
Part Number

| Length (mm)	LEDs	Color	Part Number
247	8 x 3 rows	Cool White	LF1A-D2F-2THWW6

LF1B Series (IP54)

Miniature LED Modules with High Heat-dissipation in a Slim Housing

LF1B miniature LED light strips are housed in a thin light strip, and are available in four sizes with a choice of two covers (clear or white). Customers needing an LED that can provide protection from dust, as well as from limited water spray, have their answer. **LF1B light strips are white in color and have a rated voltage of 24V DC.**
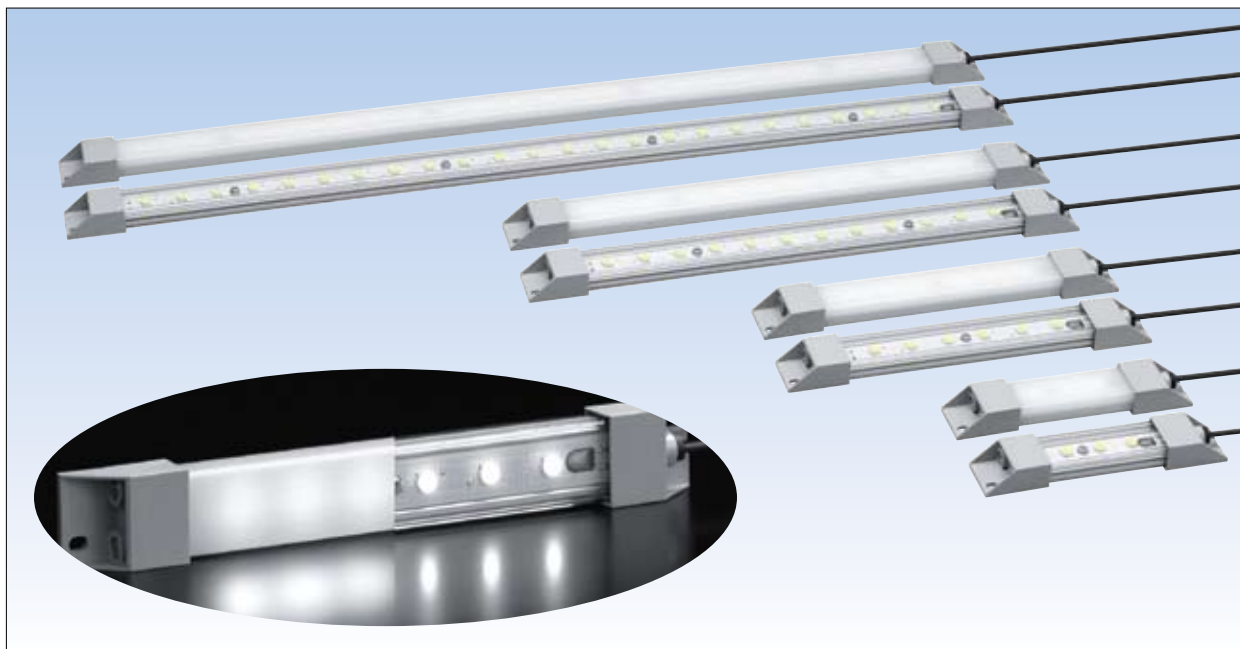

Features

- LED light source ensures energy savings, long life, compact size, noise-free, low heat generation
- Four different lengths
- Slim style fits into narrow spaces
- Two cover colors: clear and white (diffused light)
- Bright, clear illumination (color 5500K)
- Degree of protection: IP54

Application Examples

- Machine Tools
- Control Panel/Plant Equipment
- Inspection/Test Equipment
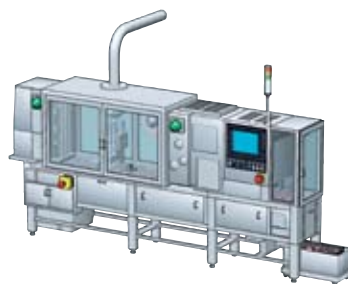
- Food Processing Machines
- Cosmetic Plants
- Chemical Plants

