

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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## Peak Emission Wavelength: 870nm

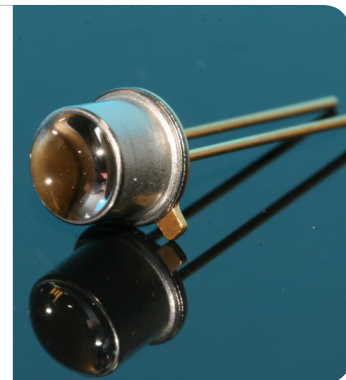
The 870nm high power infrared emitter series is designed for applications requiring high accuracy and precision as well as uniform spectral emission. Custom package solutions and sorting are available.

### 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)

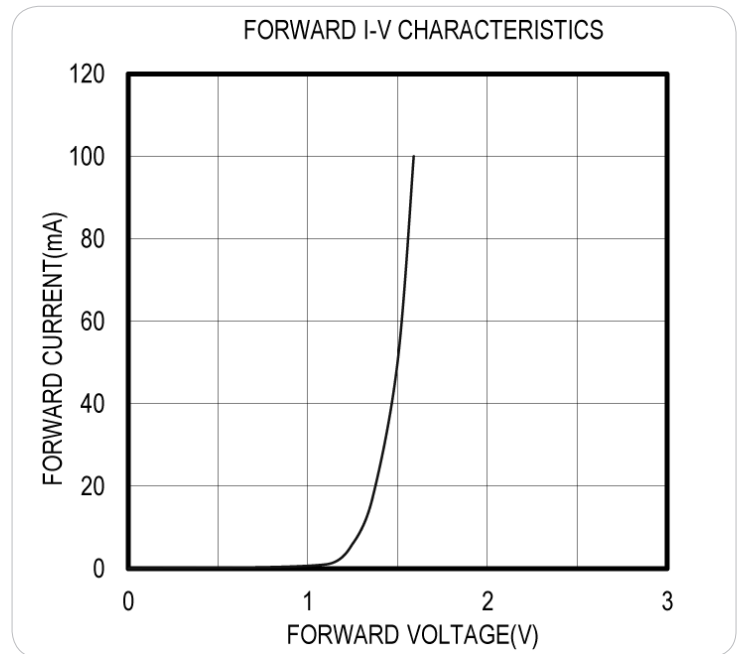
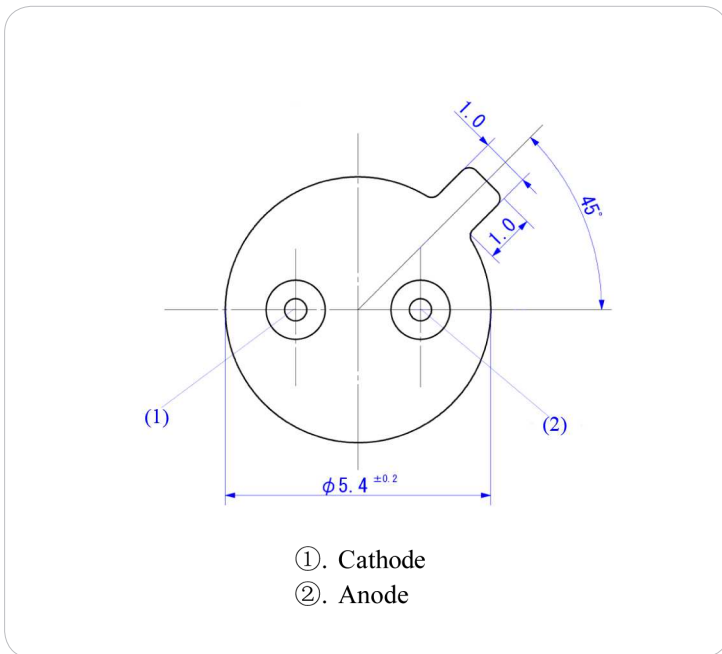
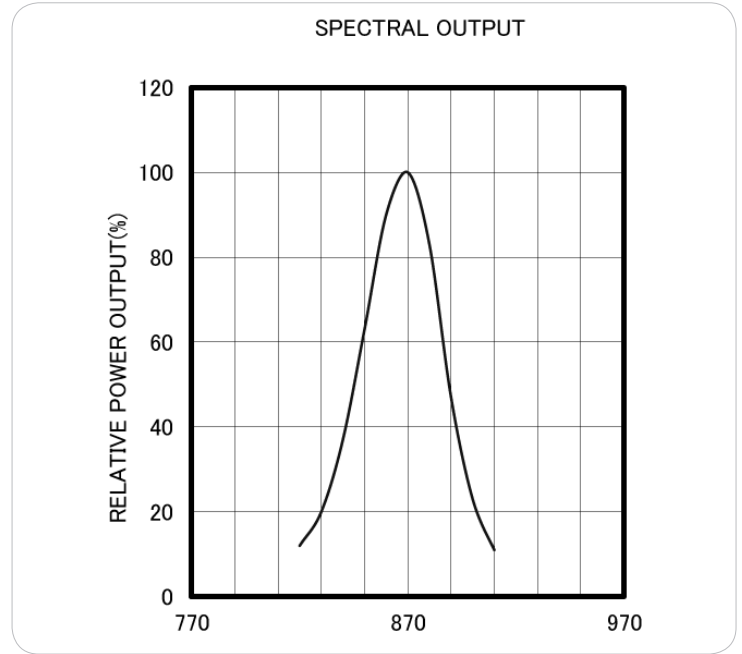
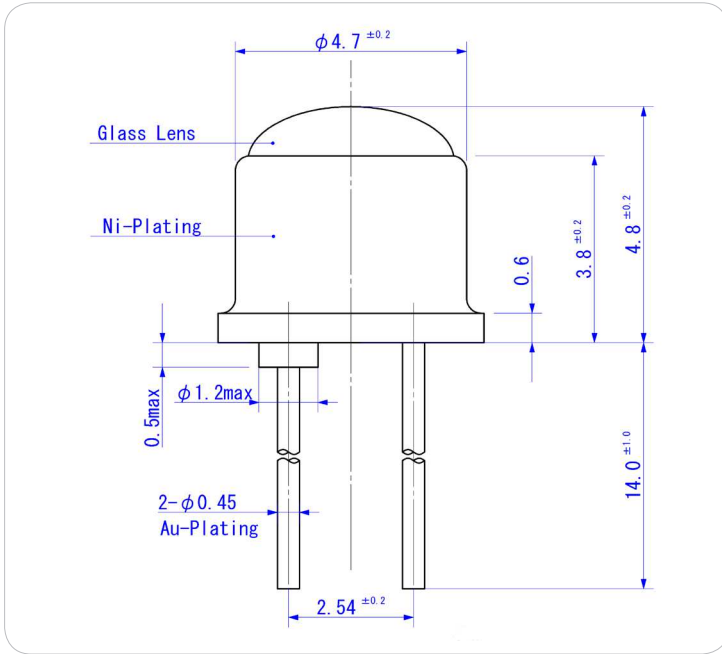


