InGaAs PIN Photodiode Module

Features

- High Responsivity
- High speed, typical 2 GHz
- Low dark current, < 1nA
- Low capacitance, typical 1.3pF
- Operating temperature range -40°C to 85°C
- Hermetically sealed TO-18 package in pigtailed or receptacle housing with FC, ST, SC, LC, MU or SMA connector

Specifications (T=25°C, -5V)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Test Condition</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsivity</td>
<td>R</td>
<td>Laser source of 10 uW(λ=1310nm)</td>
<td>0.7</td>
<td>0.8</td>
<td>0.8</td>
<td>A/W</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LED source of 10 uW(λ=1310nm)</td>
<td>0.65</td>
<td>0.75</td>
<td>0.75</td>
<td>A/W</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LED source of 10 uW(λ=1310nm)</td>
<td>0.6</td>
<td>0.7</td>
<td>0.7</td>
<td>A/W</td>
</tr>
<tr>
<td>9/125 um fiber</td>
<td>-1</td>
<td>-</td>
<td>0.7</td>
<td>0.8</td>
<td>0.8</td>
<td>A/W</td>
</tr>
<tr>
<td></td>
<td>-2</td>
<td>-</td>
<td>0.8</td>
<td>0.9</td>
<td>0.9</td>
<td>A/W</td>
</tr>
<tr>
<td>50/125 um fiber</td>
<td>-1</td>
<td>-</td>
<td>0.65</td>
<td>0.75</td>
<td>0.75</td>
<td>A/W</td>
</tr>
<tr>
<td></td>
<td>-2</td>
<td>-</td>
<td>0.75</td>
<td>0.85</td>
<td>0.85</td>
<td>A/W</td>
</tr>
<tr>
<td>62.5/125 um fiber</td>
<td>-1</td>
<td>-</td>
<td>0.6</td>
<td>0.7</td>
<td>0.7</td>
<td>A/W</td>
</tr>
<tr>
<td></td>
<td>-2</td>
<td>-</td>
<td>0.7</td>
<td>0.8</td>
<td>0.8</td>
<td>A/W</td>
</tr>
<tr>
<td>Spectral Range</td>
<td>-</td>
<td>1250</td>
<td>-</td>
<td>1650</td>
<td>-</td>
<td>nm</td>
</tr>
<tr>
<td>Dark Current</td>
<td>Id</td>
<td>V_{R}=2V, 0 to 1MHz</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>nA</td>
</tr>
<tr>
<td>Capacitance</td>
<td>Ct</td>
<td>V_{R}=2V, 1MHz</td>
<td>-</td>
<td>1.1</td>
<td>1.3</td>
<td>pF</td>
</tr>
<tr>
<td>Rise/fall Time</td>
<td>t/ff</td>
<td>V_{R}=2V, 20% to 50%</td>
<td>-</td>
<td>145</td>
<td>170</td>
<td>ps</td>
</tr>
<tr>
<td>Bandwidth</td>
<td>B</td>
<td>1.85</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>GHz</td>
</tr>
<tr>
<td>Return Loss</td>
<td>-1</td>
<td>14</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td>(9/125 um fiber only)</td>
<td></td>
<td></td>
<td>40</td>
<td>-</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td></td>
<td>-5</td>
<td></td>
<td>50</td>
<td>-</td>
<td>-</td>
<td>dB</td>
</tr>
</tbody>
</table>

Absolute Maximum Rating

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min.</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>To</td>
<td>-40</td>
<td>+85</td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>T_{stg}</td>
<td>-40</td>
<td>+125</td>
<td>°C</td>
</tr>
<tr>
<td>Forward Current</td>
<td>I_f</td>
<td>-</td>
<td>10</td>
<td>mA</td>
</tr>
<tr>
<td>Reverse Voltage</td>
<td>V_{R}</td>
<td>-</td>
<td>20</td>
<td>V</td>
</tr>
<tr>
<td>Lead Soldering Temperature</td>
<td>T_{L}</td>
<td>-</td>
<td>260</td>
<td>°C</td>
</tr>
</tbody>
</table>
InGaAs PIN Photodiode Module

Ordering Information

PD 1G5 I   □□ □□ □□ □□ □□ - □□ A □

1, 4, 5 for return loss (please see the spec above)
Pin-out

Grade
1, 2 for Responsivity (please see the spec above)

Flange type
B for board mount
P for panel mount
U for UP mount
X for None
S for sugar cube

Receptacle: X
Pigtail: P for PC
A for APC

Connector type
Receptacle: SC, FC or ST
Pigtail: SC, FC, ST, LC, MU or SMA

S1 for 9/125um
M1 for 50/125um
M2 for 62.5/125um

Fiber length
R0 for receptacle
PG for pigtail 100cm

InGaAs PD

1.5GHz
InGaAs PIN Photodiode Module

**BOTTOM VIEW**

1. Case
2. PD+
3. PD-

UNIT: MM

Pigtail:

No mount:
InGaAs PIN Photodiode Module

Receptacle:

- **FC-PM**
  - Dimensions: 6.19 x 1.345 x 9.1
  - Thread hole: M8 x 0.75

- **FC-BM**
  - Dimensions: 12.7 x 8
  - Thread hole: M8 x 0.75

- **ST-BM**
  - Dimensions: 12.7 x 9.2
  - Thread hole: 3/8"-32UNF

- **ST-PM**
  - Dimensions: 6.19 x 1.345 x 9.1
  - Thread hole: M8 x 0.75

- **SC**
  - Dimensions: 18 x 2.4
  - Thread hole: 2-56UNC-2B

Thread holes:
- 2-56UNC-2B