

Peak Emission Wavelength: 870nm

The 870nm infrared emitter series is designed for applications requiring high accuracy and precision as well as uniform spectral emission. Custom package solutions and sorting are available.

FEATURES

- > 3.5x2.2x1.24 Flat Top Ceramic SMT
- > High Reliability
- > High Output Power
- > Wide Beam Angle

APPLICATIONS

- > Optical Switches
- > Bar-code Reader



Absolute Maximum Ratings (Ta=25°C)

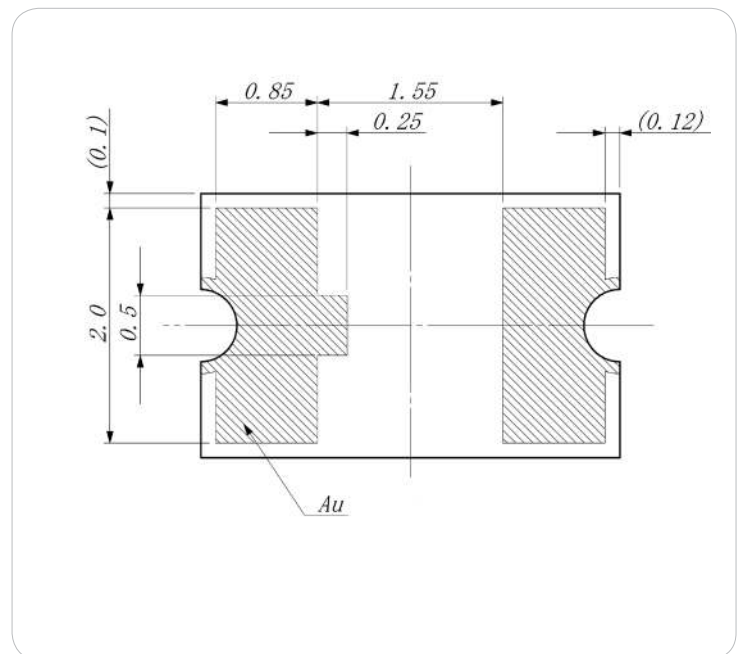
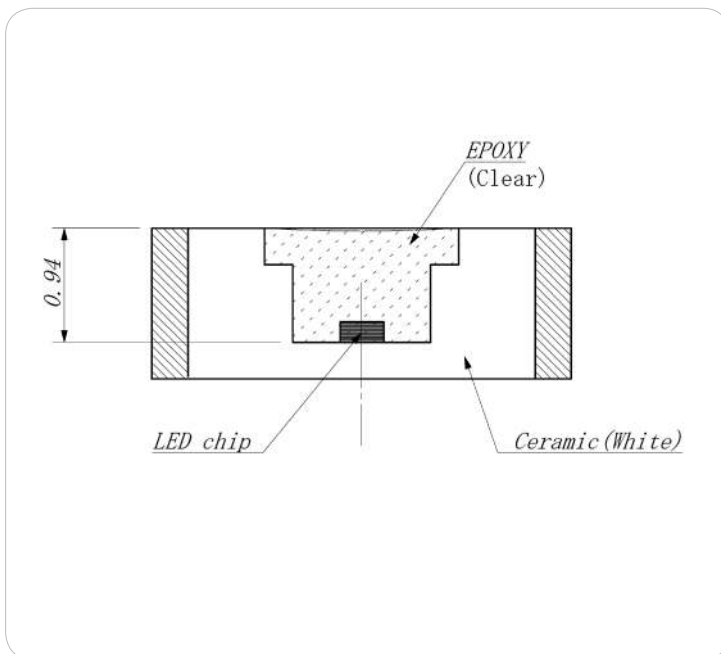
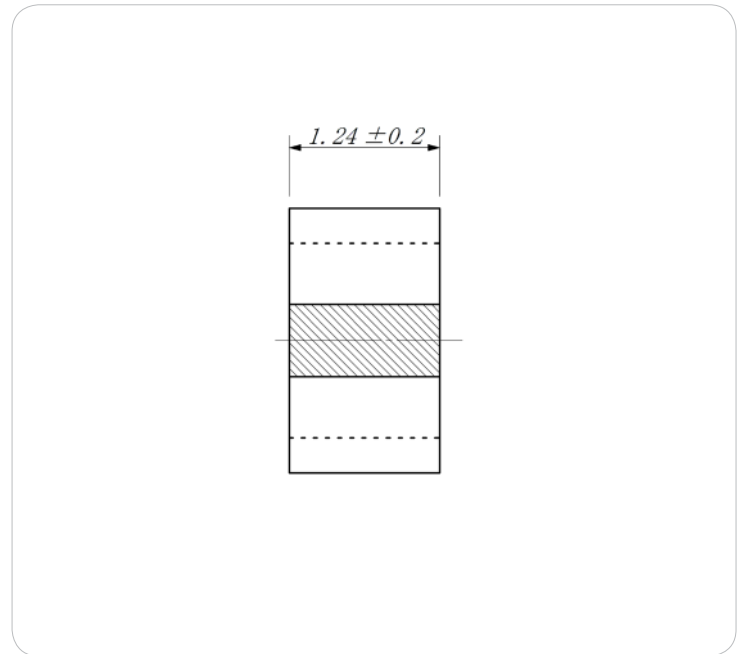
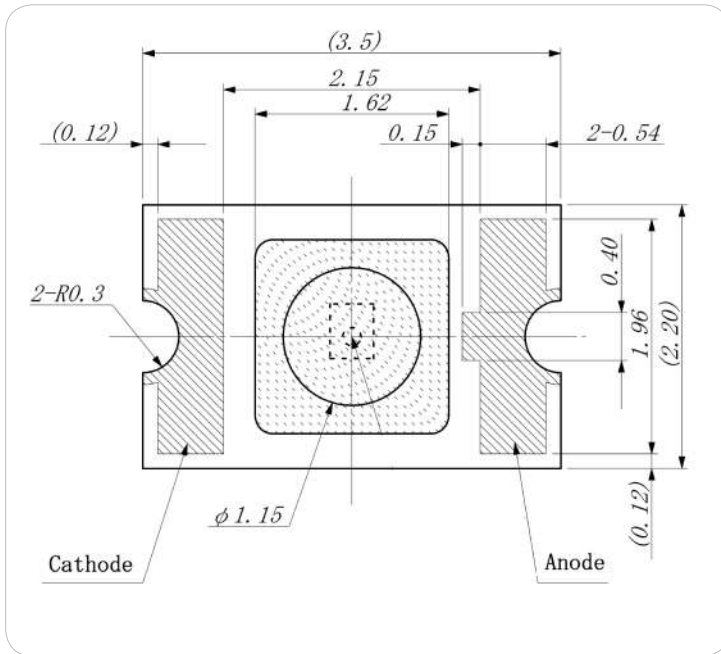


