

LUMIFA LF1B-N

Industrial Machines • Semiconductor Equipment • Control Panels



PRODUCT DESCRIPTION

The LF1B-N series is available in six lengths, two covers (transparent or white) and six distinct colors—cool white, warm white, yellow, red, blue and green—making it a flexible lighting solution for control panels, industrial machines, manufacturing lines, work stations and more. These compact, energy-efficient units are low-maintenance and last for years, contributing to overall cost savings.

KEY FEATURES

- Compact size: 27.5 mm wide x 16 mm high
- Six lengths: 134, 210, 330, 580, 830 and 1,080 mm
- Vibration- and shock-resistant
- Yellow light ideal for photosensitive materials
- IP65-rated for use in wet environments

GENERAL SPECIFICATIONS

Model		LF1B-NA (134mm)	LF1B-NB (210mm)	LF1B-NC (330mm)	LF1B-ND (580mm)	LF1B-NE (830mm)	LF1B-NF (1,080mm)
Rated Voltage		24V DC (operating voltage range: 21.6 to 26.4V)					
Input Current (typ.) (at the rated current), mA	cool white/warm white/blue	60	120	180	360	540	720
	red/yellow/green	40	80	120	240	360	480
Power Consumption (typ.) (at the rated current), W	cool white/warm white/blue	1.5	2.9	4.4	8.7	13.0	17.3
	red/yellow/green	1.0	2.0	2.9	5.8	8.7	11.6
Insulation Resistance		100MΩ minimum (500V DC megger)					
Dielectric Strength		1,000V AC, 1 minute (between live and dead parts)					
Vibration Resistance (damage limits)		Frequency: 5 to 55Hz, Amplitude 0.5mm Acceleration 60m/s ² (6G), 2 hours each in 3 axes				Frequency: 5 to 55Hz, Amplitude 0.17mm Acceleration 20m/s ² (2G), 2 hours each in 3 axes	
Shock Resistance (damage limits)		1,000m/s ² (100G), 5 shocks each in 6 axes				300m/s ² (30G), 5 shocks each in 6 axes	
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 gases					
Life¹		40,000 hours (Ta = 25°C) (The total illumination life in which the brightness 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 (24AWG)					
Weight (approx.), g		95	125	165	255	430	740

1. LED life depends on the operating environment.



LED OPTICAL SPECIFICATIONS

Illumination Color		Cool White		Warm White		Yellow		Red		Blue		Green	
Cover		Clear	White	Clear	White	Clear	White	Clear	White	Clear	White	Clear	White
Color Temperature/Dominant Wavelength (typ.)		6500K		3000K		590nm		620nm		455nm		525nm	
Reference Brightness (typ.) at 0.5m, lx	LF1B-NA	95	85	90	80	20	18	20	18	10	9	30	27
	LF1B-NB	240	215	230	2100	40	36	40	36	20	18	60	55
	LF1B-NC	455	410	440	395	75	65	75	65	30	27	110	100
	LF1B-ND	840	750	815	725	125	110	125	110	50	45	190	170
	LF1B-NE	1100	995	1065	960	160	145	160	145	60	55	260	235
	LF1B-NF	1350	1210	1300	1170	180	160	180	160	80	70	300	270

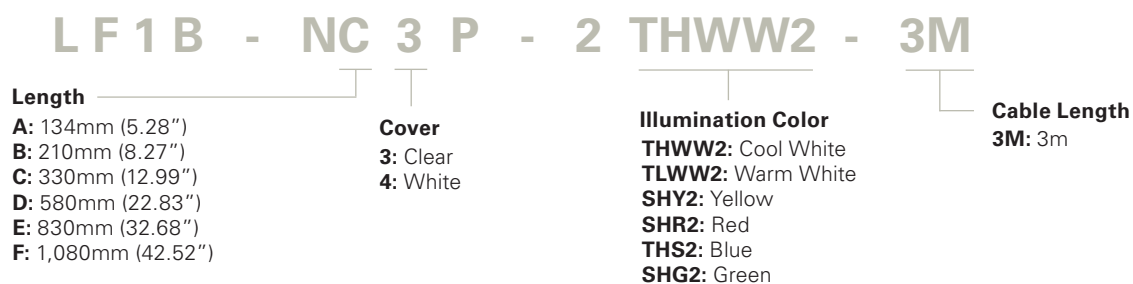
LED modules and illumination units may vary in illumination colors and brightness.

PART NUMBERS

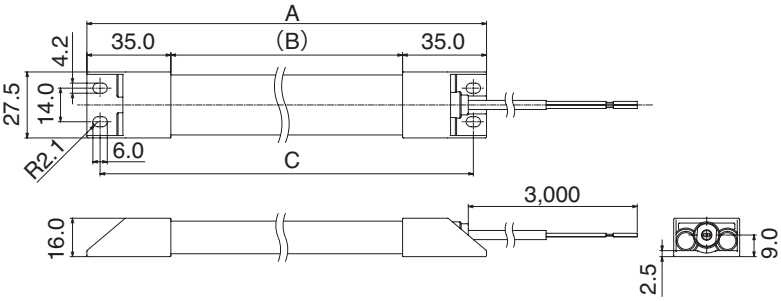
Illumination Color	Cool White	Warm White	Yellow	Red	Blue	Green
Appearance						
LF1B-NA (134mm)	LF1B-NA⊙P-2THWW2-3M	LF1B-NA⊙P-2TLWW2-3M	LF1B-NA⊙P-2SHY2-3M	LF1B-NA⊙P-2SHR2-3M	LF1B-NA⊙P-2THS2-3M	LF1B-NA⊙P-2SHG2-3M
LF1B-NB (210mm)	LF1B-NB⊙P-2THWW2-3M	LF1B-NB⊙P-2TLWW2-3M	LF1B-NB⊙P-2SHY2-3M	LF1B-NB⊙P-2SHR2-3M	LF1B-NB⊙P-2THS2-3M	LF1B-NB⊙P-2SHG2-3M
LF1B-NC (330mm)	LF1B-NC⊙P-2THWW2-3M	LF1B-NC⊙P-2TLWW2-3M	LF1B-NC⊙P-2SHY2-3M	LF1B-NC⊙P-2SHR2-3M	LF1B-NC⊙P-2THS2-3M	LF1B-NC⊙P-2SHG2-3M
LF1B-ND (580mm)	LF1B-ND⊙P-2THWW2-3M	LF1B-ND⊙P-2TLWW2-3M	LF1B-ND⊙P-2SHY2-3M	LF1B-ND⊙P-2SHR2-3M	LF1B-ND⊙P-2THS2-3M	LF1B-ND⊙P-2SHG2-3M
LF1B-NE (830mm)	LF1B-NE⊙P-2THWW2-3M	LF1B-NE⊙P-2TLWW2-3M	LF1B-NE⊙P-2SHY2-3M	LF1B-NE⊙P-2SHR2-3M	LF1B-NE⊙P-2THS2-3M	LF1B-NE⊙P-2SHG2-3M
LF1B-NF (1,080mm)	LF1B-NF⊙P-2THWW2-3M	LF1B-NF⊙P-2TLWW2-3M	LF1B-NF⊙P-2SHY2-3M	LF1B-NF⊙P-2SHR2-3M	LF1B-NF⊙P-2THS2-3M	LF1B-NF⊙P-2SHG2-3M

In place of ⊙ insert 3 for clear cover and 4 for white cover.

