

## Peak Emission Wavelength: 850nm

The 850nm Point Source Series is designed for applications requiring high accuracy and precision as well as uniform spectral emission. Custom package solutions and sorting are available.

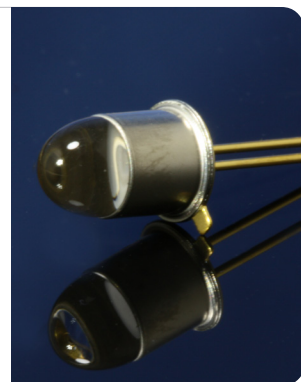
### FEATURES

- > Hermetically Sealed TO-18
- > Emitting Window Diameter  $\Phi$  150 $\mu$ m
- > Gold Plated Dome Lens
- > High Reliability / High Output Power

- > Extremely Narrow Radiation Pattern

### APPLICATIONS

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



## Absolute Maximum Ratings (Ta=25°C)



| ITEMS                        | SYMBOL | RATINGS    | UNIT |
|------------------------------|--------|------------|------|
| Forward Current (DC)         | IF     | 100        | mA   |
| Forward Current (Pulse)*1    | IFP    | 0.8        | A    |
| Reverse Voltage              | VR     | 5          | V    |
| Power Dissipation            | PD     | 180        | 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   |

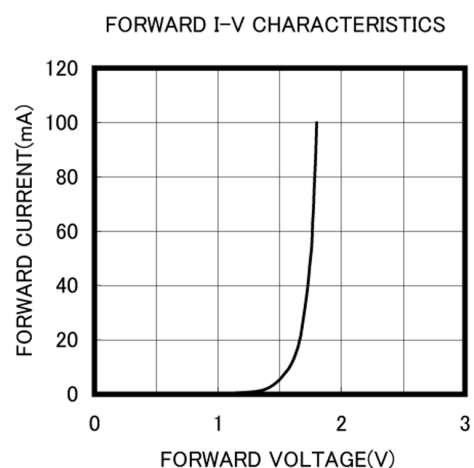
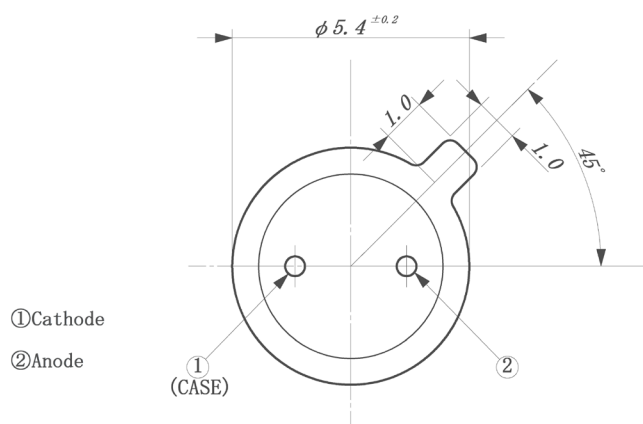
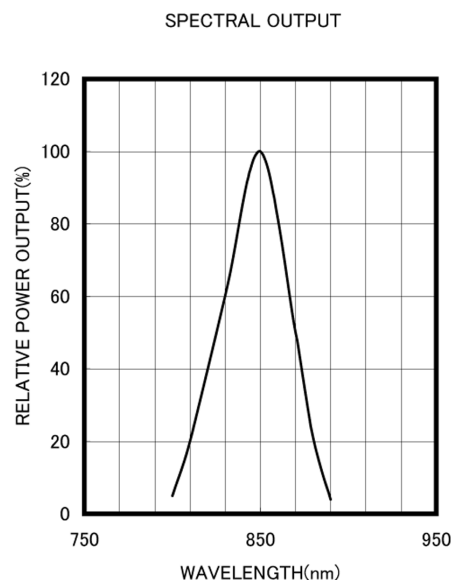
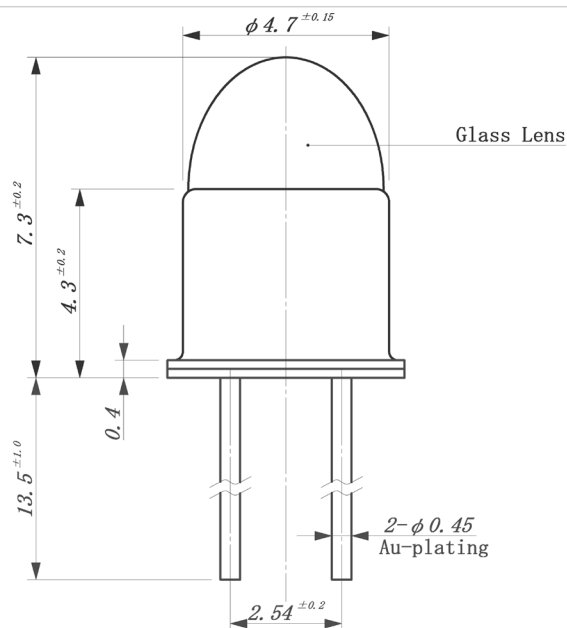
\*1: Tw=10 $\mu$ sec, T=10msec; \*2: Time 5 Sec max, Position: Up to 3mm from the body.

