Description:
The OPF472 is a low noise silicon PIN photodiode mounted in a low cost package for fiber optic applications. It offers fast response at moderate bias and is compatible with LED and laser diode sources in the 800-1000 nm wavelength region. Low capacitance improves signal to noise performance in typical short haul LAN applications.

The OPF472 is designed to be compatible with multimode optical fibers from 50/125 to 200/300 microns.

Applications:
- Industrial Ethernet equipment
- Copper-to-fiber media conversion
- Intra-system fiber optic links
- Video surveillance systems

Features:
- High speed, low capacitance
- Popular ST® style receptacle
- Pre-tested with fiber to assure performance
- Component pre-mounted and ready to use
- 35MHz operation minimum

RoHS
ST® is a registered trademark of AT&T.
Fiber Optic Detector
OPF472

Electrical Specifications

Absolute Maximum Ratings (T_A = 25°C unless otherwise noted)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>MIN</th>
<th>TYP</th>
<th>MAX</th>
<th>UNITS</th>
<th>TEST CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Temperature Range</td>
<td>-55°C</td>
<td></td>
<td>+100°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-40°C</td>
<td></td>
<td>+85°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead Soldering Temperature[^1]</td>
<td></td>
<td></td>
<td>260°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuous Power Dissipation[^2]</td>
<td></td>
<td></td>
<td>200 mW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Reverse Voltage</td>
<td></td>
<td></td>
<td>100 VDC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Electrical Characteristics (T_A = 25°C unless otherwise noted)

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>PARAMETER</th>
<th>MIN</th>
<th>TYP</th>
<th>MAX</th>
<th>UNITS</th>
<th>TEST CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>Responsivity</td>
<td>0.45</td>
<td>0.55</td>
<td></td>
<td>A/W</td>
<td>V_R = 5.0V; 50/125µm fiber; λ = 850nm</td>
</tr>
<tr>
<td>I_D</td>
<td>Dark Current</td>
<td>0.1</td>
<td>5.0</td>
<td></td>
<td>nA</td>
<td>V_R = 5.0V</td>
</tr>
<tr>
<td>λ_p</td>
<td>Peak Response Wavelength</td>
<td>905</td>
<td></td>
<td></td>
<td>nm</td>
<td></td>
</tr>
<tr>
<td>t_r</td>
<td>Output Rise Time</td>
<td>6.0</td>
<td></td>
<td></td>
<td>ns</td>
<td>V_R = 15V; R_L = 50Ω, 10%-90%</td>
</tr>
<tr>
<td>C_T</td>
<td>Total Capacitance</td>
<td>3.0</td>
<td></td>
<td></td>
<td>pF</td>
<td>V_R = 20V</td>
</tr>
</tbody>
</table>

Notes:
1. Maximum of 5 seconds with soldering iron. Duration can be extended to 10 seconds when flow soldering. RMA flux is recommended.
2. De-rate linearly at 2.67mW/°C above 25°C.
Performance

Typical Responsivity

- Relative A/W
- Wavelength (nm)

**Fiber Optic Detector**

**OPF472**

- Dark Current vs. Temperature
- Rise Time vs. Bias Voltage
- Dark Current vs. Bias Voltage
- Capacitance vs. Bias Voltage