

# GL460/GL461

## Double Ended Mold Type Infrared Emitting Diode

### ■ Features

1. Small double-end type package  
(packaging area : 37% smaller than **GL480**)
2. High output power type (**GL461**)
3. Taped models 2,000pcs/reel (**GL460T**/  
**GL461T**)

### ■ Applications

1. Floppy disk drives
2. VCRs
3. Audio equipment

### ■ Absolute Maximum Ratings (Ta = 25°C)

| Parameter                | Symbol           | Rating       | Unit |
|--------------------------|------------------|--------------|------|
| Power dissipation        | P                | 150          | mW   |
| Forward current          | I <sub>F</sub>   | 50           | mA   |
| *1 Peak forward current  | I <sub>FM</sub>  | 1            | A    |
| Reverse voltage          | V <sub>R</sub>   | 6            | V    |
| Operating temperature    | T <sub>opr</sub> | - 25 to + 85 | °C   |
| Storage temperature      | T <sub>stg</sub> | - 40 to + 85 | °C   |
| *2 Soldering temperature | T <sub>sol</sub> | 260          | °C   |

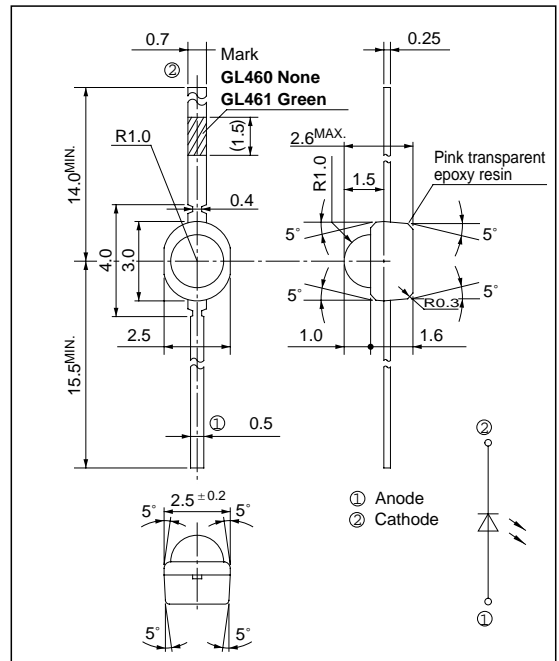
\*1 Pulse width ≤ 100 μs, Duty ratio = 0.01

\*2 For MAX. 3 seconds at the position of 2.5mm from the bottom face of resin package.

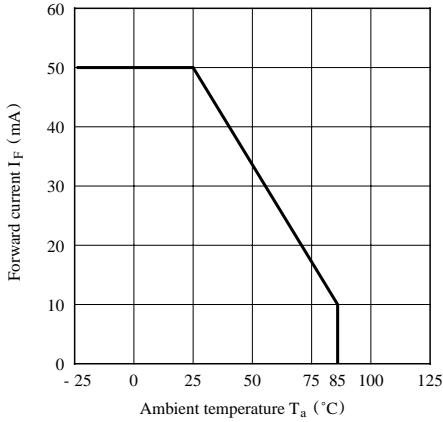
### ■ Electro-optical Characteristics (Ta = 25°C)

| Parameter                 | Symbol          | Conditions                    | MIN. | TYP. | MAX. | Unit |
|---------------------------|-----------------|-------------------------------|------|------|------|------|
| Forward voltage           | V <sub>F</sub>  | I <sub>F</sub> = 20mA         | -    | 1.2  | 1.5  | V    |
| Peak forward voltage      | V <sub>FM</sub> | I <sub>FM</sub> = 0.5A        | -    | 2.2  | 4.0  | V    |
| Reverse current           | I <sub>R</sub>  | V <sub>R</sub> = 3V           | -    | -    | 10   | μA   |
| Terminal capacitance      | C <sub>t</sub>  | V <sub>R</sub> = 0V, f = 1MHz | -    | 20   | -    | pF   |
| Response frequency        | f <sub>c</sub>  | -                             | -    | 300  | -    | kHz  |
| Radiant flux              | <b>GL460</b>    | I <sub>F</sub> = 20mA         | 1.0  | -    | 4.0  | mW   |
|                           | <b>GL461</b>    |                               | 1.8  | -    | 7.2  |      |
| Peak emission wavelength  | λ <sub>P</sub>  | I <sub>F</sub> = 5mA          | -    | 950  | -    | nm   |
| Half intensity wavelength | Δλ              | I <sub>F</sub> = 5mA          | -    | 45   | -    | nm   |
| Half intensity angle      | Δθ              | I <sub>F</sub> = 20mA         | -    | ± 40 | -    | °    |

