

LUMIFA LF1E

LF1E Series

The LF1E illumination lights are designed to be used in freezers or refrigerated display cases where the ambient temperature is as low as -40°C. These energy saving units, with a long service life, compact size and low heat generation make them perfect for illuminating areas with very low temperatures.

- Three types of light distribution: no-lens, condensing and dual
- Life: 70% of initial luminance at 40,000 Hrs
- Available in 4 lengths
- Plastic lens suitable for food industry
- IP54 protection against dust and water
- CE marked, UL Listed (damp locations)



LED Optical Specifications

Illumination Color		Cool White	Warm White
Color Temperature		5000K	3000K
Lens Type	Unit Length	Reference Illumination	
No Lens ^{Note 1}	550mm	950lx	750lx
	808mm	1100lx	900lx
	1066mm	1200lx	950lx
	1450mm	1250lx	1000lx
Condensing Lens ^{Note 1}	550mm	1950lx	1500lx
	808mm	2000lx	1550lx
	1066mm	2000lx	1550lx
	1450mm	2000lx	1550lx
Dual Lens	See Illumination Distribution Chart next page		

Note 1: Measured at 0.3m directly below unit.

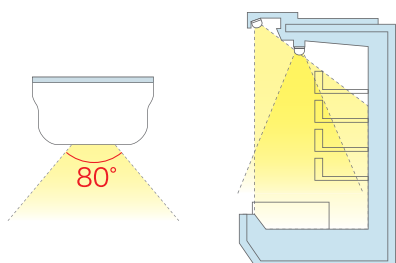
General Specifications

Model (length)	LF1E-B (550mm)	LF1E-C (808mm)	LF1E-D (1066mm)	LF1E-E (1450mm)
Rated Voltage	24V DC			
Input Current (at rated voltage) - 24V DC	350mA (404mA max)	525mA (606mA max)	700mA (807mA max)	950mA (1004mA max)
Power Consumption (typ. at rated input) - 24V DC	8.4W (9.7W max)	12.6W (14.6W max)	16.8W (19.4W max)	22.8W (26.3W max)
Insulation Resistance	100 MΩ minimum (500V DC megger) between input and housing			
Dielectric Strength	500V AC, 1 minute			
Vibration Resistance (damage limits)	Frequency 5 to 55Hz, amplitude 0.17mm			
Shock Resistance (damage limits)	300m/s ²			
Operating Temperature	-40 to +40°C (no freezing)			
Operating Humidity	45 to 85% RH (no condensation)			
Storage Temperature	-40 to +70°C (no freezing)			
Operating Environment	No corrosive gases			
Life	40,000 hours (The illumination duration in which the illuminance maintains a minimum of 70% of the initial value at 25°C.)			
Weight (approx.) (Note 1)	275g	390g	515g	690g
Degree of protection	IP54			
Material	End cover, conduit: polyamide, Cover: polycarbonate, Cable: PVC, Mounting bracket: stainless steel			

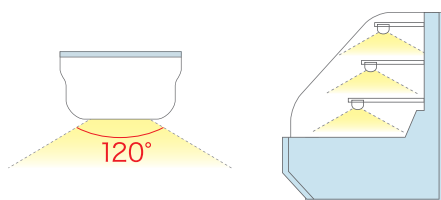
Note 1: Dual lens type.

Application Examples

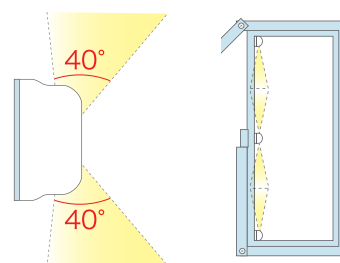
Open Front Display Cases - use Condensing Lens type



