

## Peak Emission Wavelength: 870nm

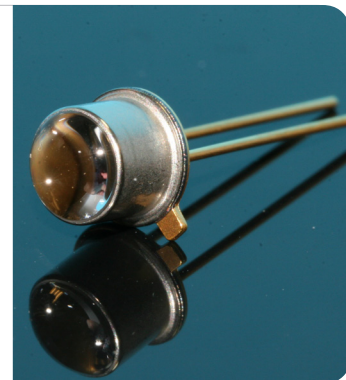
The 870nm high power infrared emitter series is designed for applications requiring high accuracy and precision as well as uniform spectral emission. Custom package solutions and sorting are available.

### FEATURES

- > Hermetically Sealed TO-46
- > High Output Power
- > High Reliability
- > Narrow Beam Angle

### APPLICATIONS

- > Optical Scanning
- > Linear & Rotary Encoder
- > Edge Sensing / Optical Sensors
- > Optical Switches / Security Systems



## Absolute Maximum Ratings (Ta=25°C)

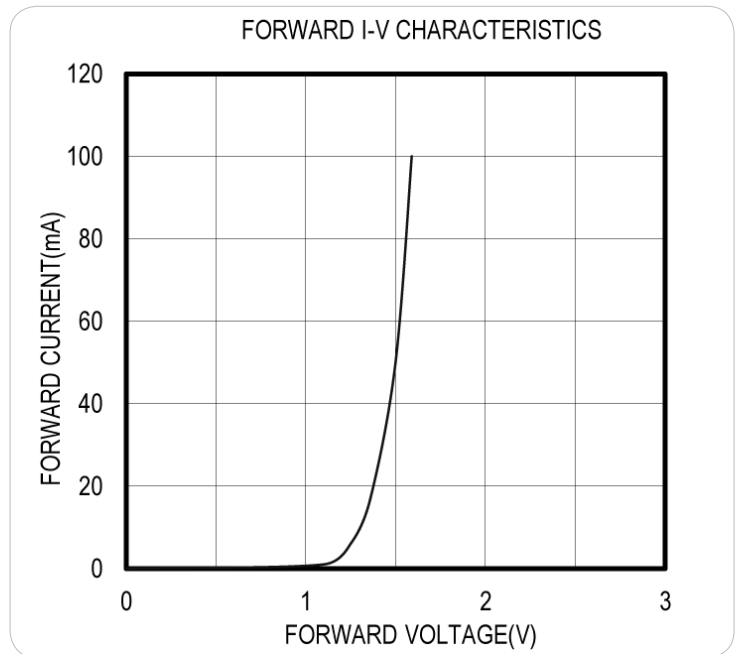
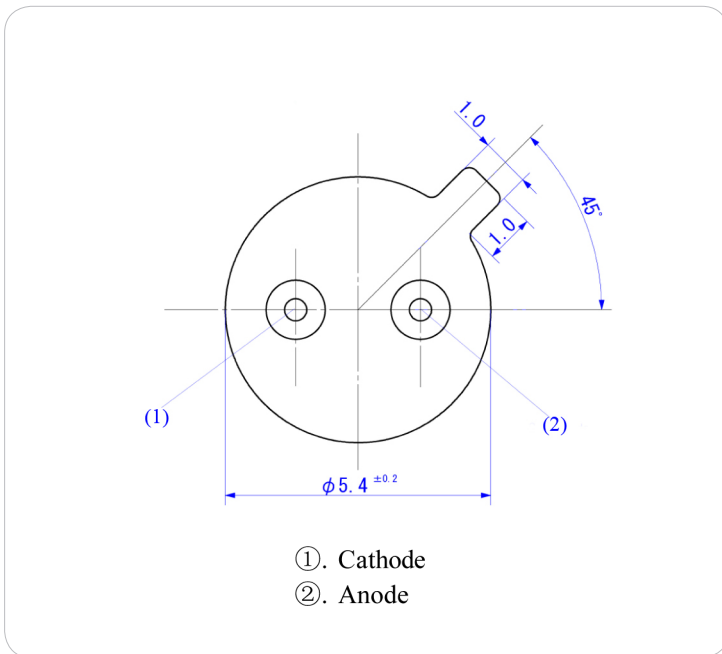
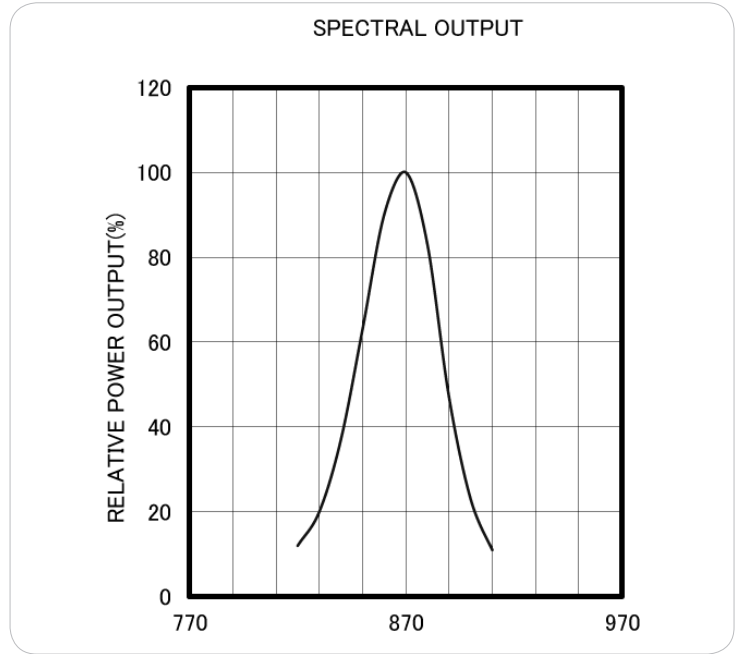
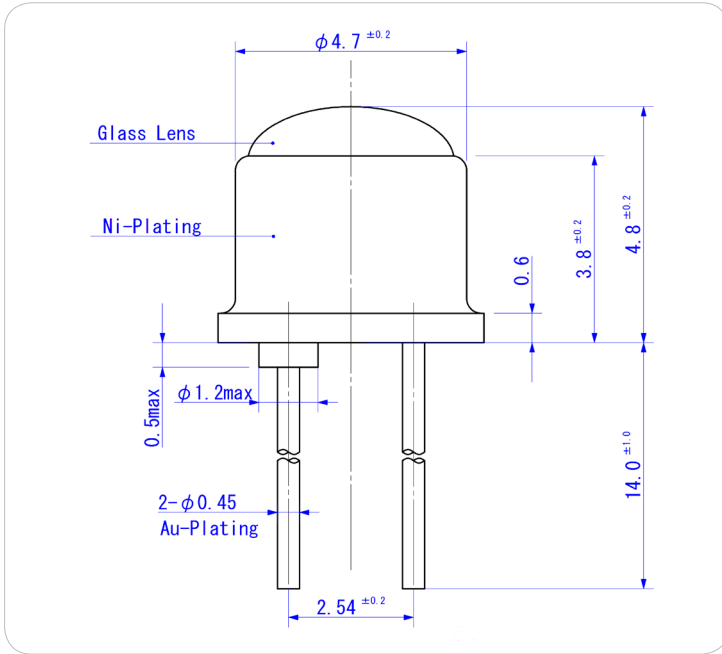


