

## InGaAs Avalanche PHOTODIODE with Single-Mode Pigtail

### FEATURES

- 2 Data Rate up to 2.7 Gbps
- 2 0.9 A/W Typical Responsivity
- 2 Breakdown voltage: 40V Typical
- 2 Wide Wavelength Band: 1260 nm to 1620 nm
- 2 Case Operating Temperature: -40 to 85°C
- 2 Coaxial Module with 9/125 μm Single-Mode Fiber

### APPLICATIONS

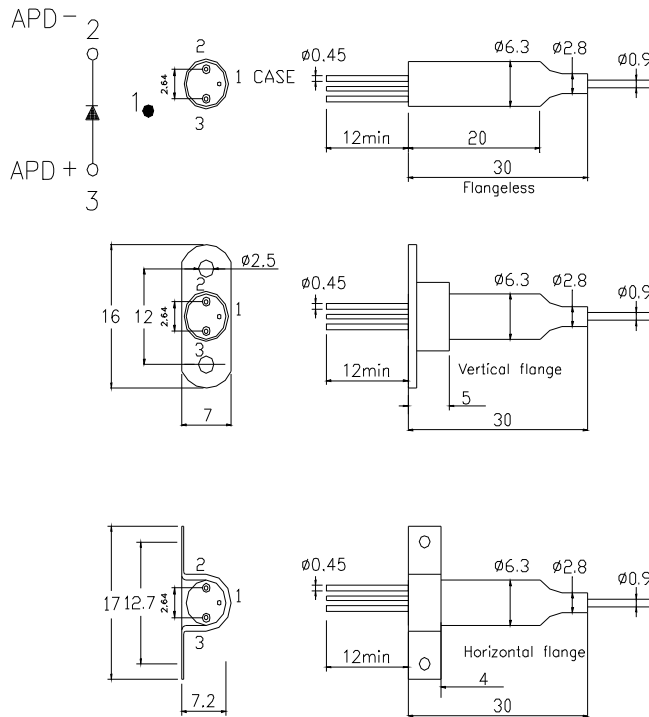
Receiver supports long distance fiber-optics communication systems with performance up to 2.7 Gb/s data rate, -40 to 85 °C operating temperature.

| ELECTRICAL AND OPTICAL CHARACTERISTICS (Tc=25°C) |  |                                 |      |       |       |      |
|--|--|---------------------------------|------|-------|-------|------|
| Symbol   | Parameter                                    | Test Conditions                 | Min. | Typ.  | Max.  | Unit |
|  | Detection Range                              | $\lambda$                       | 1260 | -     | 1620  | nm   |
| VBR  | Breakdown Voltage                            | Idark=10μA                      | 35   |       | 47    | V    |
| VOP  | Operating Voltage                            | Best Sensitivity                |      | VBR-3 | VBR-2 | V    |
| dVBR/dT  | Temperature Coefficient of Breakdown Voltage |                                 | 0.06 | 0.07  | 0.10  | V/°C |
| Idark  | Dark Current                                 | VR =0.9 VBR                     |      | 80    | 100   | nA   |
| R  | Responsivity                                 | $\lambda=1550\text{nm}$ , M=1   | 0.85 |       |       | A/W  |
| C  | Capacitance                                  | VR =0.9 VBR, f=1MHz             |      | 0.5   | 0.8   | pF   |
| ORL  | Optical Return Loss                          | Vop, $\lambda= 1550 \text{ nm}$ | 40   |       |       | dB   |
| BW   | Bandwidth                                    | RL=50 Ω, -3 dB, M=10            | 2.5  | 3     |       | GHz  |

| Absolute Maximum Ratings (Tc=25 °C) |                       |         |         |      |
|-------------------------------------|-----------------------|---------|---------|------|
| Symbol                              | Parameter             | Minimum | Maximum | Unit |
| IF                                  | APD Forward Current   |         | 2       | mA   |
| IR                                  | APD Reverse Current   |         | 3       | mA   |
| VR                                  | APD Reverse Voltage   |         | VBR     | V    |
| Topr                                | Operating Temperature | -40     | 85      | °C   |
| Tstg                                | Storage Temperature   | -40     | 85      | °C   |

Stress in excess of the absolute Maximum Ratings may cause permanent damage to the device.

MECHANICAL DIMENSION (mm) and PIN ASSIGNMENT



- Note:** 1. Specifications subject to change without notice.  
 2. Other PIN assignment is available upon request.

ORDER INFORMATION

Part No.: A P D - 1 3  0 -

| Code | Fiber                |
|------|----------------------|
| 0    | 50/125 $\mu\text{m}$ |
| 1    | 9/125 $\mu\text{m}$  |

| Code | Flange     |
|------|------------|
| V    | Vertical   |
| H    | Horizontal |
| X    | No Flange  |

| Code | Connector Type |
|------|----------------|
| S    | SC/PC          |
| F    | FC/PC          |
| T    | ST/PC          |
| L    | LC/PC          |
| X    | No Connector   |
| SA   | SC/APC         |
| FA   | FC/APC         |
| LA   | LC/APC         |