PART NUMBER STRUCTURE (USE FOR INTERPRETING PART NUMBERS ONLY)



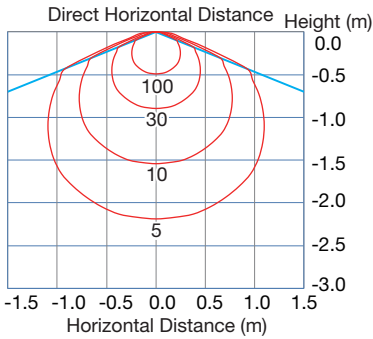
DIMENSIONS (mm)



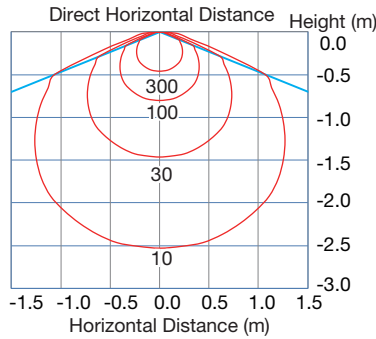
Model	A		B		C	
	mm	inch	mm	inch	mm	inch
LF1B-NA	134	5.28	64	2.52	123	4.84
LF1B-NB	210	8.27	140	5.51	199	7.83
LF1B-NC	330	12.99	260	10.24	319	12.56
LF1B-ND	580	22.83	510	20.08	569	22.40
LF1B-NE	830	32.68	760	29.92	819	32.24
LF1B-NF	1080	42.52	1010	39.76	1069	42.09

ILLUMINANCE DISTRIBUTION (lm)

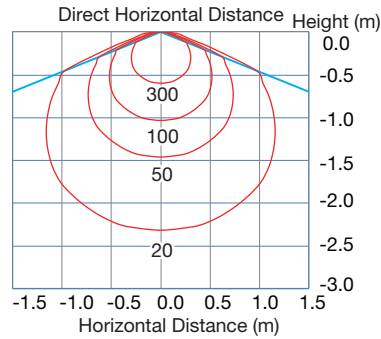
LF1B-NA3P-2THWW2-*



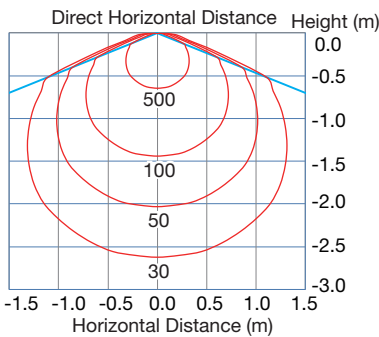
LF1B-NB3P-2THWW2-*



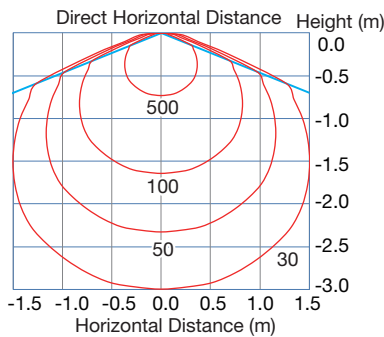
LF1B-NC3P-2THWW2-*



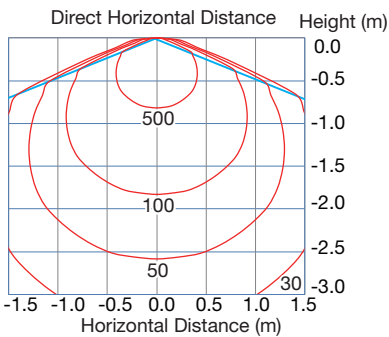
LF1B-ND3P-2THWW2-*



LF1B-NE3P-2THWW2-*



LF1B-NF3P-2THWW2-*



ACCESSORY

Item	Mounting Bracket—Adjustable Angle	
Part No.	LF9Z-1MB1	
Material	Stainless Steel	

- 1. 1 pair, Left and Right.
- 2. Not applicable to LF1B-ND, NE, NF.

LUMIFA LF2B

Control Panels • Industrial Equipment • Manufacturing Lines & Work Stations



PRODUCT DESCRIPTION

The LF2B features a rugged, slim design for industrial applications and installations where space is limited. Its high illuminance, snap-in mounting brackets, range of input voltages, DC-battery compatibility and IP65 rating make this series ideal for a wide variety of lighting applications, from control panels to industrial equipment in wet environments.

KEY FEATURES

- Slim size: 40 mm wide x 29 mm high
- Five lengths: 210, 330, 580, 830 and 1,080 mm
- Clear or white cover options
- 100-240V AC or 12/24V DC rated voltages
- Mounting brackets enable one-step installation process in tight spaces
- IP65-rated for use in wet environments

GENERAL SPECIFICATIONS

Model		LF2B-B (210mm)	LF2B-C (330mm)	LF2B-D (580mm)	LF2B-E (830mm)	LF2B-F (1,080mm)
Rated Voltage		100-240V AC 50/60Hz (Voltage range: 90-264V AC)				
		12V/24V DC (Voltage range: 10.8-30V DC)				
Input Current (typ.) (at the rated voltage) ¹ , mA	AC100~240V AC	28	57	80	128	165
	12V/24V DC	215	409	880	–	–
Rated Power (at the rated voltage), W	100~240V AC	2.2	4.4	7.8	12.2	15.9
	12V/24V DC	2.6	4.9	10.6	–	–
Insulation Resistance		100MΩ minimum (500V DC megger)				
Dielectric Strength	100~240V AC	2,000V AC, 1 minute (between live and dead parts)				
	12V/24V DC	1,000V AC, 1 minute (between live and dead parts)			–	
Vibration Resistance		Frequency 5 - 55Hz, Amplitude 0.17mm, speed acceleration 20m/s ² , 3 directions, 2 hours each				
Shock Resistance		300m/s ² , 6 directions, 5 times each				
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 gases				
Life ²		40,000 hours (Ta = 25°C) (The total illumination life in which the brightness maintains a minimum of 70% of the initial value.)				
Degree of Protection		IP65 (IEC 60529)				
Material		Front Cover: Polycarbonate Resin; End Cover/Cable Gland: Polyamide Resin; Cable: PVC sheathing (24AWG)				
Weight (approx.), g	100~240V AC	200	255	400	520	645
	12V/24V DC	175	235	370	–	–

1. 100V AC input for 100~240V AC; 12V DC input for 12V/24V DC.
2. LED life depends on the operating environment.



*UL applies for DC units only.

LED OPTICAL SPECIFICATIONS

Model	LF2B-B (210mm)		LF2B-C (330mm)		LF2B-D (580mm)		LF2B-E (830mm)		LF2B-F (1,080mm)	
Illumination Color	Cool White									
Color Temperature, K	6500									
Cover	Clear	White	Clear	White	Clear	White	Clear	White	Clear	White
Luminous Flux (typ.), lm	235	215	465	425	935	860	1380	1270	1860	1710
Reference Illuminance (typ.) at 0.5m directly below, lx	290	265	540	500	1065	980	1385	1275	1520	1400

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

PART NUMBERS

Illumination Color	Cool White			
Cover	Clear Cover		White Cover	
Rated Voltage	100 - 240V AC		12V/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	–

PART NUMBER STRUCTURE (USE FOR INTERPRETING PART NUMBERS ONLY)

LF2B - C3P - ATHWW2 - 1M

Length

B: 210mm (8.27")
C: 330mm (12.99")
D: 580mm (22.83")
E: 830mm (32.68")
F: 1,080mm (42.52")