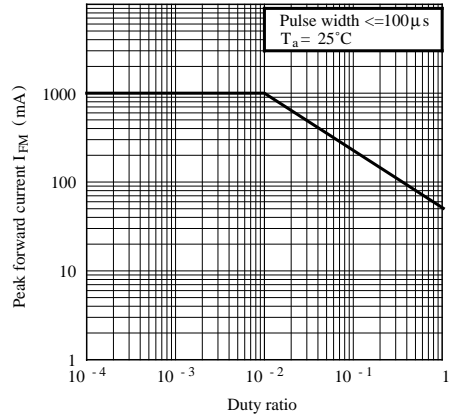
### ■ Outline Dimensions (Unit : mm)



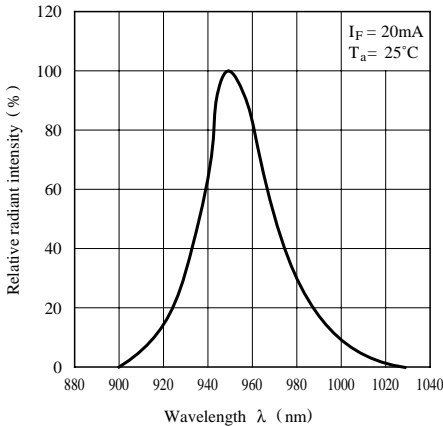
**Fig. 1 Forward Current vs. Ambient Temperature**



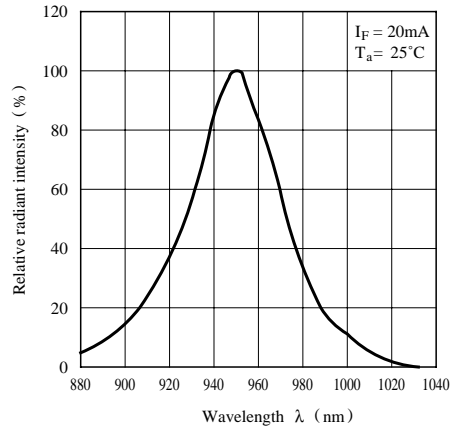
**Fig. 2 Peak Forward Current vs. Duty Ratio**



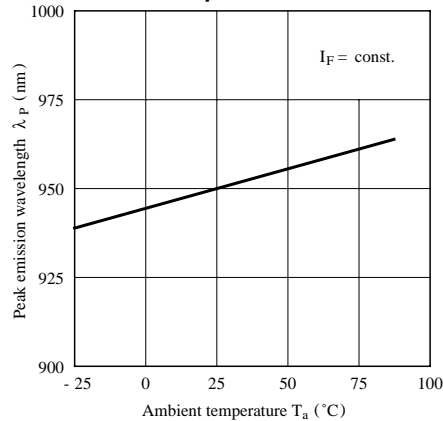
**Fig. 3-a Spectral Distribution (GL460)**



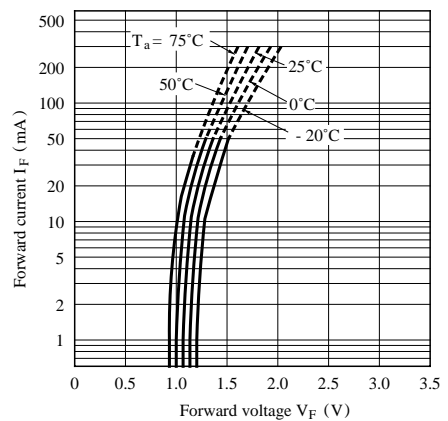
**Fig. 3-b Spectral Distribution (GL461)**



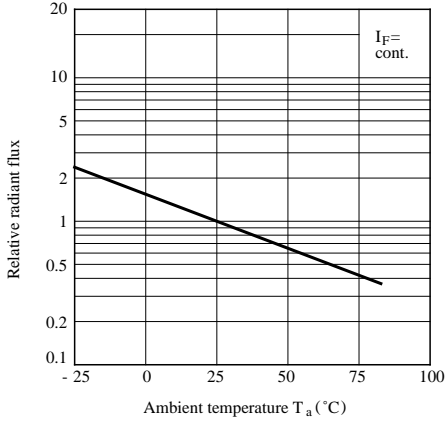
**Fig. 4 Peak Emission Wavelength vs. Ambient Temperature**



