

Think Automation and beyond...



LF1B Series

LED Illumination Units

LUMIFATM

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

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

Heat generation
reduced by
70%*

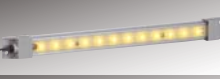
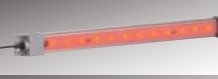
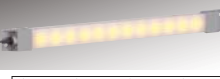
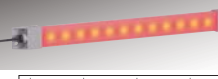
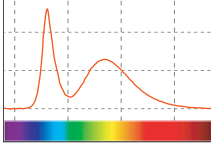
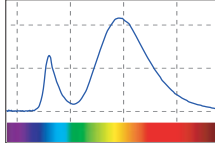
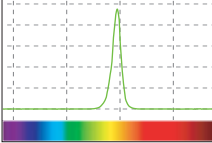
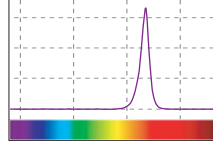
Less power
consumption &
71% less CO₂
emission*

5 times
longer life*

*Compared to 20W
fluorescent lamps.

IDEC CORPORATION

Illumination Colors & Application Examples

Illumination Color		Cool White	Warm White	Yellow	Red
Power Voltage		24V DC			
Appearance	Clear Cover				
	White Cover				
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		- Control panel - Plant equipment - Refrigerator/freezer - Inspection/test equipment - Advertising display/board - Machine tool 	- Food processing machines - Cosmetic plants - Chemical plants - Showcases - Food display cases 	- Manufacturing equipment - IC foundries 	- 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	20 lx
	6 LEDs × 1 row	170 lx	110 lx	40 lx	40 lx
	12 LEDs × 1 row	330 lx	200 lx	75 lx	75 lx
	24 LEDs × 1 row	560 lx	350 lx	125 lx	125 lx

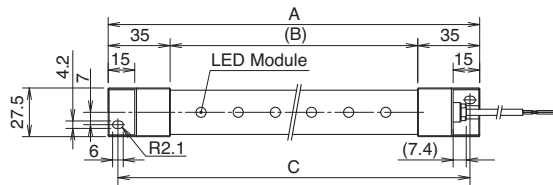
Note: Illumination colors and illuminance may vary. Specifications shown in the above table are typical values and may vary depending upon actual environment.

Performance Specifications

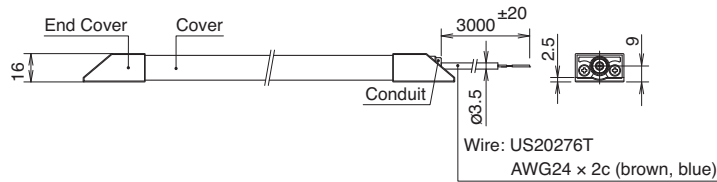
Rated Voltage		24V DC (non-polarized)	
Input Current (typ.) (at the rated voltage)	LF1B-A	30mA	
	LF1B-B	60mA	
	LF1B-C	120mA	
	LF1B-D	240mA	
Power Consumption (typ.) (at the rated voltage)	LF1B-A	0.8W	
	LF1B-B	1.5W	
	LF1B-C	2.9W	
	LF1B-D	5.8W	
Insulation Resistance		100MQ minimum (500V DC megger)	
Dielectric 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