Cover
3: Clear
4: White

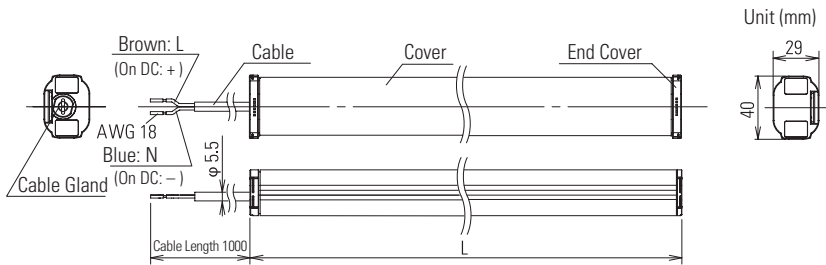
Rated Voltage

A: 100 - 240 VAC
B: 12V/24V DC

DC12V/24V Length

B: (210mm)
C: (330mm)
D: (580mm) only

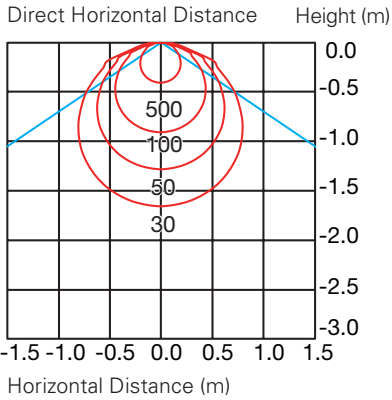
DIMENSIONS (mm)



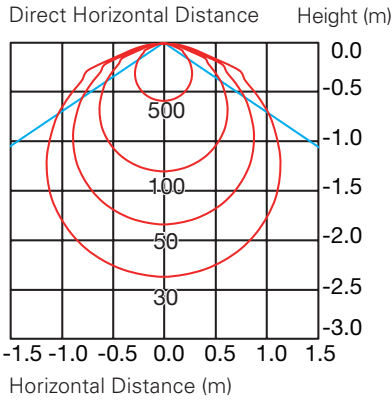
Part Number	L (mm)	Inches
LF2B-B	210	8.27
LF2B-C	330	12.99
LF2B-D	580	22.83
LF2B-E	830	32.68
LF2B-F	1,080	42.52

ILLUMINANCE DISTRIBUTION at 0.5m (lx)

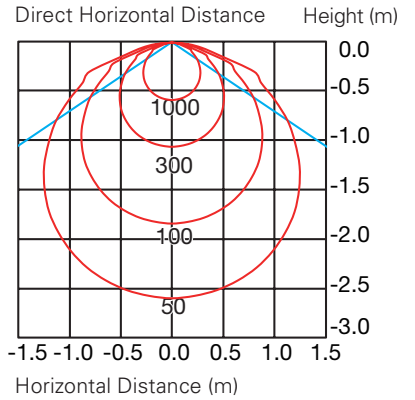
LF2B-B (210mm)



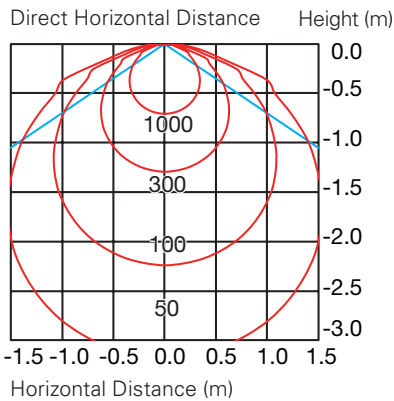
LF2B-C (330mm)



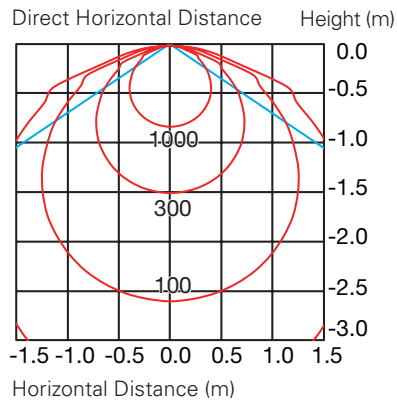
LF2B-D (580mm)



LF2B-E (830mm)



LF2B-F (1,080mm)



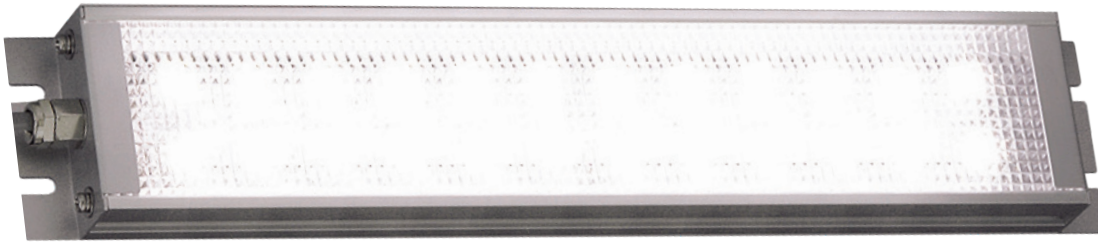
ACCESSORIES

Item	Part No.	Notes
Mounting Bracket (U-shape)	LF9Z-1SB21	Comes with the product (see note below)
Mounting Bracket (L-shape)	LF9Z-1SB22	Order separately

LF2B-B, -C, and -D include 2 brackets each; LF2B-E 3 brackets, and LF2B-F 4 brackets.

LUMIFA LF1A

Control Panels • Manufacturing Equipment



PRODUCT DESCRIPTION

LF1A LED strips use super-bright multi-chip LEDs providing illumination equivalent to a 25W fluorescent lamp, while consuming only one-third the power. They come in a thin housing available in three sizes with four color configurations: cool white (5500K), warm white (2800K), yellow (590nm) and red (625nm).

KEY FEATURES

- Brightness: 66.6 Lumens/Watt
- Energy savings: One-third of fluorescent lamps
- Long life: 40,000 hrs (Half-life)
- UL Listed
- RoHS Compliant
- IP40

GENERAL SPECIFICATIONS

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

*LED Array A1 = 3x2, B1 = 6x2, D1 = 12x2

1. LED life depends on the operating environment.




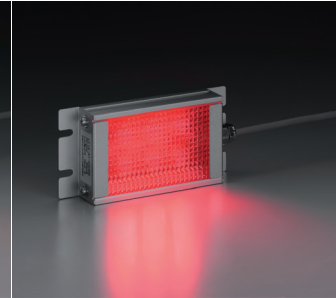
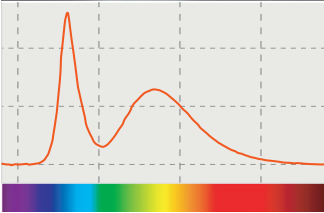
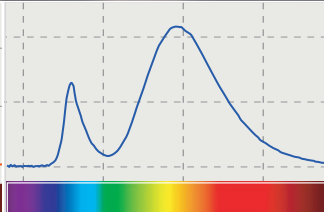
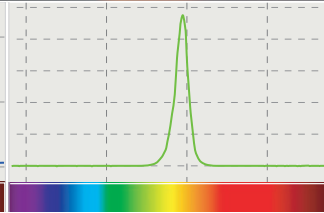
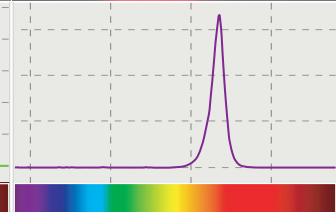


LED OPTICAL SPECIFICATIONS

Model	LF1A-*-2THWW6	LF1A-*-2TLWW6	LF1A-*-2SHY8	LF1A-*-2SHR8
illumination Color	Cool White	Warm White	Yellow	Red
Luminous Intensity (Single LED module), mcd	6000	4000	4000	2500
Color Temperature/Dominant Wavelength	5500K	2800K	590nm	625nm
Reference Illuminance at 0.5m, lx	LED Array 3 x 2	190	130	85
	LED Array 6 x 2	380	260	170
	LED Array 12 x 2	760	520	340

