

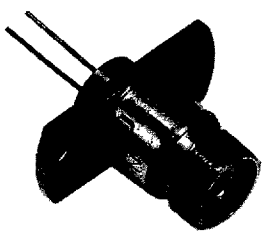
# FU-02LE-N, FU-23LE

0.85 μm LED Module for Multimode Fiber

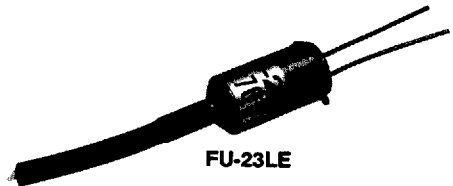
LED Module, FU-02LE-N and FU-23LE contain a highly-reliable 0.85 μm band AlGaAs/Ga Light-emitting diode and are used as light source for both digital and analog optical communication systems.

## FEATURES

- High optical output power
- High-speed modulation
- Superior linearity between current and optical output
- High reliability



FU-02LE-N



FU-23LE

## ABSOLUTE MAXIMUM RATINGS (Tc=25 °C)

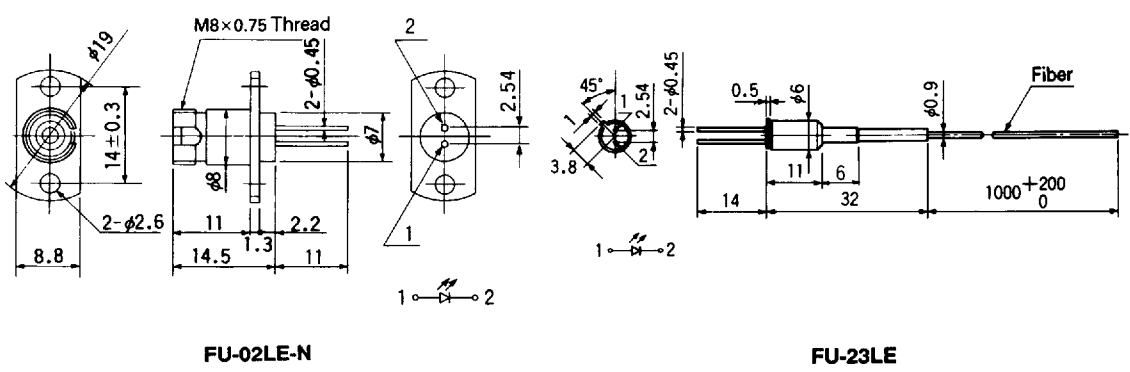
| Items                      | Symbols          | Conditions             | Ratings        |         | Units |    |
|----------------------------|------------------|------------------------|----------------|---------|-------|----|
|                            |                  |                        | FU-02LE-N      | FU-23LE |       |    |
| Forward current (Note 1)   | I <sub>F</sub>   | T <sub>c</sub> ≤ 50 °C | CW             | 75      | 75    | mA |
|                            |                  |                        | Pulse (Note 2) | 120     | 120   |    |
| Reverse voltage            | V <sub>R</sub>   | -                      | 3              | 3       | V     |    |
| Operating case temperature | T <sub>c</sub>   | -                      | -20~65         | -20~65  | °C    |    |
| Storage temperature        | T <sub>stg</sub> | -                      | -40~70         | -40~70  | °C    |    |

Note 1) Forward current at T<sub>c</sub> > 50 °C

$$I_F(T_c) = I_F(T_c \leq 50^\circ\text{C}) \cdot \frac{100 - T_c}{50}$$

Note 2) Frequency > 100kHz, Duty ratio < 50 %

## OUTLINE DRAWINGS Unit (mm)



FU-02LE-N

FU-23LE

**FU-02LE-N, FU-23LE**

0.85 μm LED Module for Multimode Fiber

**CHARACTERISTICS (T<sub>c</sub>=25°C, unless otherwise noted)**

| Items  | Symbols          | Conditions                                 | FU-02LE-N |      |      | FU-23LE |      |      | Units |
|--|------------------|--|-----------|------|------|---------|------|------|-------|
|  |                  |  | Min.      | Typ. | Max. | Min.    | Typ. | Max. |       |
| Central wavelength                           | $\lambda_c$      | I <sub>F</sub> = 50mA                      | 780       | 840  | 880  | 780     | 840  | 880  | nm    |
| Spectral bandwidth (FWHM)                    | $\Delta \lambda$ | I <sub>F</sub> = 50mA                      | -         | 45   | -    | -       | 45   | -    | nm    |
| Optical output power from fiber end (Note 1) | P <sub>F</sub>   | I <sub>F</sub> = 75mA                      | 40        | 65   | -    | 40      | 65   | -    | μW    |
| Cutoff frequency (-1.5dB)                    | f <sub>c</sub>   | I <sub>F</sub> = 25mA + 4mA <sub>p-p</sub> | 10        | 30   | -    | 10      | 30   | -    | MHz   |
| Forward voltage                              | V <sub>F</sub>   | I <sub>F</sub> = 50mA                      | -         | 1.6  | 2.2  | -       | 1.6  | 2.2  | V     |
| Reverse current                              | I <sub>R</sub>   | V <sub>R</sub> = 3.0V                      | -         | -    | 10   | -       | -    | 10   | μA    |
| Optical connector type (Note 2)              | -                | -  | FC        |      |      | -       |      |      | -     |

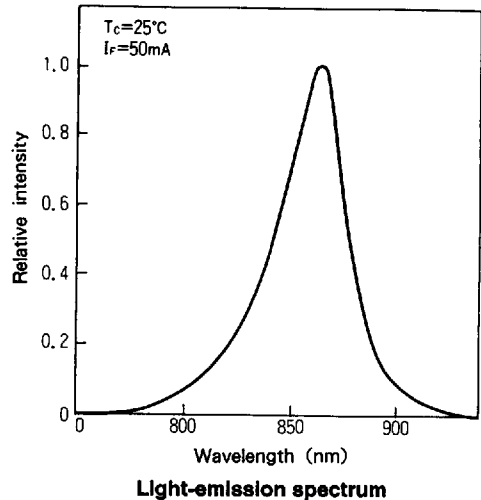
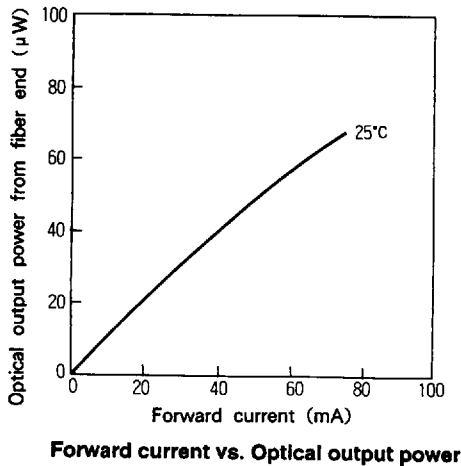
Note 1) Fiber : GI type with core dia. 50μm and N.A.0.2

Note 2) FU-02LE-N only

**FIBER PIGTAIL SPECIFICATIONS (FU-23LE only)**

| Items         | Specifications | Units |
|---------------|----------------|-------|
| Type          | GI             | -     |
| Core dia.     | 50 ± 3         | μm    |
| N.A.          | 0.2            | -     |
| Cladding dia. | 125 ± 3        | μm    |
| Jacket dia.   | 0.9            | mm    |

**EXAMPLE OF CHARACTERISTICS**



**0.85 μm LED Module for Multimode Fiber**

