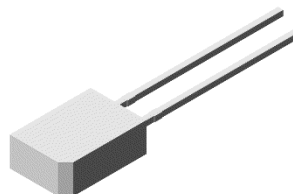


## Rectangular Silicon Photodiode

### OD T638

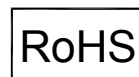
#### Features

- High radiant sensitive
- Low junction capacitance
- Wide radiant sensitive area
- Fast respond speed.
- Pb free
- Lens in water clear



#### Applications

- Industrial electronics
- Measurement
- Control circuit
- Interrupter



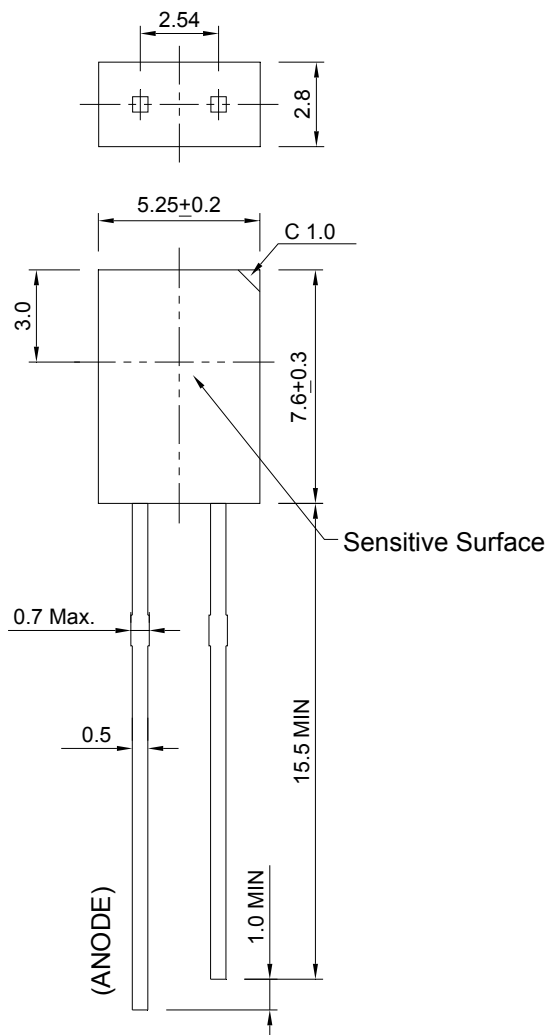
#### Absolute Maximum Rating at $T_a = 25^{\circ}\text{C}$ , unless otherwise specified

| Parameter                   | Symbol    | Value                 | Unit               |
|-----------------------------|-----------|-----------------------|--------------------|
| Reverse Voltage             | $V_R$     | 32                    | V                  |
| Power Dissipation           | $P_v$     | 150                   | mW                 |
| Operating Temperature Range | $T_{amb}$ | -30 to + 85           | $^{\circ}\text{C}$ |
| Storage Temperature         | $T_{stg}$ | -40 to + 85           | $^{\circ}\text{C}$ |
| Soldering Temperature       | $T_{sd}$  | 260 $\pm$ 5 for 5 sec | $^{\circ}\text{C}$ |

Note: Please take note the Absolute Maximum Rating values. Any operation beyond the specified ratings in this table will result degradation of LED life- span and may cause LED to fail.

## Package Dimension:

unit: mm



### Notes:

1. All dimensions are millimeters.
2. Tolerance is  $\pm 0.2\text{mm}$  unless otherwise specified.
3. Specifications are subject to change without notice.

**Optical Characteristics at Ta=25°C, unless otherwise specified**

| Parameter                      | Test condition                                             | Symbol          | Min | Typ. | Max  | Unit    |
|--------------------------------|------------------------------------------------------------|-----------------|-----|------|------|---------|
| Open Circuit Voltage           | Ee = 5mW/cm <sup>2</sup><br>$\lambda_p$ = 940nm            | Voc             | --- | 0.35 | ---  | V       |
| Short Circuit Current          |                                                            | Isc             | --- | 145  | ---  | $\mu$ A |
| Dark Current                   | Ee = 0mW/cm <sup>2</sup><br>VR = 10V                       | ID              | --- | 5    | 30   | nA      |
| Reverse Light Current          | Ee = 5mW/cm <sup>2</sup><br>$\lambda_p$ = 940nm<br>VR = 5V | IL              | --- | 150  | ---  | $\mu$ A |
| Total Capacitance              | Ee = 0mW/cm <sup>2</sup><br>VR = 3V<br>f=1MHz              | Ct              | --- | 25   | ---  | pF      |
| Reverse Breakdown Voltage      | Ee = 0mW/cm <sup>2</sup><br>IR=100 $\mu$ A                 | BVR             | 33  | 170  | ---  | V       |
| Range of Spectral Bandwidth    | ---                                                        | $\lambda_{0.5}$ | 400 | ---  | 1200 | nm      |
| Wavelength of Peak Sensitivity | ---                                                        | $\lambda_p$     | --- | 980  | ---  | nm      |
| Rise Time                      | VR=10V,<br>RL=1000 $\Omega$                                | tr              | --- | 50   | ---  | nS      |
| Fall Time                      |                                                            | tf              |     | 50   | ---  |         |

## Optical Characteristics Curves