| ITEMS                        | SYMBOL | RATINGS    | UNIT |
|------------------------------|--------|------------|------|
| Forward Current (DC)         | IF     | 100        | mA   |
| Forward Current (Pulse)*1    | IFP    | 1          | A    |
| Reverse Voltage              | VR     | 5          | V    |
| Power Dissipation            | PD     | 200        | mW   |
| Operating Temperature Range  | Topr   | -30 ~ +100 | °C   |
| Storage Temperature Range    | Tstg   | -40 ~ +125 | °C   |
| Junction Temperature         | Tj     | 125        | °C   |
| Lead Soldering Temperature*2 | Tls    | 260        | °C   |

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

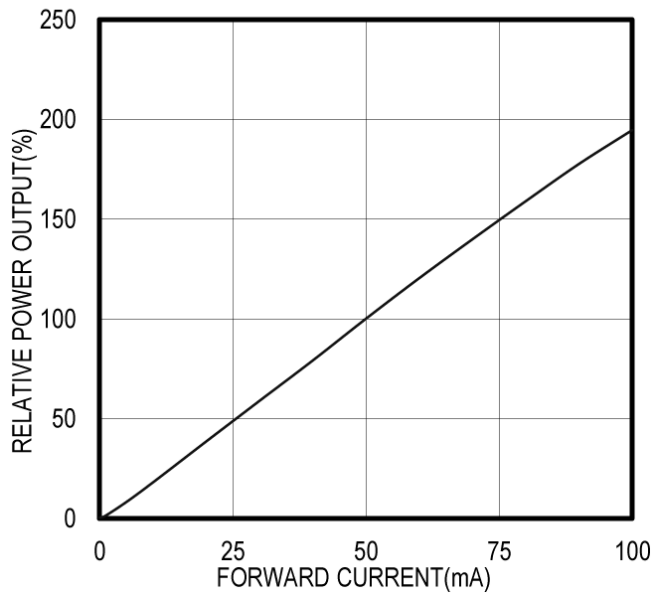
## Electrical & Optical Characteristics (Ta = 25°C)

| ITEMS                     | SYMBOL | CONDITIONS | MIN | TYP  | MAX | UNIT |
|---------------------------|--------|------------|-----|------|-----|------|
| Power Output              | PO     | IF=50mA    | --  | 10.0 | --  | mW   |
| Forward Voltage           | VF     | IF=50mA    | --  | 1.5  | 2.0 | 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    | --  | ±6   | --  | deg  |

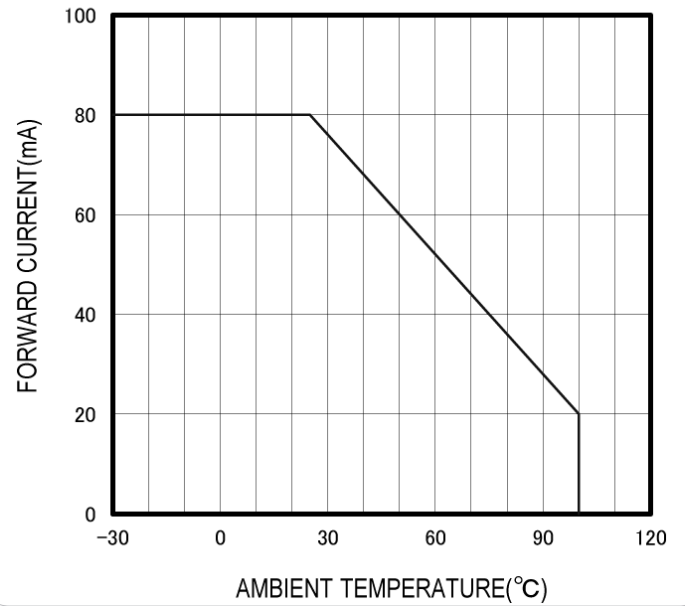


Unit: mm, Tolerance:  $\pm 0.2$

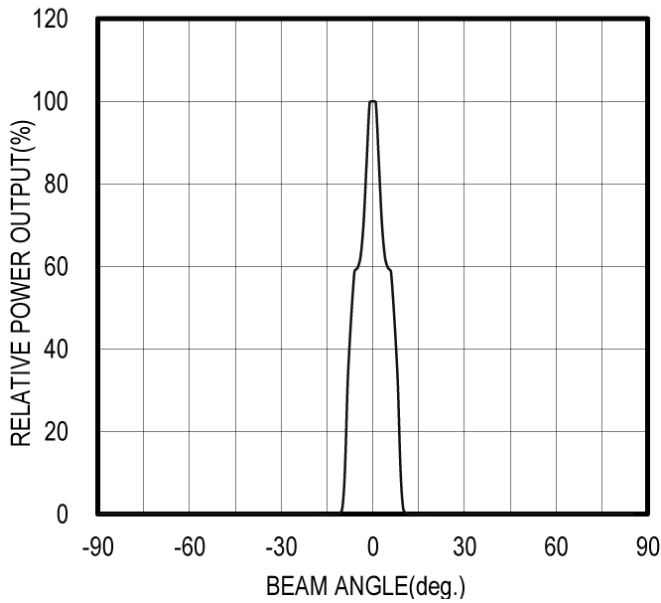
RELATIVE POWER vs FORWARD CURRENT



THERMAL DERATING CURVE



RADIATION PATTERN



The information contained herein is subject to change without notice.

2014-02-13

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