- Semiconductor Manufacturing Equipment
- IC Plants
- Refrigerators & Freezers

- Application Equipment for Photosensitive Materials
- Semiconductor Manufacturing Equipment
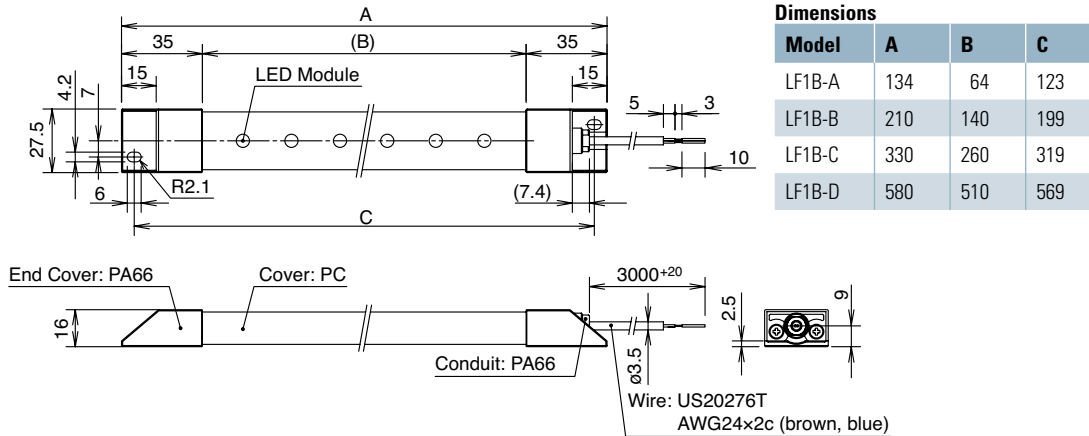
Specifications

General Specifications

Part No.	LF1B-A*S-2THWW4	LF1B-B*S-2THWW4	LF1B-C*S-2THWW4	LF1B-D*S-2THWW4
Rated Voltage	24V DC (non-polarized)			
Input Current (typ.) (at the rated voltage)	30mA	60mA	120mA	240mA
Rated Power (typ.) (at the rated voltage)	0.8W	1.5W	2.9W	5.8W
Insulation Resistance	100MΩ minimum (500V DC megger)			
Dielectric Strength	1000V AC, 1 minute (between live and dead parts)			
Operating Temperature	−30 to +55ºC (no freezing)			
Operating Humidity	45 to 85% RH (no condensation)			
Storage Temperature	−35 to +70ºC (no freezing)			
Life	40,000 hours (half brightness)			
Weight (approx.)	95g	125g	165g	255g
Degree of Protection	IP54			
Construction	Plastic housing (middle): PC (UL94-V2), Plastic housing (ends): PA66 G15 (UL94-V0) Wire: US20276T, AWG24 & 2 conductors			

LED Optical Specifications

| Part No.	LF1B-A*S-2THWW4	LF1B-B*S-2THWW4	LF1B-C*S-2THWW4	LF1B-D*S-2THWW4
Color Temperature (typ.)	5500K			
Brightness (typ.) (at 500 mm)	Clear: 90lx White: 80lx	Clear: 170lx White: 150lx	Clear: 330lx White: 300lx	Clear: 560lx White: 500lx

* 3 = clear cover, 4 = white cover

Dimensions (mm)

Dimensions

Model	A	B	C
LF1B-A	134	64	123
LF1B-B	210	140	199
LF1B-C	330	260	319
LF1B-D	580	510	569

Part Numbers

| Length (mm)	LEDs	Cover	Part Number
134	3 x 1 row	Clear	LF1B-A3S-2THWW4
		White	LF1B-A4S-2THWW4
210	6 x 1 row	Clear	LF1B-B3S-2THWW4
		White	LF1B-B4S-2THWW4
330	12 x 1 row	Clear	LF1B-C3S-2THWW4
		White	LF1B-C4S-2THWW4
580	24 x 1 row	Clear	LF1B-D3S-2THWW4
		White	LF1B-D4S-2THWW4

Internal Circuit
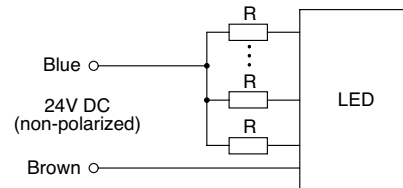
LF1 Series Mounting Accessories