Glass Front Display Cases - use No Lens type

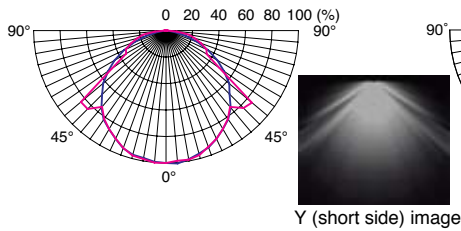


Reach-in Display Cases - use Dual Lens type

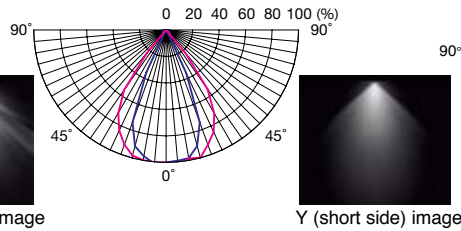


Illuminance Distribution Chart

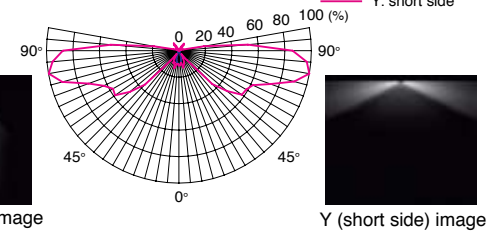
No-lens



Condensing Lens

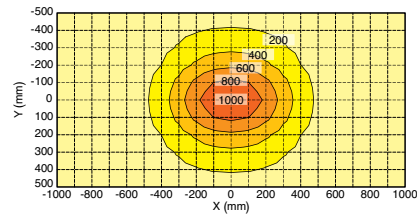


Dual Lens

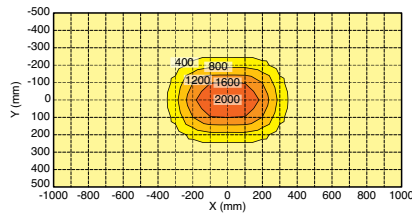


Illuminance Chart

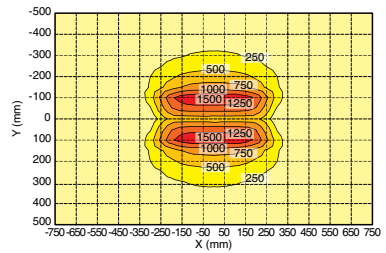
No-lens (LF1E-B3S-2N)



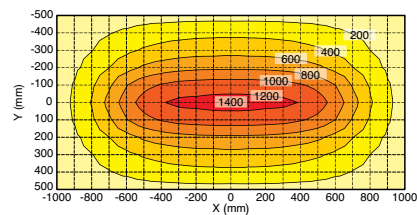
Condensing Lens (LF1E-B3S-2NA)



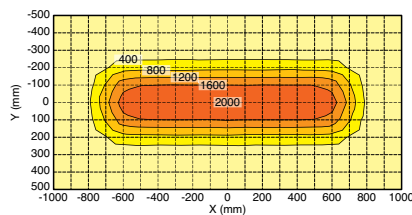
Dual Lens (LF1E-B3S-2NB)



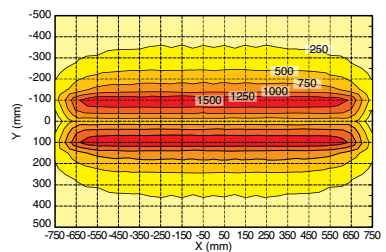
No-lens (LF1E-E3S-2N)



Condensing Lens (LF1E-E3S-2NA)



Dual Lens (LF1E-E3S-2NB)



LF1E - B 3 S - 2 N A

Length (mm)

B: 550
C: 808
D: 1,066
E: 1,450

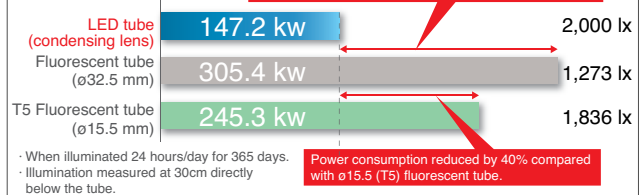
Light Distribution (Lens type)

Blank: No lens
A: Condensing lens
B: Dual lens

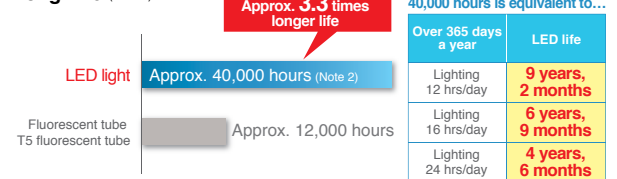
LED color

N: Cool White
(5000 K equivalent)
L: Warm white
(3000 K equivalent)

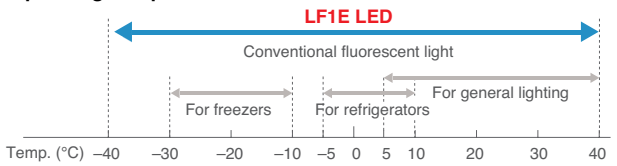
Annual Electricity Cost (Note 1)



Long Life (Note 1)



Operating Temperatures



Note 1: Comparison among LED illumination unit LF1E-D3 (1,066mm), 40W fluorescent tube equivalent (1,198mm), and T5 fluorescent tube equivalent (1,200mm).

Note 2: The total illumination life in which the illuminance maintains a minimum of 70% of the initial value in 25°C environment. LED life depends on the operating environment and conditions.



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