

GL381 Datasheet



| | |
|------------------------------|---|
| DiGi Electronics Part Number | GL381-DG |
| Manufacturer | Sharp Microelectronics |
| Manufacturer Product Number | GL381 |
| Description | EMITTER IR 950NM 60MA T-1 |
| Detailed Description | Infrared (IR) Emitter 950nm 1.3V 60mA 8.5mW/sr @ 50mA 26° T-1 |

<https://www.DiGi-Electronics.com>

This model GL381 is available at DiGi Electronics.

DiGi Electronics offers a global database of semiconductor and electronic component datasheets.

We welcome your inquiries regarding pricing, lead time, or other product-related questions.

 [Request a Quote](#)

 [Datasheet Search](#)



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

GL381

Series:

-

Manufacturer:

Sharp Microelectronics

GL380/GL381

High Output, ϕ 3mm Resin Mold Type Infrared Emitting Diode

■ Features

- High output
(I_E : MIN. 4.5mW/sr at $I_F = 50\text{mA}$, **GL380**)
(I_E : MIN. 8.5mW/sr at $I_F = 50\text{mA}$, **GL381**)
- Compact ϕ 3mm resin mold package
- Narrow beam angle($\Delta\theta$: TYP. $\pm 13^\circ$)

■ Applications

- Floppy disk drives
- Optoelectronic switches
- Infrared applied systems

■ Absolute Maximum Ratings (Ta = 25°C)

| Parameter | Symbol | Rating | Unit |
|-------------------------|-----------|--------------|------|
| Forward current | I_F | 60 | mA |
| *1Peak forward current | I_{FM} | 1 | A |
| Reverse voltage | V_R | 6 | V |
| Power dissipation | P | 150 | mW |
| Operating temperature | T_{opr} | - 25 to + 85 | °C |
| Storage temperature | T_{stg} | - 40 to + 85 | °C |
| *2Soldering temperature | T_{sol} | 260 | °C |

*1 Pulse width $\leq 100\mu\text{s}$, Duty ratio = 0.01

*2 For 3 seconds at the position of 2.6mm from the bottom face of resin package.

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

| Parameter | Symbol | Conditions | MIN. | TYP. | MAX. | Unit |
|---------------------------|-----------------|----------------------------|------|----------|------|---------------|
| Forward voltage | V_F | $I_F = 50\text{mA}$ | - | 1.3 | 1.5 | V |
| Peak forward voltage | V_{FM} | $I_{FM} = 0.5\text{A}$ | - | 2.2 | 3.5 | V |
| Reverse current | I_R | $V_R = 3\text{V}$ | - | - | 10 | μA |
| *3Radiant intensity | GL380 | $I_F = 50\text{mA}$ | 4.5 | 11 | - | mW/sr |
| | GL381 | | 8.5 | 20 | - | |
| Peak emission wavelength | λ_P | $I_F = 5\text{mA}$ | - | 950 | - | nm |
| Half intensity wavelength | $\Delta\lambda$ | $I_F = 5\text{mA}$ | - | 45 | - | nm |
| Terminal capacitance | C_t | $V_R = 0, f = 1\text{MHz}$ | - | 70 | - | pF |
| Response frequency | f_C | | - | 300 | - | kHz |
| Half intensity angle | $\Delta\theta$ | $I_F = 20\text{mA}$ | - | ± 13 | - | ° |

*3 I_E : Value obtained by converting the value in power of radiant fluxes at the solid angle of 0.01 sr(steradian)the direction of mechanical axis of the lens portion into 1 sr of all those emitted from the light emitting diode.

■ Outline Dimensions (Unit : mm)

