

Infrared LED

L7560

High-speed, high output power LED with mini-lens



L7560 is a high-speed, high-power LED with a micro-ball lens bonded to the surface of the LED chip having an internal confined structure. The package is sealed by a metal cap with a mini-lens, making the output beam even narrower. This allows highly efficient input of the beam into an optical fiber, making L7560 well suited for optical fiber communications.

Features

- High-speed response: 100 MHz Typ. ($I_F=50$ mA)
- High radiant output power: 30 μ W Typ. ($I_F=50$ mA, GI 50)

Applications

- Optical fiber communication
- Range-finder

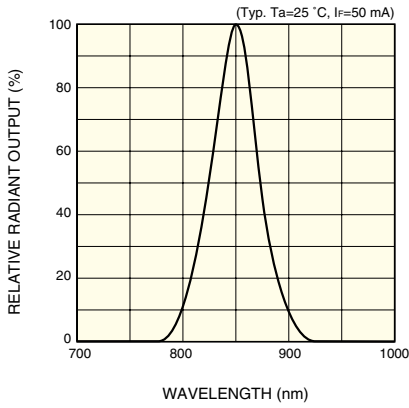
■ Absolute maximum ratings ($T_a=25$ °C)

| Parameter | Symbol | Condition | Value | Unit |
|-----------------------|-----------|--|-------------|------|
| Forward current | I_F | | 70 | mA |
| Reverse voltage | V_R | | 3 | V |
| Pulse forward current | I_{FP} | Pulse width=10 μ s Duty ratio=1 % | 0.25 | A |
| Operating temperature | T_{opr} | | -30 to +85 | °C |
| Storage temperature | T_{stg} | | -40 to +100 | °C |

■ Electrical and optical characteristics ($T_a=25$ °C)

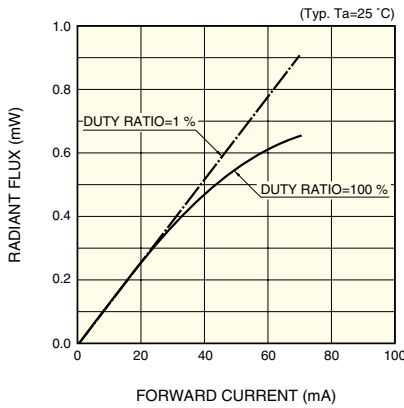
| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|--------------------------|-----------------|------------------------|------|------|------|---------|
| Peak emission wavelength | λ_p | $I_F=50$ mA | 820 | 850 | 880 | nm |
| Spectral half width | $\Delta\lambda$ | $I_F=50$ mA | - | 50 | - | nm |
| Forward voltage | V_F | $I_F=50$ mA | - | 1.8 | 2.0 | V |
| Reverse current | I_R | $V_R=3$ V | - | - | 20 | μ A |
| Fiber end output | P_f | $I_F=50$ mA, GI 50 | 15 | 30 | - | μ W |
| Cut-off frequency | f_c | $I_F=50$ mA + 1 mA p-p | 70 | 100 | - | MHz |

Emission spectrum



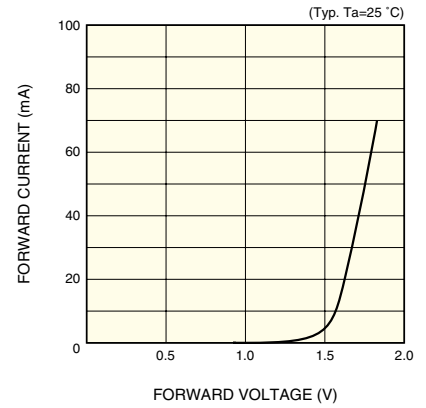
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Radiant flux vs. forward current



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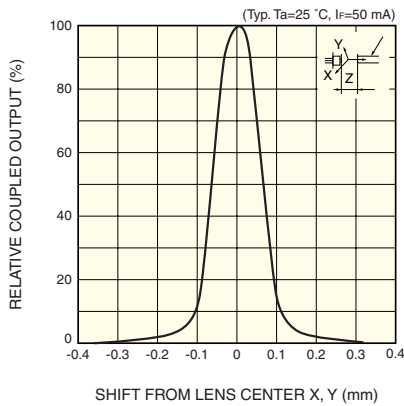
Forward current vs. forward voltage



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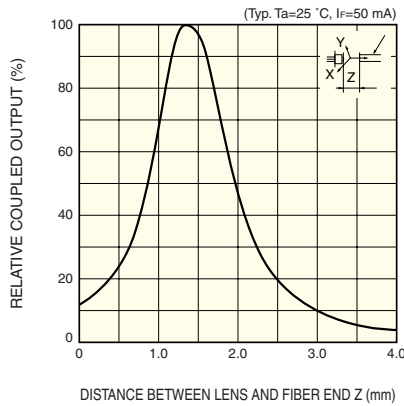
Fiber coupling characteristic (GI 50)

X, Y axes



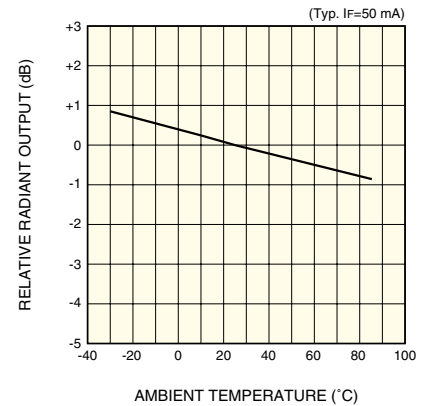
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Z axis



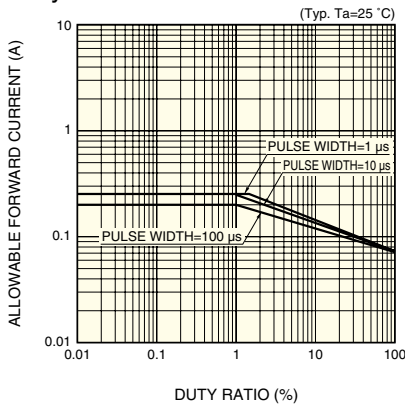
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Radiant output vs. ambient temperature



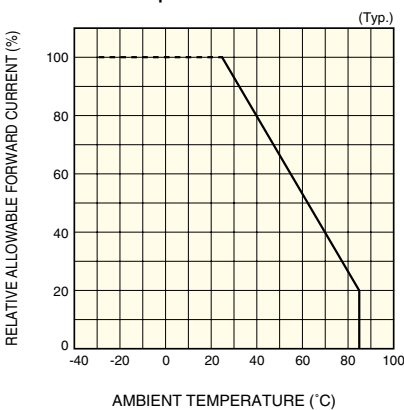
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Allowable forward current vs. duty ratio



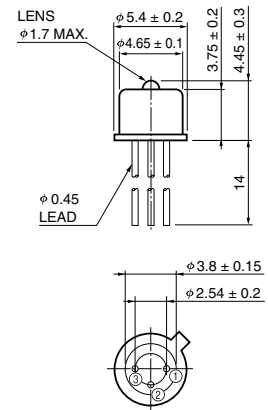
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Allowable forward current vs. ambient temperature



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Dimensional outline (unit: mm)



COMMON TO CASE



KLEDA0029EB

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