*LED Array A1 = 3x2, B1 = 6x2, D1 = 12x2

PART NUMBERS

Color	Cool White	Warm White	Yellow	Red
Part Number	LF1A-*-2THWW6	LF1A-*-2TLWW6	LF1A-*-2SHY8	LF1A-*-2SHR8
Appearance				
Light Spectrum				

*LED Array A1 = 3x2, B1 = 6x2, D1 = 12x2

PART NUMBER STRUCTURE (USE FOR INTERPRETING PART NUMBERS ONLY)

LF1A - A1 - 2 THWW6

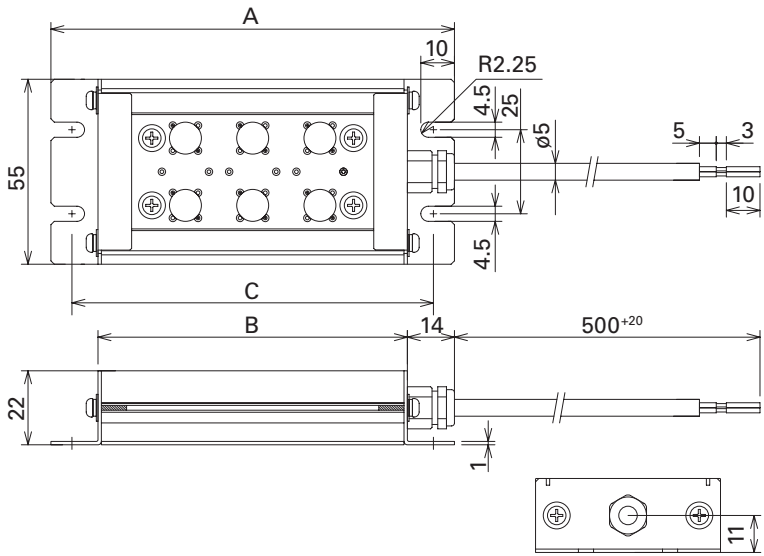
LED Module Arrangement

- A1:** 3 LEDs x 2 rows
- B1:** 6 LEDs x 2 rows
- D1:** 12 LEDs x 2 rows

LED Illumination Color

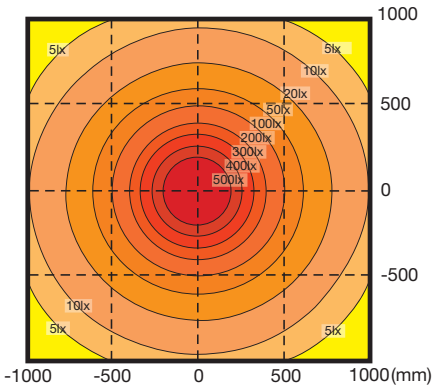
- THWW6:** Cool White
- TLWW6:** Warm White
- SHY8:** Yellow
- SHR8:** Red

DIMENSIONS (mm)



Part Number	A	B	C
LF1A-A1-	120	92	108
LF1A-B1-	180	152	168
LF1A-D1-	300	272	288

ILLUMINANCE CHART (LF1A-D1-2THWW6)



ACCESSORY

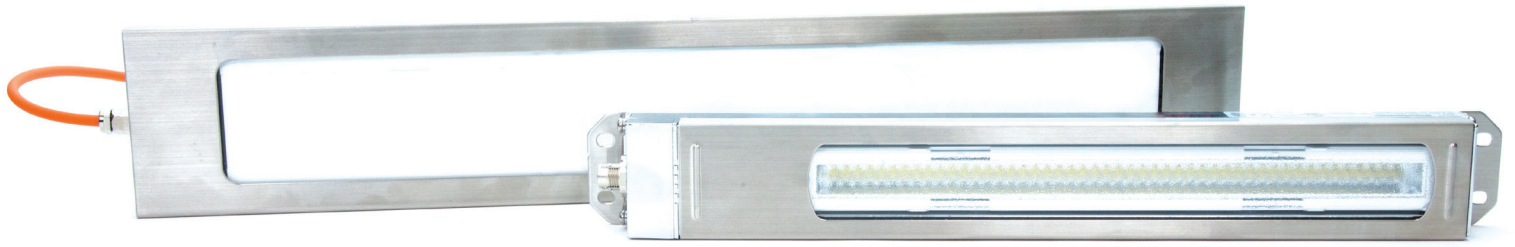
Item	Mounting Bracket—Adjustable Angle	
Part No.	LF9Z-1MA1	
Material	Stainless Steel	

1 pair, Left and Right.

LUMIFA LF1D & LF2D



Machine Tools • Food & Beverage Processing Equipment • Pharmaceutical & Chemical • Automotive



PRODUCT DESCRIPTION

Thanks to their rugged construction and high brightness levels up to 3,000 lumens, the LF1D & LF2D series are ideal for machine tools, food and beverage processing equipment and automotive, pharmaceutical and chemical applications. With their IP67, IP67F, IP67G and IP69K ratings, stainless-steel cover and diecast aluminum housing, they can even be used in the presence of high-pressure, high-temperature washdown.

KEY FEATURES

- No glare, shadows or strip effect
- Heavy-duty aluminum housing with reinforced glass lens
- Long-lasting, maintenance-free LEDs
- Extremely bright illumination—up to 3,000 lumens
- Different lengths, mounts and connection options available

GENERAL SPECIFICATIONS

Model	MINI	SLIM		WIDE	LONG	
	LF1D-C	LF1D/2D-EN	LF1D/2D-EH	LF1D/2D-FH	LF1D-H	LF1D-J
Rated Voltage	24V DC					
Voltage Range	21.6 to 26.4V DC					
Rated Power (typ.), W	4.6	10	11	12.5	18.4	27.6
Insulation Resistance	100MΩ minimum (500V DC megger)					
Dielectric Strength	1000V AC, 50/60Hz, 1 minute					
Vibration Resistance (damage limits)	Frequency 5 to 55Hz, amplitude 0.5mm					
Shock Resistance (damage limits)	1000m/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 gases					
Life 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 ²	IP67F (Reinforced Glass), IP67 (all models), IP67G (LF1D/LF2D-EN), IP69K (LF1D)					
Material ³	Housing: Diecast Aluminum (LF1D/LF2D), Lens: Reinforced Glass (LF1D/LF2D) Cover: Stainless Steel (LF1D), Flange Cover: Diecast Aluminum (LF2D)					
Weight (approx.), g	420	LF1D-EH/EN-2W*: 750 LF1D-EH/EN-2W-A*: 950 LF2D-EH/EN-2W*: 850 LF2D-EH/EN-2W-A*: 1,000		LF1D-FH-2W*: 800 LF1D-FH-2W-A*: 1,000 LF2D-FH-2W*: 900 LF2D-FH-2W-A*: 1,050	1200	1600

1. LED life depends on the operating environment.

2. Waterproof or oil-proof characteristics specified by IEC 60529 and JIS0920. For illumination units without accessories, use a cable gland and cables that satisfy IP67F or IP67 degree of protection.

3. The reinforced glass and polycarbonate lens types have the same appearance, but have different degrees of protection (IP67F or IP67).