Mount at Any Angle From 0 to 90 Degrees

The adjustable mounting accessories hold the LED Light Strips at any angle (in 10 degree increments). They can be used in many environments such as internal illumination for machine tools, metal processing machines, semiconductor production equipment, printing presses, chip mounters, and automatic production machines. They are made of stainless steel.
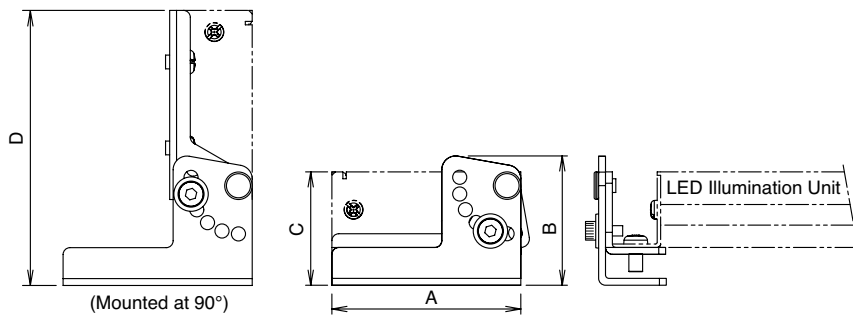
LF9Z-1MB1

LF9Z-1MA1
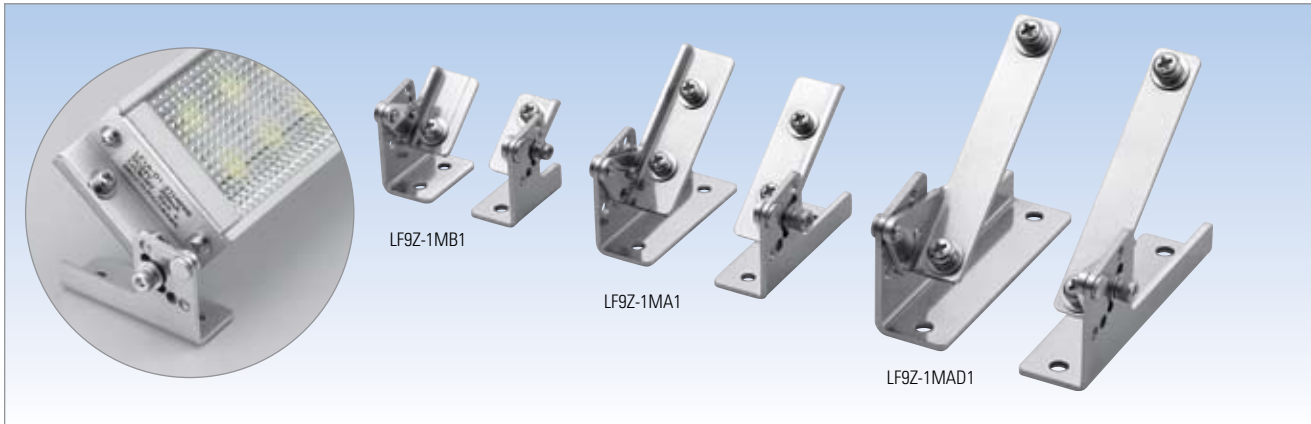
LF9Z-1MAD1

Part Numbers

Description	Part Numbers
Applicable for LF1A Series	LF9Z-1MA1*
Applicable for LF1A-D2F Series	LF9Z-1MAD1 *
Applicable for LF1B series	LF9Z-1MB1 *

* Mounting accessories are sold in pairs (one left and one right per package).
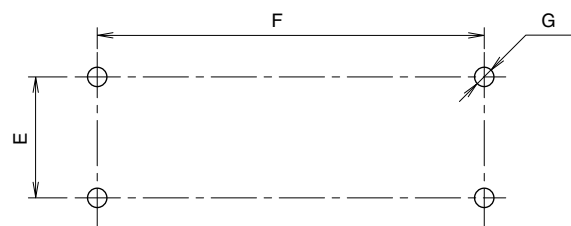
Dimensions (mm)

(Mounted at 90°)

The above drawing illustrates LF9Z-1MA1.

LED Illumination Unit

Dimensions

Part No.	A	B	C	D
LF9Z-1MB1	27.5	35.2	27	50.5
LF9Z-1MA1	55	37.9	33	80
LF9Z-1MAD1	88	43.2	37	121

1. The angle is adjusted using hex socket bolts.
2. Applicable environment and mechanical strength depends upon the LED light strip.

Mounting Hole Layout (mm)

Dimensions

Part No.	E	F	G
LF9Z-1MB1	14	see note below	4-ø4.2
LF9Z-1MA1	25	see note below	4-ø4.2
LF9Z-1MAD1	74	231	4-ø5.5

Same as the LED light strip.