| ITEMS | SYMBOL | RATINGS | UNIT |
|------------------------------|--------|------------|------|
| Forward Current (DC) | IF | 80 | mA |
| Forward Current (Pulse)*1 | IFP | 0.5 | A |
| Reverse Voltage | VR | 5 | V |
| Power Dissipation | PD | 160 | mW |
| Operating Temperature Range | Topr | -20 ~ +80 | °C |
| Storage Temperature Range | Tstg | -30 ~ +100 | °C |
| Junction Temperature | Tj | 100 | °C |
| Lead Soldering Temperature*2 | Tls | 260 | °C |

*1: Tw=10μsec, T=10msec. *2: Time 5 Sec max, Position: Up to 3mm from the body.

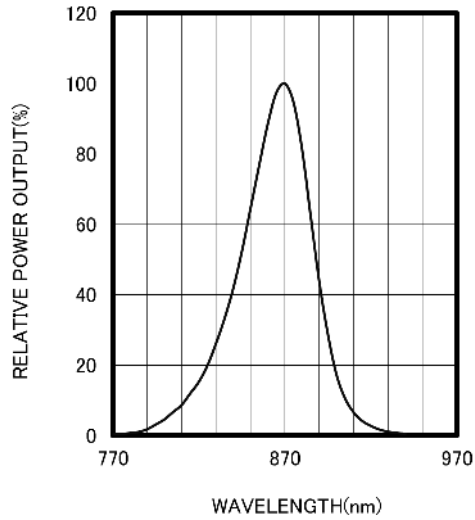
Electrical & Optical Characteristics (Ta = 25°C)

| ITEMS | SYMBOL | CONDITIONS | MIN | TYP | MAX | UNIT |
|---------------------------|--------|------------|-----|------|------|------|
| Power Output | PO | IF=50mA | -- | 10.0 | -- | mW |
| Forward Voltage | VF | IF=50mA | -- | 1.45 | 1.80 | V |
| Reverse Current | IR | VR=5V | -- | -- | 100 | μA |
| Peak Emission Wavelength | λp | IF=50mA | -- | 870 | -- | nm |
| Spectral Line Half Width | Δλ | IF=50mA | -- | 45 | -- | nm |
| Half Intensity Beam Angle | Θ | IF=50mA | -- | ±55 | -- | deg |