LED OPTICAL SPECIFICATIONS


Model	MINI	SLIM		WIDE	LONG	
	LF1D-C	LF1D/2D-EN	LF1D/2D-EH	LF1D/2D-FH	LF1D-H	LF1D-J
Illumination Color	Cool White				Neutral White	
Luminous Flux, lm	560	1530	1260	1540	2000	3000
Color Temperature, k	5700				4700	
Reference Illuminance at 1.0m, lx	180	1700	1800	1500	560	840

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

PART NUMBERS

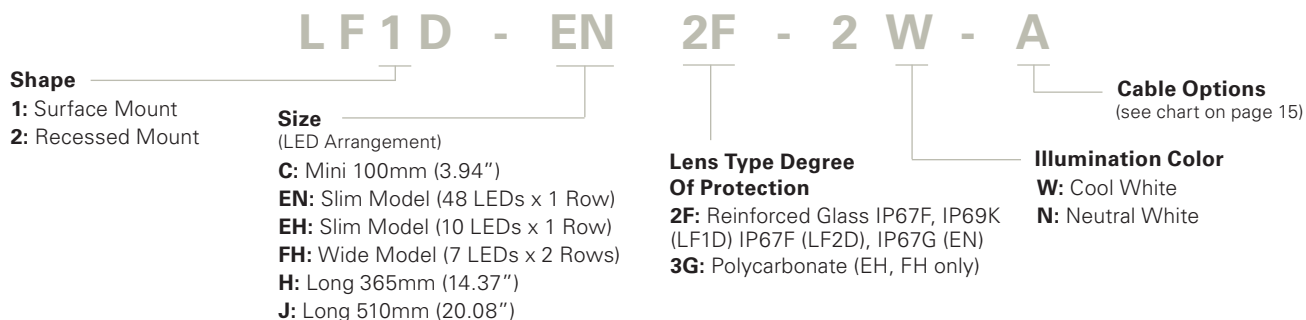
MINI (LF1D-C)		
Location	Cable	
	Length	Part Number
		
Side	3m	LF1D-C2F-2W-330
	5m	LF1D-C2F-2W-350
Back	3m	LF1D-C2F-2W-430
	5m	LF1D-C2F-2W-450

LONG (LF1D-H 365mm)		
Location	Cable	
	Length	Part Number
		
Side	5m	LF1D-H2F-2N-350
	1.5m + M12 connector	LF1D-H2F-2N-3B0
Back	5m	LF1D-H2F-2N-450
	1.5m + M12 connector	LF1D-H2F-2N-4B0

LONG (LF1D-J 510mm)		
Location	Cable	
	Length	Part Number
		
Side	5m	LF1D-J2F-2N-350
	1.5m + M12 connector	LF1D-J2F-2N-3B0
Back	5m	LF1D-J2F-2N-450
	1.5m + M12 connector	LF1D-J2F-2N-4B0

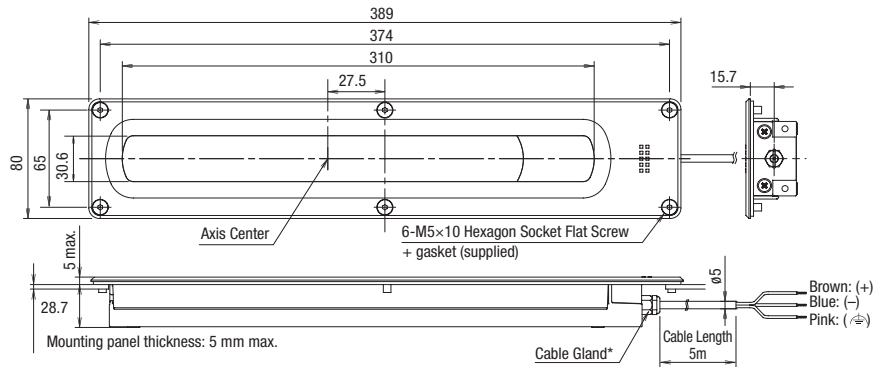
Model	SLIM				WIDE	
	Reinforced Glass		Polycarbonate		Reinforced Glass	Polycarbonate
	Standard	Diffuse	Standard	Standard	Standard	Standard
LF1D						
	LF1D-EN2F-2W-A	LF1D-EN21F-2W-A	LF1D-EH2F-2W-A	LF1D-EH3G-2W-A	LF1D-FH2F-2W-A	LF1D-FH3G-2W-A
	LF1D-EN2F-2W-451	LF1D-EN21F-2W-451	LF1D-EH2F-2W-451	LF1D-EH3G-2W-451	LF1D-FH2F-2W-451	LF1D-FH3G-2W-451
	LF1D-EN2F-2W-56S01	N/A	N/A	N/A	LF1D-FH2F-2W-56S01	N/A
LF2D						
	LF2D-EN2F-2W-A	LF2D-EN21F-2W-A	LF2D-EH2F-2W-A	LF2D-EH3G-2W-A	LF2D-FH2F-2W-A	LF2D-FH3G-2W-A
	LF2D-EN2F-2W-450	LF2D-EN21F-2W-450	LF2D-EH2F-2W-450	LF2D-EH3G-2W-450	LF2D-FH2F-2W-450	LF2D-FH3G-2W-450

PART NUMBER STRUCTURE (USE FOR INTERPRETING PART NUMBERS ONLY)



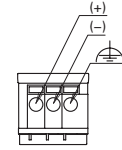
DIMENSIONS (mm)

LF2D SLIM



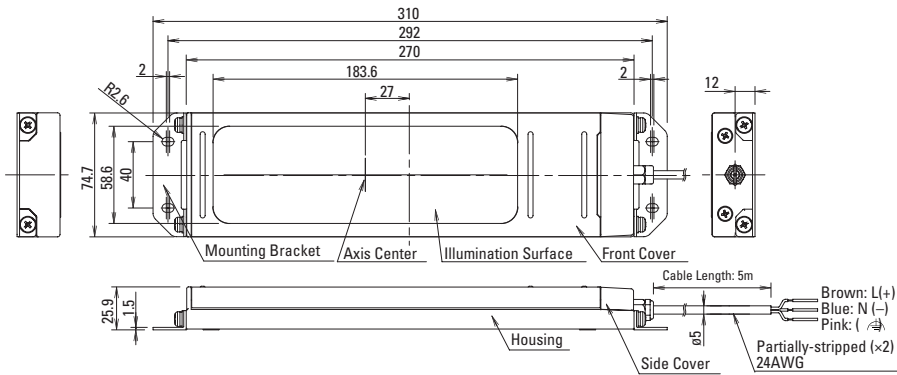
* When the cable gland is prepared by the user, make sure that the cable diameter is $\phi 20$ mm at maximum.

