

Think Automation and beyond...



LF1B Series

LED Illumination Units

LUMIFA™

Low heat generation.
Four lengths & four illumination
colors available.

Slim, space-
saving design
(only 16mm
thick)

Heat generation
reduced by
70%*

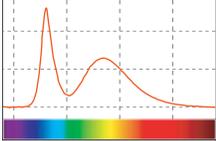
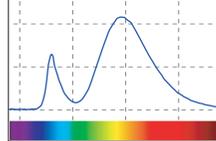
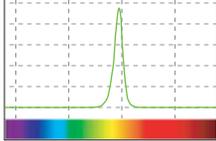
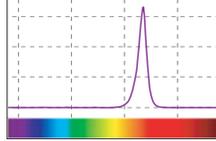
Less power
consumption &
71% less CO₂
emission*

5 times
longer life*

*Compared to 20W
fluorescent lamps.



Illumination Colors & Application Examples

Illumination Color	Cool White	Warm White	Yellow	Red
Power Voltage	24V DC			
Appearance	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">   </div> <div style="text-align: center;">   </div> <div style="text-align: center;">   </div> <div style="text-align: center;">   </div> </div>			
Spectrum	   			
Features	Suppressing glare, the bright, clear cool white illumination color lights up a target object clearly. This illumination color gives off a color temperature of 5500K.	Warm color similar to that of incandescent lamps. This illumination color gives off a color temperature of 2800K.	Yellow illumination color gives off an emission spectrum with a dominant wavelength of 590 nm.	Red illumination color gives off an emission spectrum with a dominant wavelength of 625 nm.
Applications	<ul style="list-style-type: none"> Control panel Plant equipment Refrigerator/freezer Inspection/test equipment Advertising display/board Machine tool  	<ul style="list-style-type: none"> Food processing machines Cosmetic plants Chemical plants Showcases Food display cases 	<ul style="list-style-type: none"> Manufacturing equipment IC foundries 	<ul style="list-style-type: none"> Photosensitive materials Semiconductor manufacturing equipment 

Features

- Brightness: 62.5 Lumens/Watt
- Low heat generation.
- Less energy usage, longer operation life, smaller mounting space, and no electrical noise.
- 71% reduction of power and CO₂ emission when compared to 20W fluorescent lamps (LF1B-C/D)
- Thin and slim style fits into compact spaces.
- Two cover colors: clear and white (diffused light)
- Cool white, warm white, yellow and red illumination colors available.
- UL Listed & IP54 protection against dust and water splash (IEC 60529)



Part No. Development

LF1B- C 3 S - 2 THWW4

LED Module Arrangement

- A: 3 LEDs × 1 row
- B: 6 LEDs × 1 row
- C: 12 LEDs × 1 row
- D: 24 LEDs × 1 row

Rated Voltage

2: 24V DC

Degree of Protection

S: IP54

Cover

- 3: Clear plastic
- 4: White plastic

LED Illumination Color

- THWW4: Cool white
- TLWW4: Warm white
- SHY6: Yellow
- SHR6: Red

LED Optics Specifications

Illumination Color	Cool White	Warm White	Yellow	Red
Luminous Intensity (typ.) (Single LED module)	5000 mcd	4500 mcd	2300 mcd	1800 mcd
Color Temperature (typ.)/Dominant Wavelength (typ.)	5500K	2800K	590 nm	625 nm
Reference Illuminance (typ.) at 500 mm (clear cover)	3 LEDs × 1 row	90 lx	60 lx	20 lx
	6 LEDs × 1 row	170 lx	110 lx	40 lx
	12 LEDs × 1 row	330 lx	200 lx	75 lx
	24 LEDs × 1 row	560 lx	350 lx	125 lx

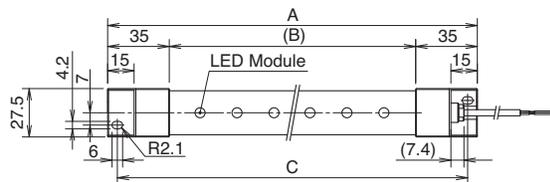
Note: Illumination colors and illuminance may vary. Specifications shown in the above table are typical values and may vary depending upon actual environment.

Performance Specifications

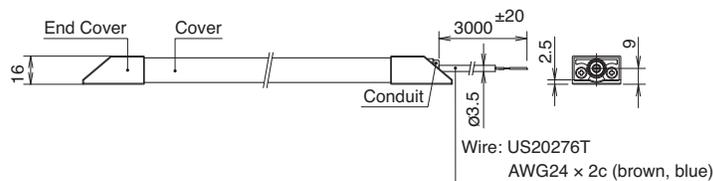
Rated Voltage	24V DC (non-polarized)		
Input Current (typ.) (at the rated voltage)	LF1B-A	30mA	
	LF1B-B	60mA	
	LF1B-C	120mA	
	LF1B-D	240mA	
Power Consumption (typ.) (at the rated voltage)	LF1B-A	0.8W	
	LF1B-B	1.5W	
	LF1B-C	2.9W	
	LF1B-D	5.8W	
Insulation Resistance	100MΩ minimum (500V DC megger)		
Dielectric Strength	1000V AC, 1 minute (between live and dead parts)		
Vibration Resistance (damage limits)	Frequency: 5 to 55 Hz Amplitude: 0.5 mm		
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 gas		
Life	40000 hours (The total illumination duration in which the luminance maintains a minimum of 70% of the initial value.)		
Degree of Protection	IP54		
Material	End cover, conduit: polyamide Cover: polycarbonate Wire: US20276T AWG24 × 2C		
Weight (approx.)	LF1B-A	95g	
	LF1B-B	125g	
	LF1B-C	165g	
	LF1B-D	255g	

- Do not use the LF1B illumination units in environments subject to corrosive gases, otherwise illuminance may deteriorate.

Dimensions



Type No.	A	B	C
LF1B-A	134	64	123
LF1B-B	210	140	199
LF1B-C	330	260	319
LF1B-D	580	510	569



All dimensions in mm.

Internal Circuit

