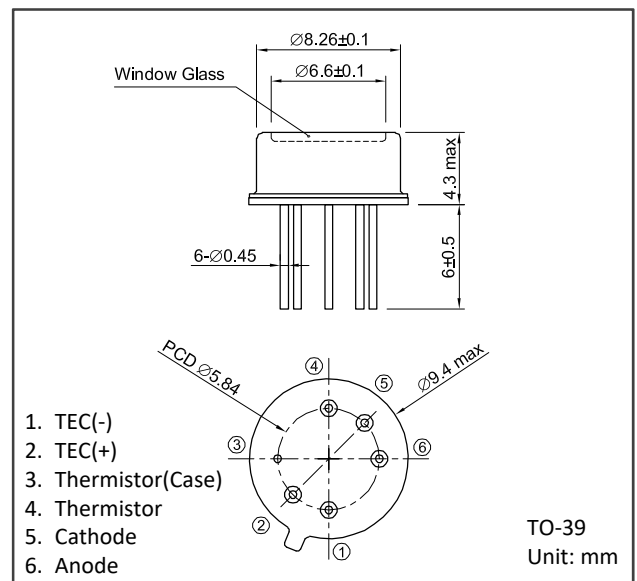


Features

- 860 μm sq. large sensitive area
- Low dark current
- High shunt resistance
- Electrically cooled with TEC and thermistor

Applications

- Near IR sensors
- Near IR spectroscopy
- Power meters



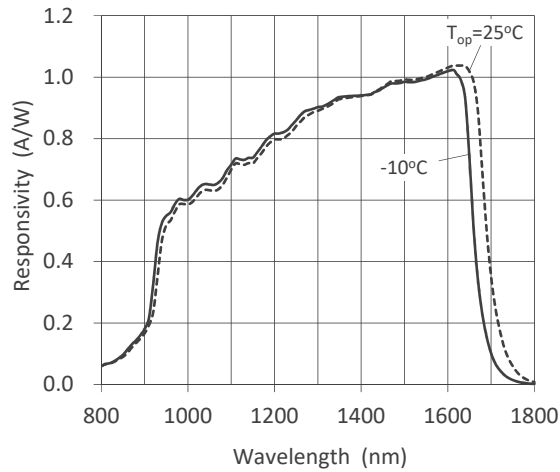
Absolute Maximum Ratings

| Parameter | Symbol | Value | Unit | Note |
|-----------------------------|--------------|------------|--------------------|------------------------|
| Reverse voltage | V_R | 20 | V | |
| Maximum optical power input | $P_{i(max)}$ | 50 | mW | |
| Power dissipation | P_D | 100 | mW | |
| Forward current | I_F | 50 | mA | |
| TEC current | I_C | 1.0 | A | |
| Thermistor power rating | P_{th} | 1.5 | mW | |
| Operating temperature | T_{opr} | -40 to +70 | $^{\circ}\text{C}$ | Avoid dew condensation |
| Storage temperature | T_{stg} | -40 to +85 | $^{\circ}\text{C}$ | Avoid dew condensation |

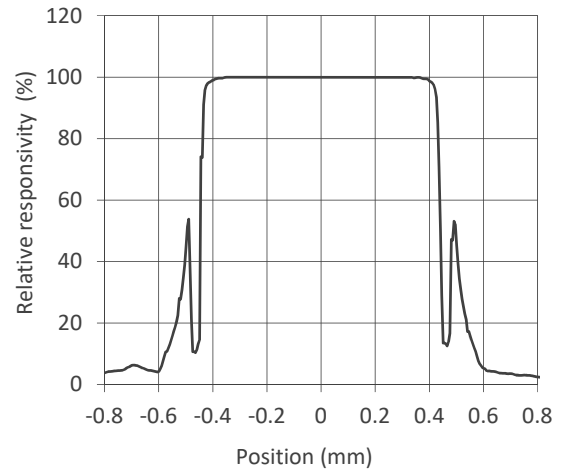
Electrical and Optical Characteristics (Ta=25 $^{\circ}\text{C}$ unless otherwise noted)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test Condition |
|----------------------|--------|-----------|------|------|-----------------|--------------------------------|
| Active area | S | 860 x 860 | | | μm^2 | |
| Responsivity | R | 0.8 | 0.9 | - | A/W | $\lambda=1310\text{nm}$ |
| | | 0.9 | 1.0 | - | A/W | $\lambda=1550\text{nm}$ |
| Dark current | I_D | - | 1.0 | 10 | nA | $V_R=5\text{V}$ |
| Terminal capacitance | C_t | - | 45 | 60 | pF | $V_R=5\text{V}, f=1\text{MHz}$ |