TERMINAL BLOCK WIRING



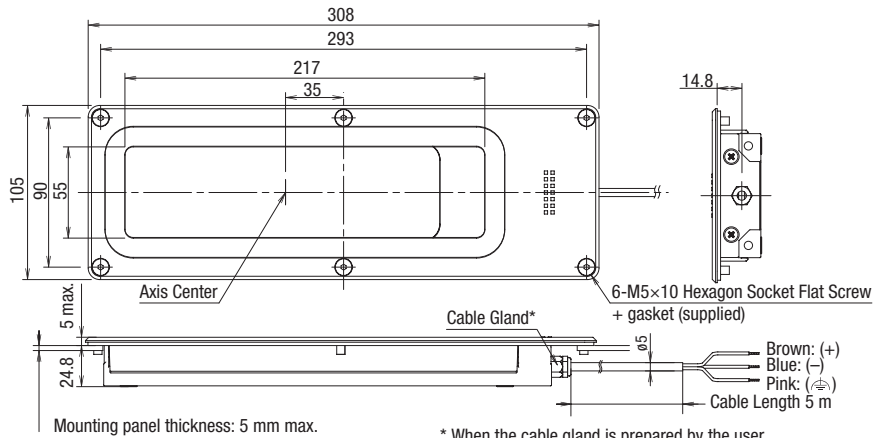
Slim Type

LF1D WIDE



Wide Type

LF2D WIDE

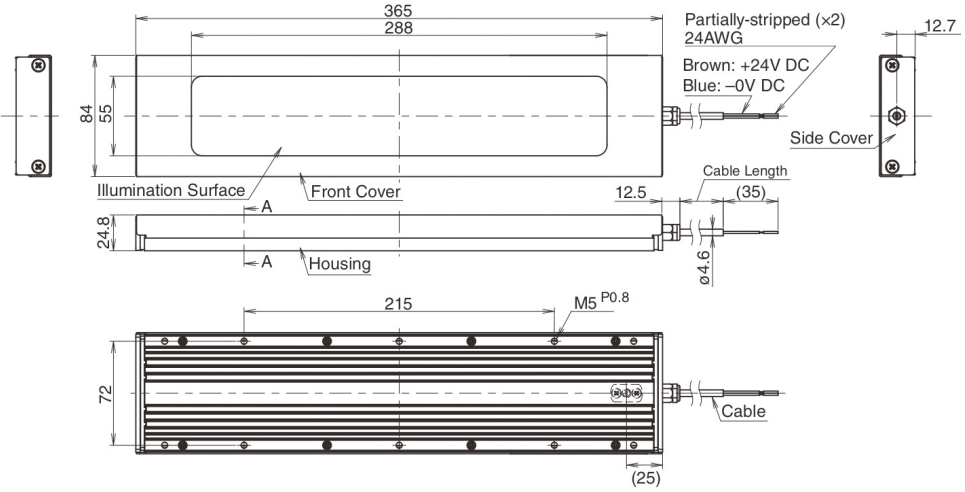


* When the cable gland is prepared by the user, make sure that the cable diameter is $\phi 20$ mm at maximum.

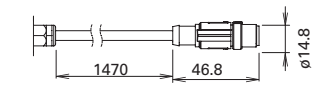
Wide Type

DIMENSIONS (mm)

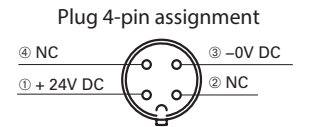
LF1D-H (Long)



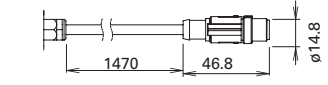
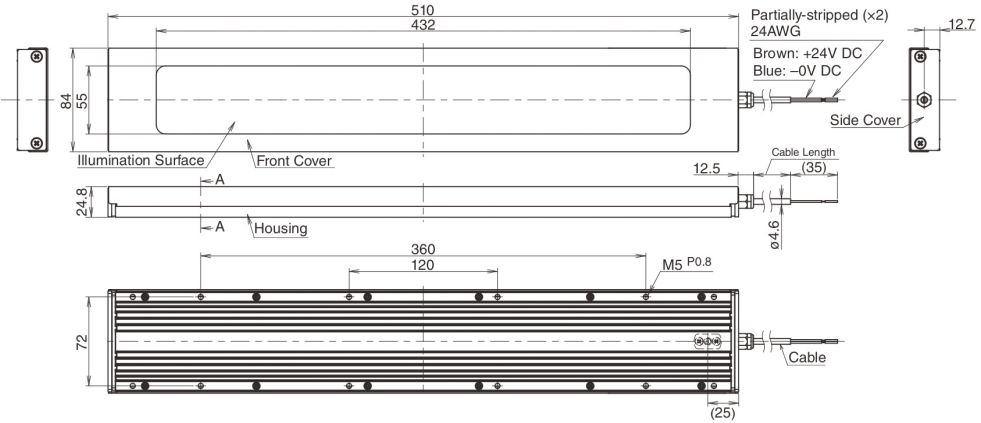
CONNECTOR WIRING



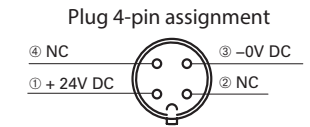
M12 connector: SAC-4P-MS SCO/150/1.5



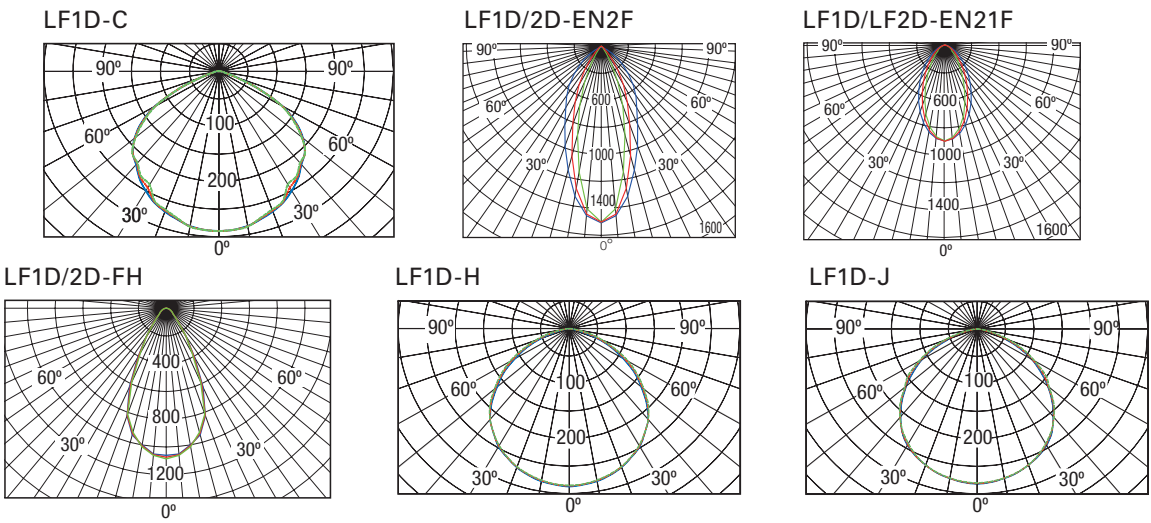
LF1D-J (Long)



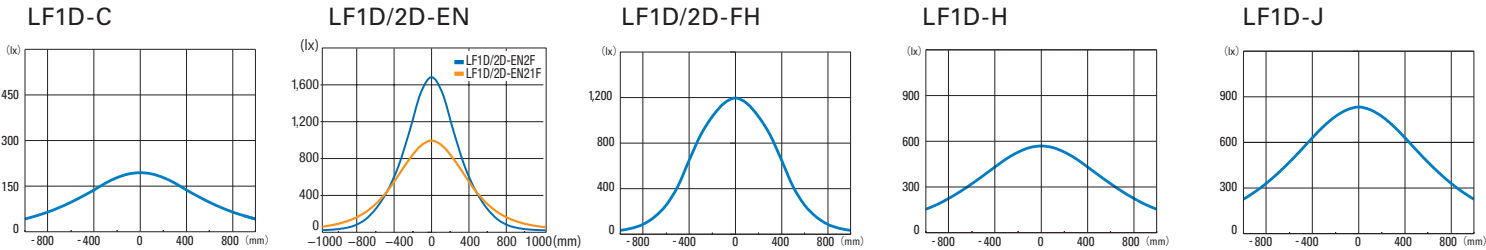
M12 connector: SAC-4P-MS SCO/150/1.5



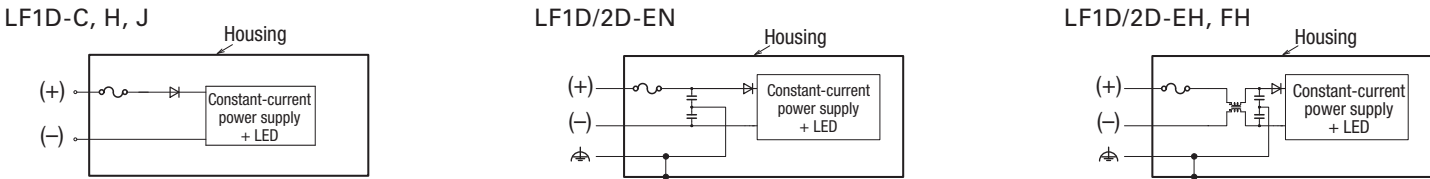
ILLUMINANCE DISTRIBUTION CHARTS (Reference value/unit: cd/1000lm)