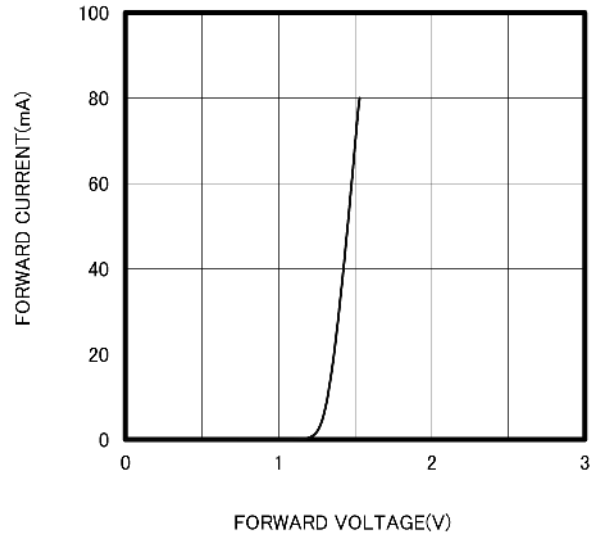


Unit: mm, Tolerance: ± 0.2

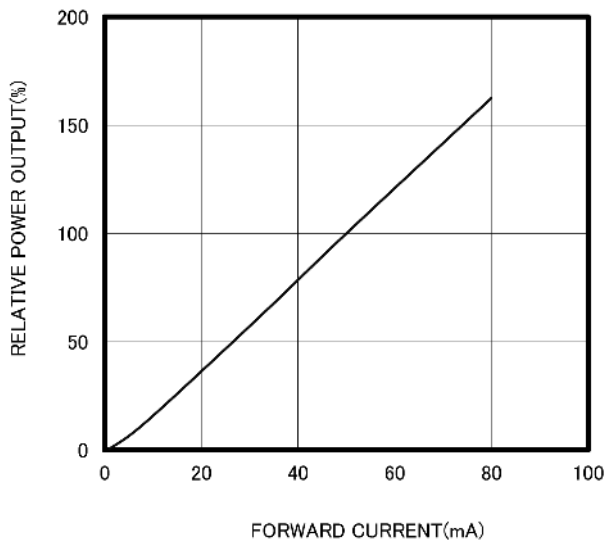
SPECTRAL OUTPUT



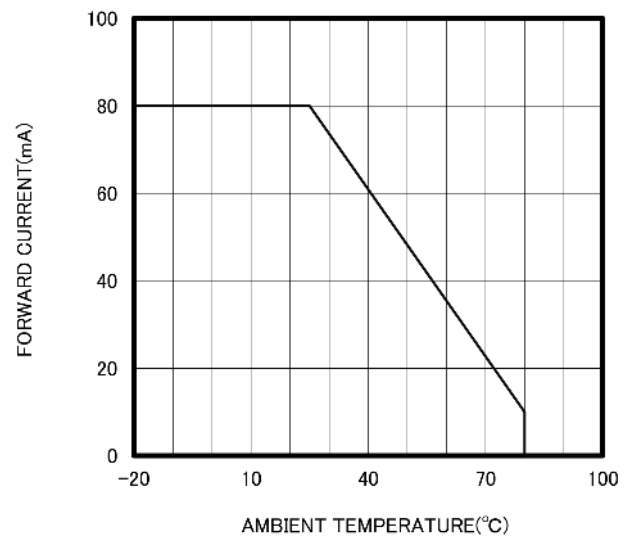
FORWARD I-V CHARACTERISTICS



RELATIVE POWER vs FORWARD CURRENT



THERMAL DERATING CURVE



RADIATION PATTERN