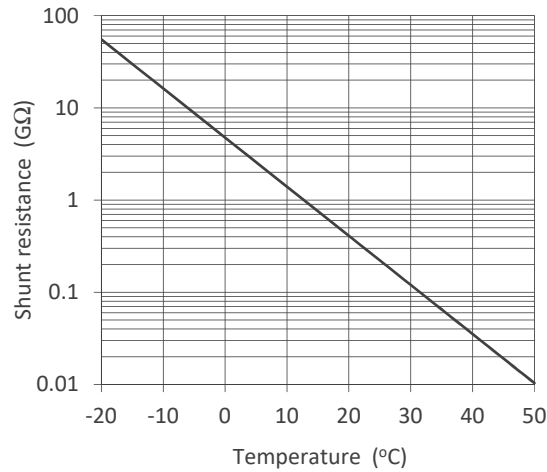
Spectral Responsivity



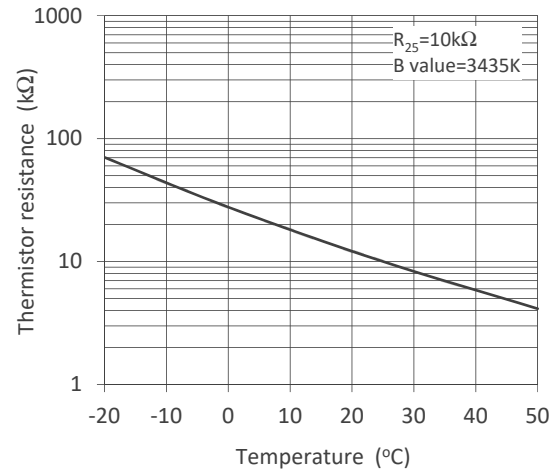
Responsivity Distribution



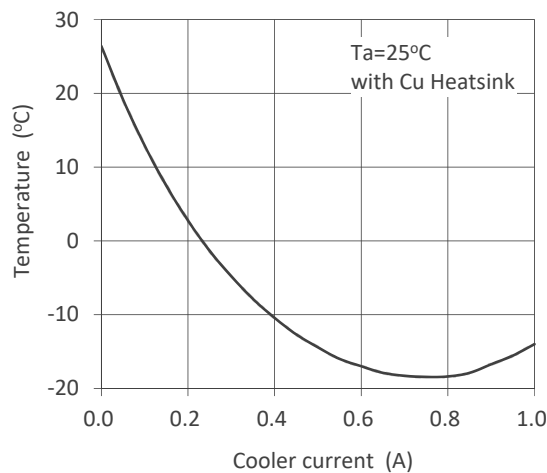
Shunt Resistance - Temperature



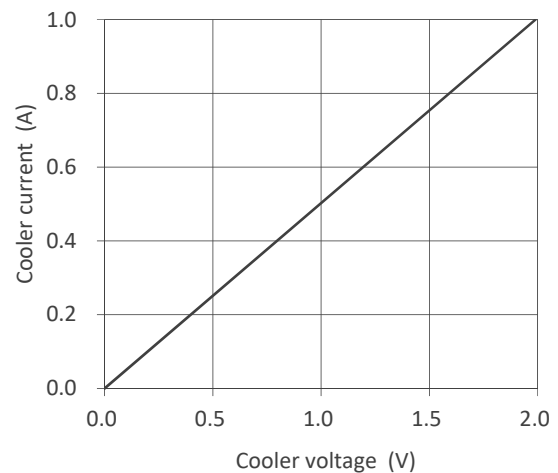
Thermistor Resistance - Temperature



TEC Temperature - Current



TEC Current - Voltage



- Specifications , characteristics, data, materials, structures specified in this datasheet are subject to change without notice. Please refer to the latest specification before use of the products.
- Products listed in this datasheet comply with the RoHS Directive (2011/65/EU).



Opto-technologies for the Future

KYOTO SEMICONDUCTOR Co.,Ltd.

| | |
|--|----------------------|
| Headquarters : 307-21 Nishiote-cho Fushimi-ku Kyoto 612-8362 Japan | TEL: +81-75-605-7311 |
| Tokyo Sales Office: 24 th Sky Bldg.2F, 1-34-3 Shinjuku Shinjuku-ku, Tokyo 160-0022 Japan | TEL: +81-3-5312-5360 |
| Kansai Sales Office: 307-21 Nishiote-cho Fushimi-ku Kyoto 612-8362 Japan | TEL: +81-75-605-7314 |
| Kyosemi Opto America Corp: 4655 Old Ironsides Suite 230 Santa Clara, California 95054 USA | TEL: +1-408-492-9361 |
| Eniwa Operation: 385-31 Toiso Eniwa-shi, Hokkaido 061-1405 Japan | TEL: +81-123-34-3111 |
| Kamisunagawa Operation: 70-1 Kamisunagawa Kamisunagawa-cho Sorachi-gun, Hokkaido 073-0200 Japan | TEL: +81-125-62-3611 |