DISTRIBUTION CHARACTERISTICS



INTERNAL CIRCUIT



CABLE OPTIONS

Code	Cable Location	Cable Length	Applicable Model
A	Side	5m	LF1D/LF2D-EN, EH, FH
451	Back	5m	LF1D-EN, EH, FH
56S01	Side	M12 Quick Connect	LF1D-EN, FH
450	Back	5m	LF2D

ACCESSORIES

Item	Mounting Bracket				Cable Gland	Cable
	Fixed		Adjustable Angle			
Part No.	LF9Z-B11	LF9Z-B12	LF9Z-1MDE1	LF9Z-1MDF1	LF9Z-A11	LF9Z-C05
Applicable Unit	LF1D (Slim)	LF1D (Wide)	LF1D (Slim)	LF1D (Wide)	LF1D/2D (Slim and Wide)	
Material	Stainless Steel				Brass	PVC
Notes	1 Pair, Left and Right				MB*	Length: 5m

*Applicable wire size (10-12 AWG).

LUMIFA EF1A



Hazardous Locations • Oil & Gas • Waste Water Treatment • Painting & Chemical Plants



PRODUCT DESCRIPTION

Thanks to its rugged construction and Type 4X enclosure rating, the EF1A series is ideal for demanding applications in oil and gas, water treatment, chemical plants—and more. Units integrate heavy-duty aluminum housing with a reinforced glass lens, as well as UL-rated LED floodlights (Class 1, Zones 1 and 2). With their variety of mounting options, including adjustable, fixed angle or no mounting brackets, the EF1A can be installed virtually anywhere.

KEY FEATURES

- Heavy-duty aluminum housing with reinforced glass lens
- Optional clear or diffused lenses
- Fixed or angle adjustable bracket options
- Long-lasting, maintenance-free LEDs
- ON/OFF switch option
- Wide or narrow optical dispersion

GENERAL SPECIFICATIONS

Model	EF1A-11	EF1A-12
Rated Voltage	24V DC	100 to 240V AC
Voltage Range	21.6 to 26.4V DC	90 to 264V AC
Rated Power (typ.), W	17 (at rated voltage)	19 (at rated voltage)
Dielectric Strength	500V AC, 1 minute, input - FG	2000V AC, 1 minute, input - FG
Insulation Resistance	100MΩ minimum (500V DC megger) input - FG	
Vibration Resistance	Frequency 5 to 55Hz, amplitude 0.5mm	
Shock Resistance	1000m/s ²	
Operating Temperature	-20 to +50°C (no freezing)	
Operating Humidity	45 to 85% RH (no condensation)	
Storage Temperature	-35 to +70°C (no freezing)	
Life ¹	Over 50,000 hours (The illumination duration in which the brightness maintains a minimum of 70% of initial value at 25°C.)	
Degree of Protection	Type 4X (IP67), Type 3S (IP65) with ON/OFF switch	
Material	Housing: Aluminum, Front Panel: Stainless Steel, Mounting Bracket: Stainless Steel, Lens: Reinforced Glass	
Weight (approx.), kg	2.9 (without mounting bracket), 3.1 (with mounting bracket)	

1. LED life depends on the operating environment.



LED OPTICAL SPECIFICATIONS

Lens Type	Clear		Diffused	
	Narrow	Wide	Narrow	Wide
Collecting Lens (Optical Dispersion)				
Number of LEDs	16			
Illumination Color	Cool White			
Color Temperature (typ.), K	5700			
Luminous Flux (typ.), lm	960			
Reference Illuminance (typ.) at 1.0m directly below, lx	1100	450	205	175

CERTIFICATIONS & COMPLIANCES

NEC and CEC	IEC and ATEX (94/9/EC)
Cl. I, Zone 1, Groups IIB	Zones 1 & 21 and 2 & 22
UL: Class I, Zone 1, AEx d IIB T4 Gb	ATEX: II 2G Ex d IIB T4 Gb, II 2D Ex tb IIIC T 130°C Db IP67 (or IP65)
c-UL: Ex d IIB T4 Gb X	IECEx: Ex d IIB T4 Gb Ex tb IIIC T 130°C Db IP67 (or IP65)
Certificate/file number: UL/c-UL E353024	Certificate numbers: DEMKO 14 ATEX 1208667X IECEx UL 14.0048X

PART NUMBERS

Rated Voltage	100 to 240V AC		24V DC	
Optical Dispersion	Narrow	Wide	Narrow	Wide
Lens Type ①	Blank: Clear Glass, 1: Diffused Glass			
Conduit Entry ②	Blank: One Side, T: Both Sides, P: One Side, (Another Side Switch)*			
Termination Type ③	Blank: Spring Clamp Terminal, S: Screw Terminal			
Conduit Size ④	N1: 1/2" NPT, N2: 3/4" NPT, M25: M25 (P1.5), M32: M32 (P1.5) (Male connection thread)			
Pushbutton Switch ⑤	Empty: Without pushbutton switch—type 4x (IP67), A2: With pushbutton switch—type 3S (IP65)			
Mounting Bracket	Blank: Without, A: With fixed angle mounting bracket, B: With adjustable mounting bracket			
Part Number	EF1A-12①W②③-④-⑤	EF1A-12①W1②③-④-⑤	EF1A-11①W②③-④-⑤	EF1A-11①W1②③-④-⑤
	EF1A-12①W②③A-④-⑤	EF1A-12①W1②③A-④-⑤	EF1A-11①W②③A-④-⑤	EF1A-11①W1②③A-④-⑤
	EF1A-12①W②③B-④-⑤	EF1A-12①W1②③B-④-⑤	EF1A-11①W②③B-④-⑤	EF1A-11①W1②③B-④-⑤

*End of Part Number is marked A2 (On/Off Pushbutton Switch)

PART NUMBER STRUCTURE (USE FOR INTERPRETING PART NUMBERS ONLY)

EF1A - 111W1PSA - N2 - A2

Voltage
1: 24V DC
2: 100 to 240V AC

Lens Type
Blank: Clear
1: Diffused

Optical Dispersion
Blank: Narrow
1: Wide

Conduit/Switch
Blank: With conduit on one side / Without
T: With conduit on both sides / Without
P: With conduit on one side / With

Termination Type
Blank: Spring clamp terminal
S: Screw terminal

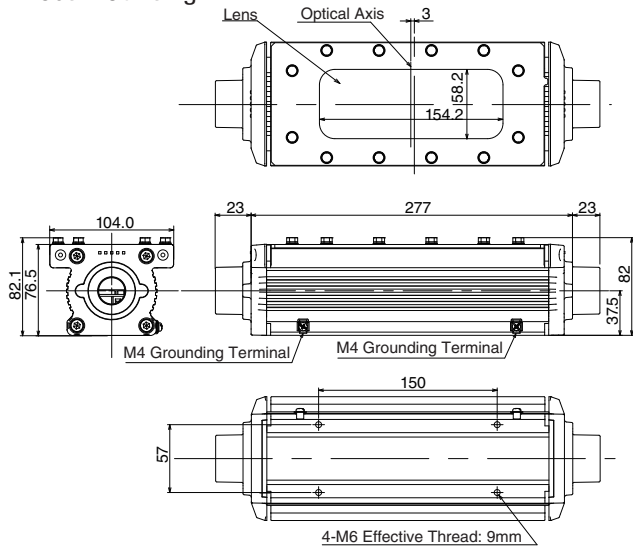
Mounting Bracket
Blank: Without
A: With fixed angle mounting bracket
B: With adjustable angle mounting bracket

