

Infrared LED

L9338

For optical switches



L9338 is an infrared LED developed for optical switches and is available at a low cost due to the improved manufacturing process.

Features

- High reliability
- Low price

Applications

- Optical switches

■ Absolute maximum ratings (Ta=25 °C, unless otherwise noted)

| Parameter | Symbol | Condition | Value | Unit |
|--------------------------------------|--------|-------------------------------------|----------------|-------|
| Reverse voltage | VR | | 5 | V |
| Forward current | IF | | 80 | mA |
| Forward current reduction rate | - | Ta>25 °C | 1.1 | mA/°C |
| Pulse forward current | IFP | Pulse width=10 μs Duty ratio=1 % | 1.0 | A |
| Pulse forward current reduction rate | - | Ta>25 °C | 13 | mA/°C |
| Power dissipation | P | | 150 | mW |
| Operating temperature | Topr | | -30 to +85 | °C |
| Storage temperature | Tstg | | -40 to +100 *1 | °C |

*1: Guaranteed to resist temperature cycle test of up to 5 cycles.

■ Electrical and optical characteristics (Ta=25 °C)

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|--------------------------|-----------------|--------------------|------|------|------|------|
| Peak emission wavelength | λ_p | IF=50 mA | 920 | 945 | 970 | nm |
| Spectral half width | $\Delta\lambda$ | IF=50 mA | - | 60 | - | nm |
| Forward voltage | VF | IF=50 mA | - | 1.34 | 1.42 | V |
| Pulse forward voltage | VFP | IF=1 A | - | 3.1 | 3.8 | V |
| Reverse current | IR | VR=5 V | - | - | 5 | μA |
| Radiant flux | ϕ_e | IF=50 mA | 10 | 15 | - | mW |
| Cut-off frequency *2 | fc | IF=50 mA ± 4 mAp-p | 0.1 | 0.3 | - | MHz |

*2: Frequency at which the optical output drops by -3 dB from that at 10 kHz.