

### LF1E Series



**Key features:**


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 lens and dual lens
- Life: 70% of initial luminance at 40,000 Hrs
- Available in 4 lengths
- Plastic lenses suitable for food industry
- IP54 protection against dust and water
- CE marked, UL Listed (damp locations)

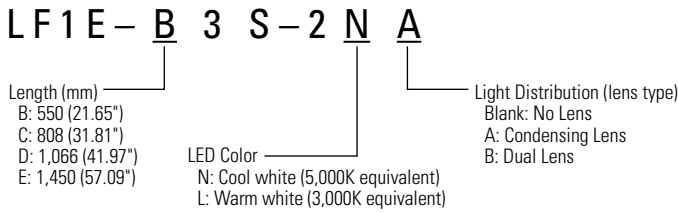


**Part Numbers**

| LF1E-B3S-2*† (550mm)  | LF1E-C3S-2*† (808mm)  | LF1E-D3S-2*† (1066mm)   | LF1E-E3S-2*† (1450mm)   |
|---|---|---|---|
| <br>warm white shown | <br>cool white shown | <br>cool white shown | <br>cool white shown |

 \* N = Cool white, L: Warm white. † Blank = No lens, A = Condensing Lens, B = Dual Lens.


**Part Number Structure** (use for interpreting part numbers only)



Note: Mounting brackets included


**Specifications**

| Model (length)                          | LF1E-B (550mm)   | LF1E-C (808mm)    | LF1E-D (1066mm)   | LF1E-E (1450mm)   |                    |
|---|--|-------------------|-------------------|-------------------|--------------------|
| Rated Voltage                           | 24V DC (Voltage range: 21.6 - 26.4VDC)   |                   |                   |                   |                    |
| 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 <sup>2</sup>  |                   |                   |                   |                    |
| 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.) <sup>1</sup>           | 275g   | 390g              | 515g              | 690g              |                    |
| Degree of protection                    | IP54   |                   |                   |                   |                    |
| Material                                | End cover, conduit: polyamide, Cover: polycarbonate, Cable: PVC, Mounting bracket: stainless steel                         |                   |                   |                   |                    |

 1. Dual lens type.

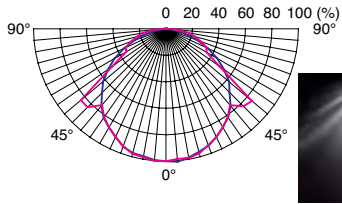
**LED Optical Specifications**

| Color Temperature            | Cool White                          | Warm White             |         |
|------------------------------|-------------------------------------|------------------------|---------|
| Color Temperature            | 5000K                               | 3000K                  |         |
| Lens Type                    | Unit Length                         | Reference Illumination |         |
| No Lens <sup>1</sup>         | 550mm                               | 950lx                  | 750lx   |
|                              | 808mm                               | 1,100lx                | 900lx   |
|                              | 1066mm                              | 1,200lx                | 950lx   |
|                              | 1450mm                              | 1,250lx                | 1,000lx |
| Condensing Lens <sup>2</sup> | 550mm                               | 1,950lx                | 1,500lx |
|                              | 808mm                               | 2,000lx                | 1,550lx |
|                              | 1066mm                              | 2,000lx                | 1,550lx |
|                              | 1450mm                              | 2,000lx                | 1,550lx |
| Dual Lens                    | See Illumination Distribution Chart |                        |         |