Pushbutton Switch
A2: Extended (Maintained)

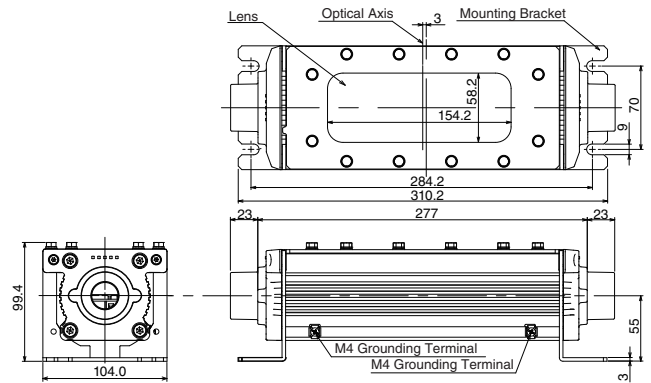
Conduit Size (Male Connection Thread)
N1: 1/2" NPT
N2: 3/4" NPT
M25: M25 (P1.5)
M32: M32 (P1.5)

DIMENSIONS (mm)

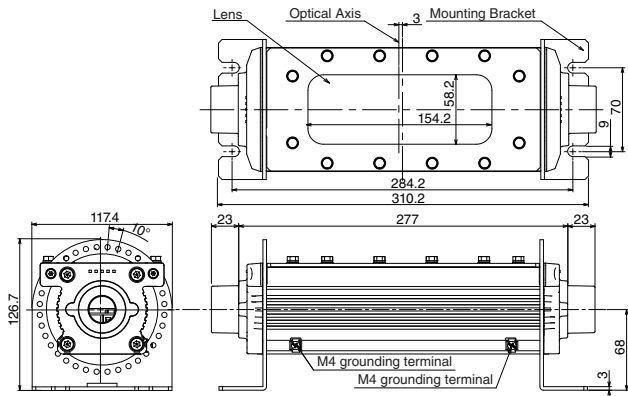
Direct Mounting



With Fixed Mounting Bracket

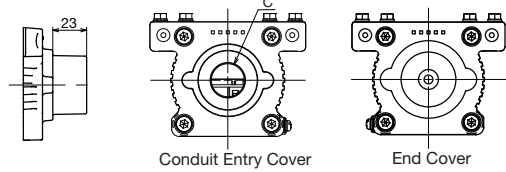


With Angle Adjustable Bracket



Dimension of Conduit Entry, ON/OFF Switch, and End Cover

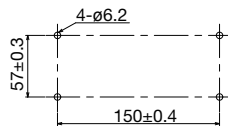
Conduit Entry or End Cover



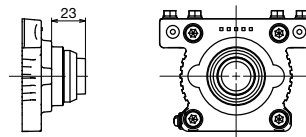
Conduit Entry Size	C
N1	1/2" NPT
N2	3/4" NPT
M25	M25 ^{P1.5}
M32	M32 ^{P1.5}

Mounting Hole Layout

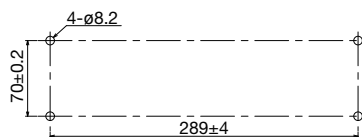
Direct Mounting



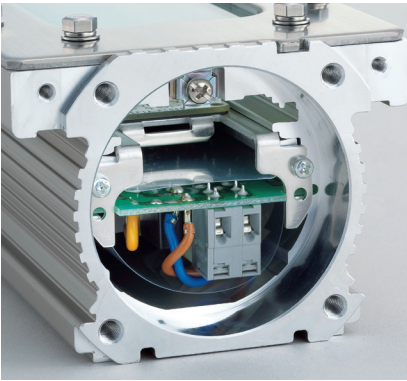
With ON/OFF Switch



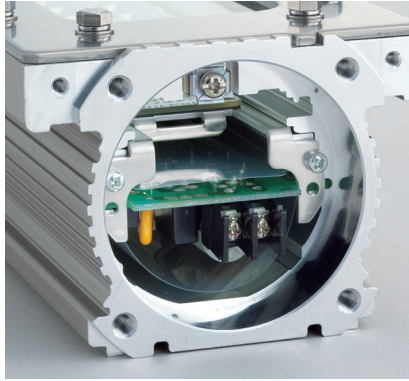
With Mounting Bracket/Angle Adjustable Bracket



TERMINATION TYPE



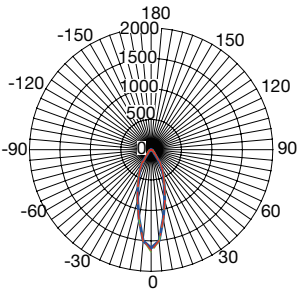
Spring Clamp Terminal



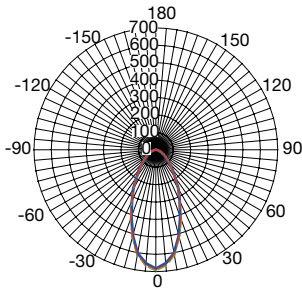
Screw Terminal

OPTICAL DISTRIBUTION (cd/1000lm)

Narrow

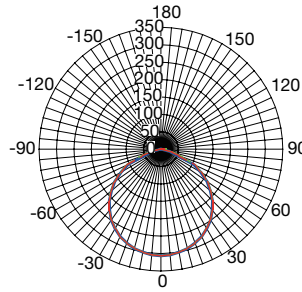


Lens Type:
Clear Glass

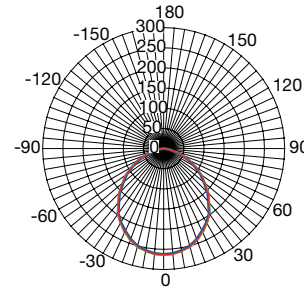


Lens Type:
Diffused Glass

Wide



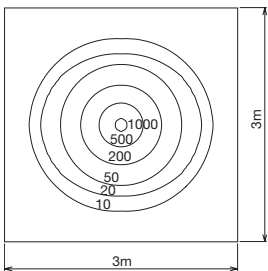
Lens Type:
Clear Glass



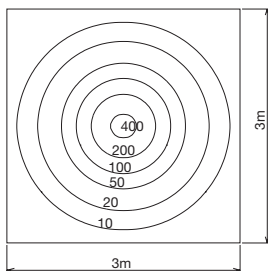
Lens Type:
Diffused Glass

ILLUMINANCE CHART at 1m (lx)

Narrow

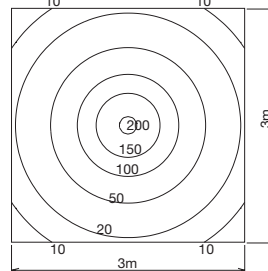


Lens Type:
Clear Glass

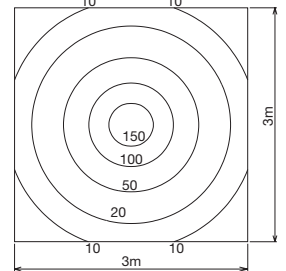


Lens Type:
Diffused Glass

Wide



Lens Type:
Clear Glass



Lens Type:
Diffused Glass