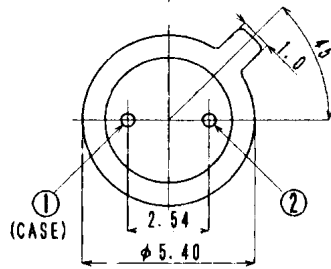
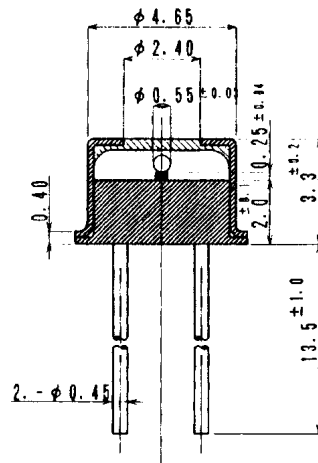


Point-source LED (\varnothing 50 μm)

ELP-880-014-1

| Radiation | Type | Technology | Case |
|-----------|-----------------------------|-------------|-------|
| Infrared | Point source with ball lens | AlGaAs/GaAs | TO 18 |



① Cathode ② Anode

Maximum Ratings

$T_{\text{amb}} = 25^{\circ}\text{C}$, unless otherwise specified

| Parameter | Test conditions | Symbol | Value | Unit |
|-----------------------------|---|------------------|-------------|--------------------|
| Forward current (DC) | | I_F | 80 | mA |
| Peak forward current | ($t_P \leq 10 \mu\text{s}$, $T = 10 \text{ ms}$) | I_{FM} | 400 | mA |
| Reverse current | $V_R = 5 \text{ V}$ | I_R | 10 | μA |
| Power dissipation | | P_D | 150 | mW |
| Operating temperature range | | T_{amb} | -30 to +100 | $^{\circ}\text{C}$ |
| Storage temperature range | | T_{stg} | -40 to +125 | $^{\circ}\text{C}$ |
| Junction temperature | | T_j | +125 | $^{\circ}\text{C}$ |
| Lead soldering temperature* | | T_j | +260 | $^{\circ}\text{C}$ |

*Time 5 sec max, position-up to 3 mm from the body

Optical and Electrical Characteristics

$T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified

| Parameter | Test conditions | Symbol | Min | Typ | Max | Unit |
|-------------------------------|---|-----------------------|-----|-------|-----|---------------|
| Forward voltage | $I_F = 50 \text{ mA}$ | V_F | | 1.9 | 2.4 | V |
| Reverse current | $I_F = 50 \text{ mA}$ | I_R | | | 10 | μA |
| Radiant power | $I_F = 50 \text{ mA}$ | Φ_e | 2.5 | 3.5 | | mW |
| Peak wavelength | $I_F = 50 \text{ mA}$ | λ_p | 850 | 880 | | nm |
| Spectral bandwidth at 50% | $I_F = 50 \text{ mA}$ | $\Delta\lambda_{0.5}$ | | 40 | | nm |
| Viewing angle | | φ | | 12 | | deg. |
| Cut-off frequency | $I_F = 50 \text{ mA} +$ 20 mA pp | f_c | | 20 | | MHz |
| Junction capacitance | $f=1 \text{ MHz}, V=0$ | C_j | | 40 | | pF |
| Temp. coefficient of Φ_e | | $\text{TC}\Phi_e$ | | -0.05 | | %/K |
| Temp. coefficient of V_F | | $\text{TC}V_F$ | | -2.3 | | mV/K |
| Fiber-coupled power** | $I_F = 50 \text{ mA}$ | | 200 | 600 | | μW |

**Fiber 200/230 μm , NA=0.4