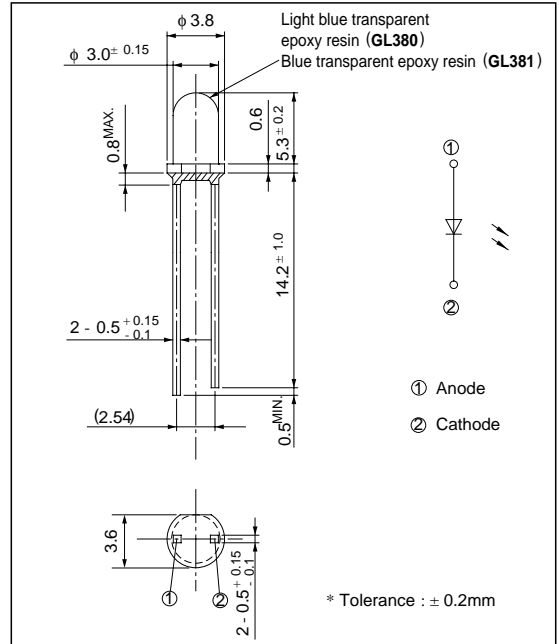


Fig. 1 Forward Current vs. Ambient Temperature

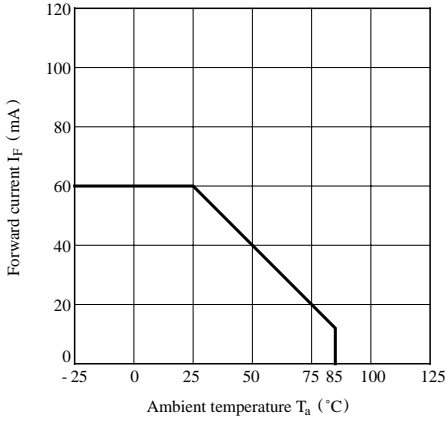


Fig. 2 Peak Forward Current vs. Duty Ratio

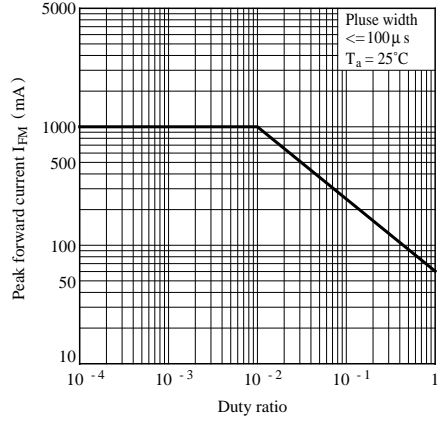


Fig. 3 Spectral Distribution

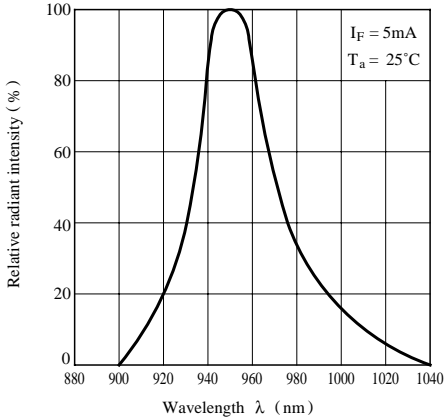


Fig. 4 Peak Emission Wavelength vs. Ambient Temperature

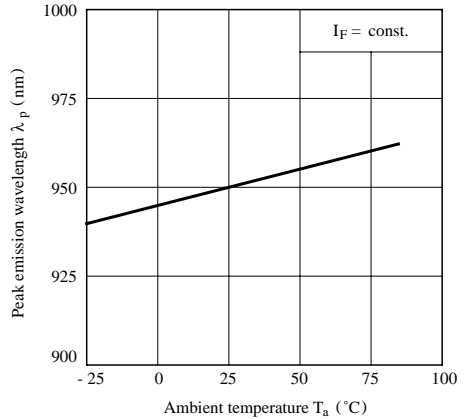


Fig. 5 Forward Current vs. Forward Voltage

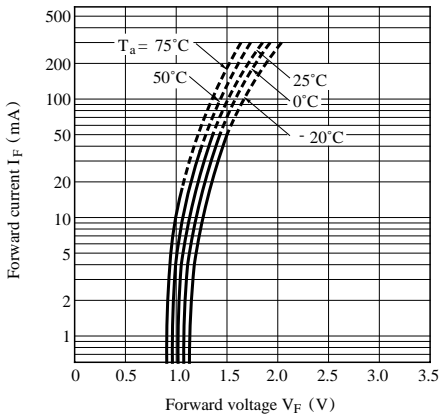


Fig. 6 Relative Radiant Flux vs. Ambient Temperature

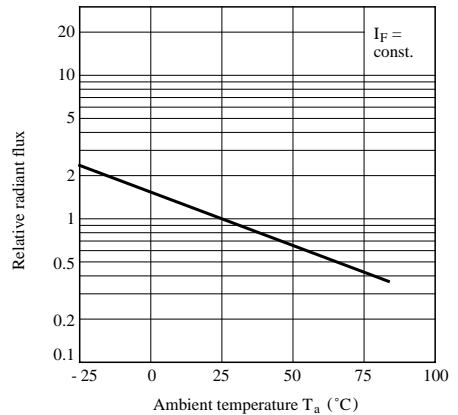


Fig. 7 Radiant Intensity vs. Forward Current

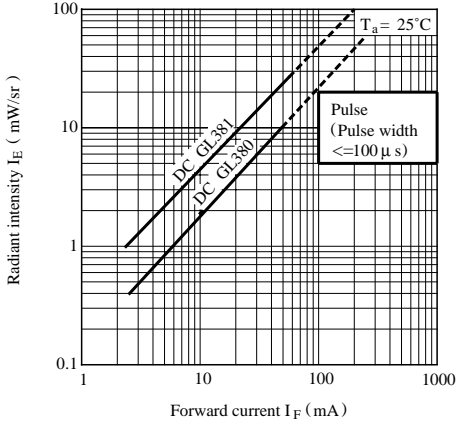


Fig. 8 Relative Collector Current vs. Distance
(Detector : PT380 / PT381)

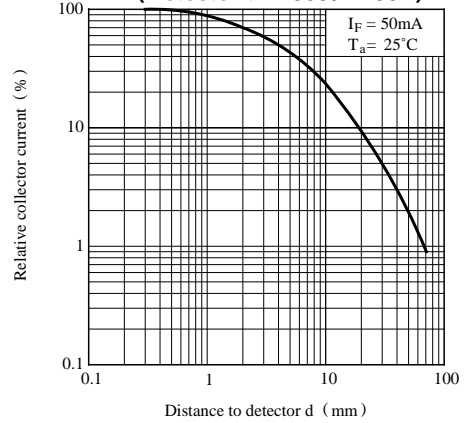
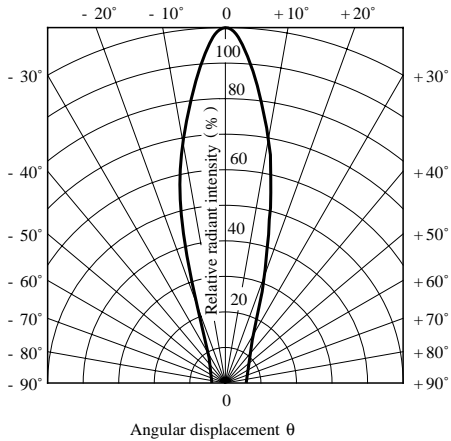


Fig. 9 Radiation Diagram



● Please refer to the chapter “Precautions for Use”