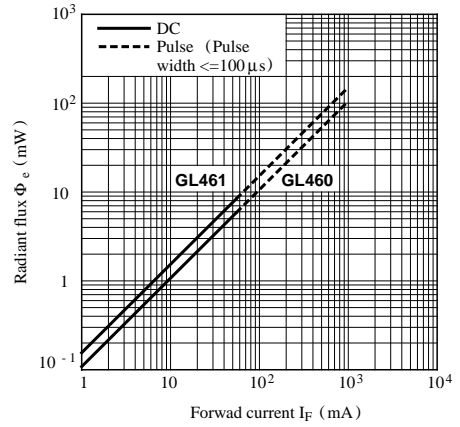
**Fig. 5 Forward Current vs. Forward Voltage**



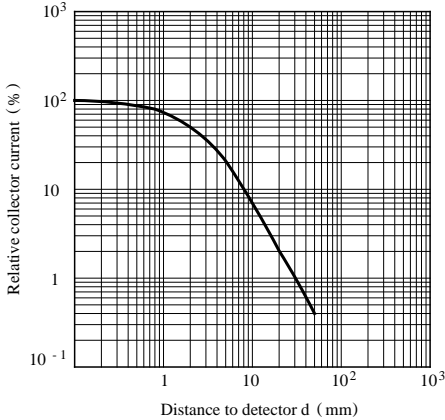
**Fig. 6 Relative Radiant Flux vs. Ambient Temperature**



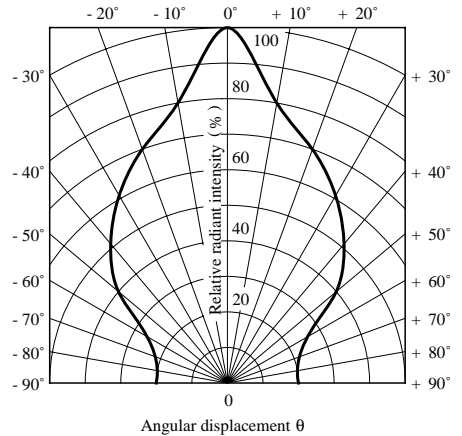
**Fig. 7 Radiant Flux vs. Forward Current**



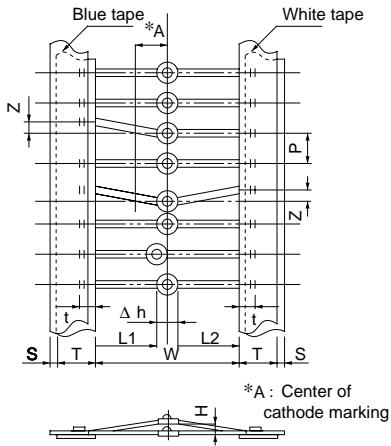
**Fig. 8 Relative Collector Current vs. Distance (Detector : PT460)**



**Fig. 9 Radiation Diagram**



## ■ Taping Specifications (GL460T /GL461T)

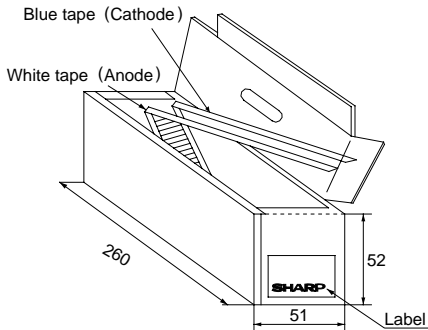


| W                  | (Note 1) P        | L2-L1 | T               | Z                  | Δ h                | S                  | (Note 2) t         | H                  | A     |
|--------------------|-------------------|-------|-----------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------|
| $26^{+1.5}_{-0.0}$ | $5^{+0.5}_{-0.5}$ | -     | $6^{+10}_{-10}$ | 1.2 <sup>MAX</sup> | 0.5 <sup>MAX</sup> | 0.8 <sup>MAX</sup> | 0.5 <sup>MIN</sup> | 2.5 <sup>MAX</sup> | (4.5) |

(Note 1) Tolerance of 20 pitches is  $\pm 2$ mm.

(Note 2) The lead's overlapping length on the tape.

## ■ Packing Specification (GL460T /GL461T)



### (1) Packing form

#### Box type

- The tape is zigzag-folded with 50 pcs. of IR LEDs per fold.
- IR LED inserting portions for 50 to 60 pcs. on the tape's starting and ending parts are not stuffed.
- For the taping of cathode pin, blue tape is used, and for anode pin, white tape is used.

### (2) Packing quantity

2 000 pcs. per box

● Please refer to the chapter “Precautions for Use”