 1. LED life depends on the operating environment.  
 2. Measured at 0.3m directly below unit.

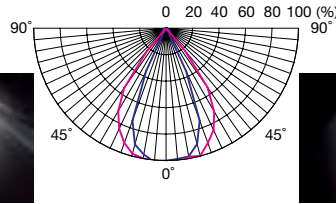
## Illuminance Distribution Charts

No-lens



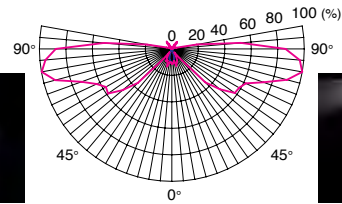
Y (short side) image

Condensing Lens



Y (short side) image

Dual Lens

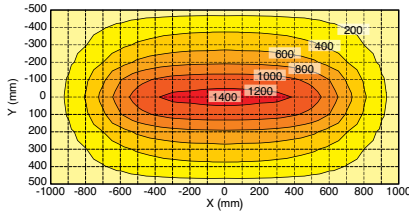


Y (short side) image

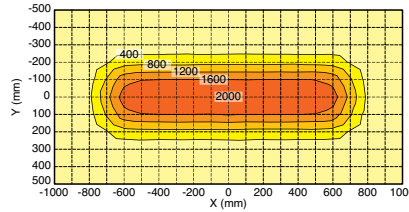
— X: long side  
— Y: short side

## Illuminance Charts

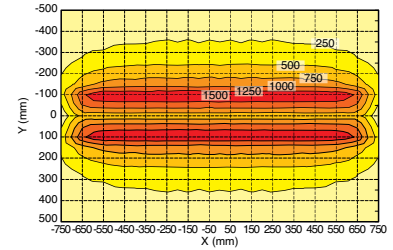
No-lens (LF1E-E3S-2N)



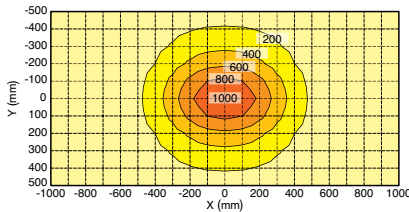
Condensing Lens (LF1E-E3S-2NA)



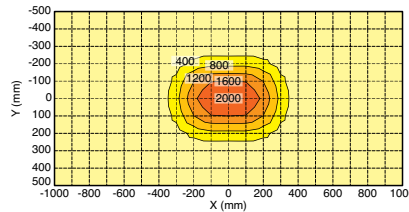
Dual Lens (LF1E-E3S-2NB)



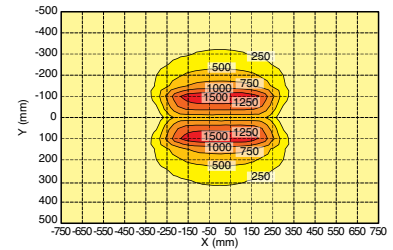
No-lens (LF1E-B3S-2N)



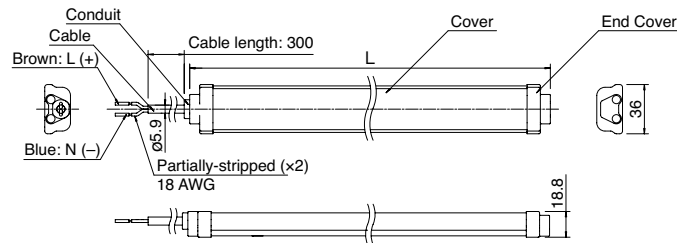
Condensing Lens (LF1E-B3S-2NA)



Dual Lens (LF1E-B3S-2NB)



## Dimensions (mm)



## Dimension Table

| Part No. | L     |       | A     |       | B    |      | C     |       | D   |       | Mounting Bracket<br>Quantity Included |
|----------|-------|-------|-------|-------|------|------|-------|-------|-----|-------|---------------------------------------|
|          | mm    | inch  | mm    | inch  | mm   | inch | mm    | inch  | mm  | inch  |                                       |
| LF1E-B3  | 550   | 21.65 | 585   | 23.03 | 30   | 1.18 | 490   | 19.29 | 490 | 19.29 | 2                                     |
| LF1E-C3  | 808   | 31.81 | 843   | 33.19 | 29   | 1.14 | 750   | 29.53 | 375 | 14.76 | 3                                     |
| LF1E-D3  | 1,066 | 41.97 | 1,101 | 43.35 | 30.5 | 1.20 | 1,005 | 39.57 | 335 | 13.19 | 4                                     |
| LF1E-E3  | 1,450 | 57.09 | 1,485 | 48.46 | 32   | 1.26 | 1,386 | 54.57 | 462 | 18.19 | 4                                     |