| ITEMS                        | SYMBOL | RATINGS    | UNIT |
|------------------------------|--------|------------|------|
| Forward Current (DC)         | IF     | 100        | mA   |
| Forward Current (Pulse)*1    | IFP    | 1          | A    |
| Reverse Voltage              | VR     | 5          | 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.

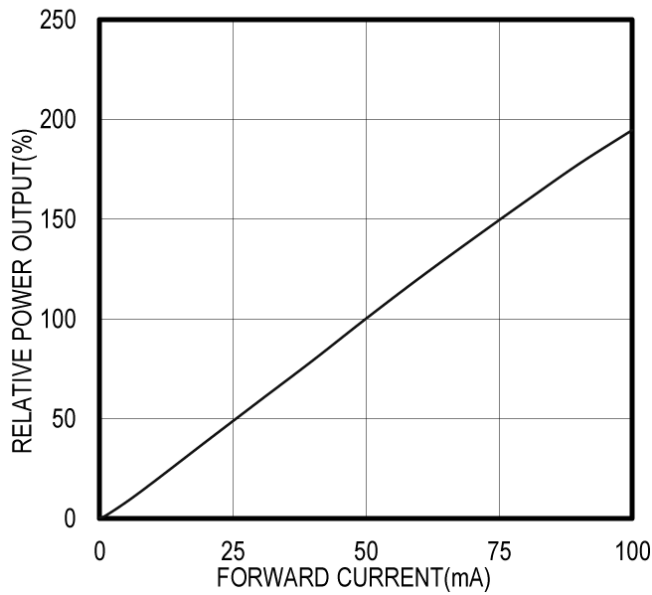
## Electrical & Optical Characteristics (Ta = 25°C)

| 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  |

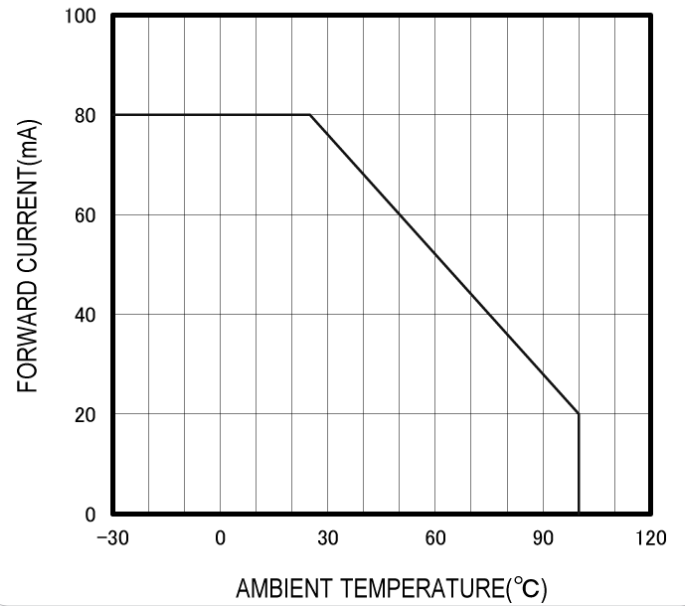


Unit: mm, Tolerance:  $\pm 0.2$

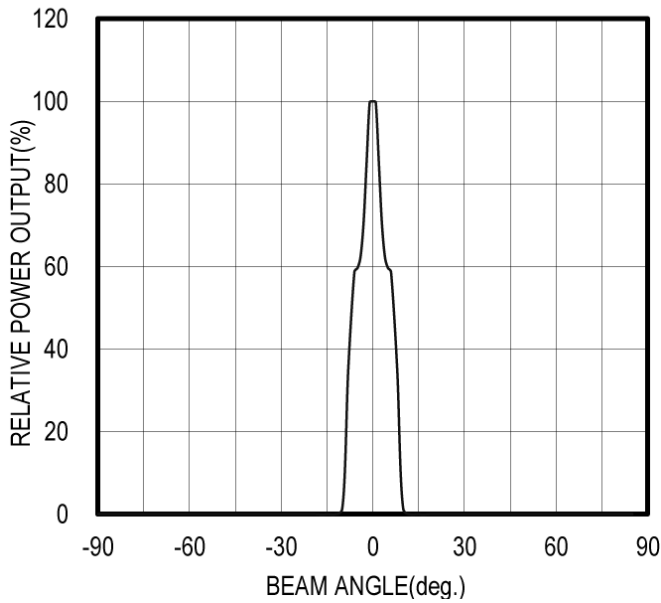
RELATIVE POWER vs FORWARD CURRENT



THERMAL DERATING CURVE



RADIATION PATTERN



The information contained herein is subject to change without notice.

2014-02-13