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

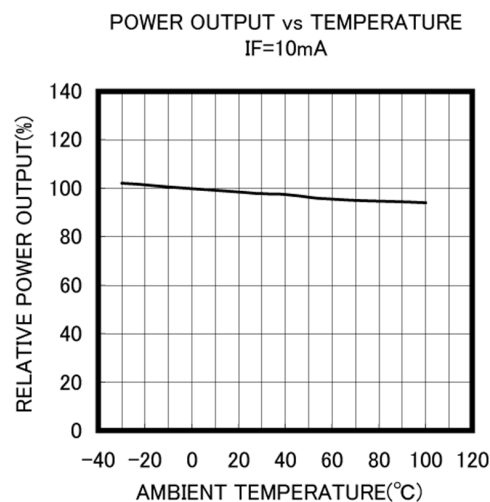
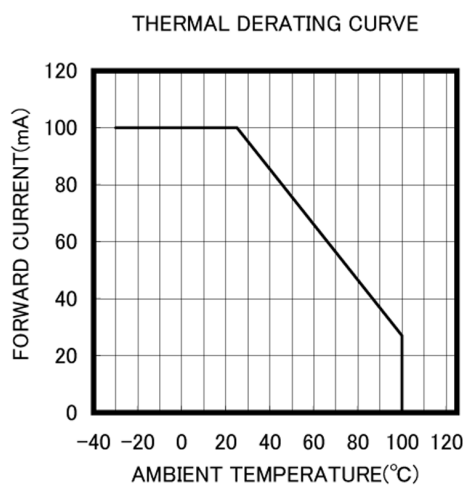
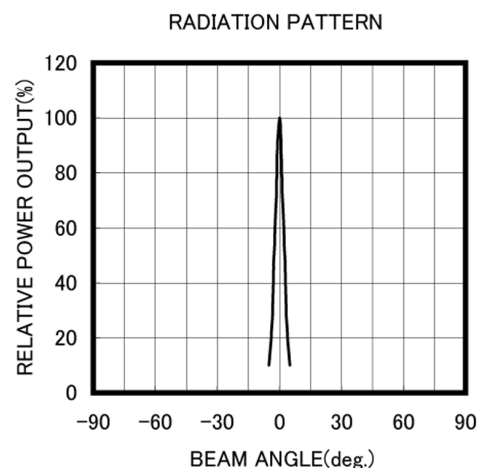
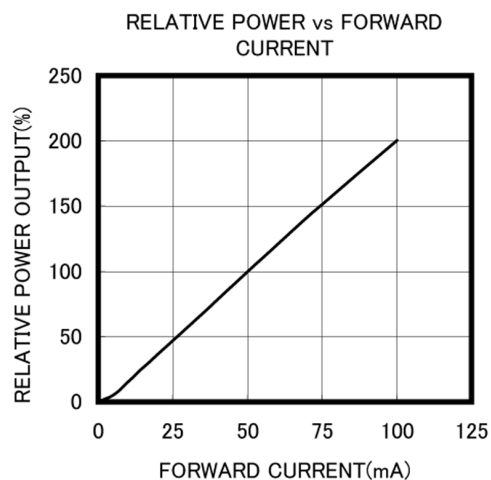
| ITEMS                         | SYMBOL          | CONDITIONS | MIN | TYP       | MAX | UNIT    |
|-------------------------------|-----------------|------------|-----|-----------|-----|---------|
| Power Output                  | PO              | IF=50mA    | 2.0 | 3.3       | --  | mW      |
| Forward Voltage               | VF              | IF=50mA    | --  | 1.7       | 2.2 | V       |
| Reverse Current               | IR              | VR=5V      | --  | --        | 100 | $\mu$ A |
| Peak Emission Wavelength      | $\lambda_p$     | IF=50mA    | --  | 850       | --  | nm      |
| Spectral Line Half Width      | $\Delta\lambda$ | IF=50mA    | --  | 45        | --  | nm      |
| Half Intensity Beam Angle     | $\Theta$        | IF=50mA    | --  | $\pm 2.5$ | --  | deg     |
| Cut-Off Frequency             | fc              | *3         | --  | 20        | --  | MHz     |
| Temperature Coefficient of PO | P/T             | IF=10mA    | --  | -0.05     | --  | %/°C    |
| Temperature Coefficient of VF | V/T             | IF=10mA    | --  | -2        | --  | mV/°C   |
| Switching Time                | tr, tf          | IF=50mA    | --  | 30        | --  | ns      |

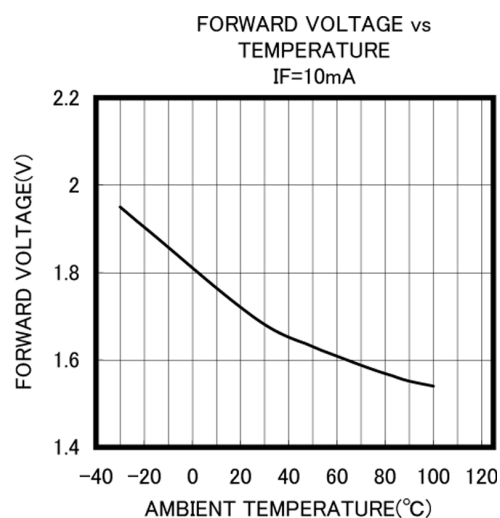
\*3: IFP=50mA+20mA<sub>p-p</sub>.

2016-09-01



Unit: mm, Tolerance:  $\pm 0.2$





# Mouser Electronics

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