

# Unidirectional **Tap-Integrated Photo Detector**

IPD-UD-1/4/8/10

#### **Product Overview**

Santec's Unidirectional Tap-Integrated Photo Detector is an optical power monitoring device consisting of individual tap-integrated photo detectors. The IPD is very compact and is easily mounted on a PCB for system use. Optical properties are excellent and include a broad wavelength range covering C and L-band with low insertion loss and high sensitivity.

The IPD eliminated the need for an optical fiber coupler/splitter and a photo detector. The IPD provides a simple and low cost solution for optical power monitoring at DWDM and switch. Especially Santec's Unidirectional Tap-Integrated Photo Detector is useful for amplifier systems.





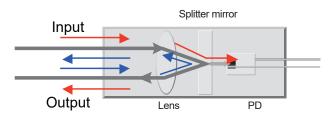
#### **Features**

- · Excellent Characteristics
- · High Directivity
- · Compact Design
- · Custom to Build Available
- · Minimum Fiber Bending Radius of 5 mm is available
- · High Quality (GR-468-CORE Qualified)
- · RoHS Compliant

### **Applications**

- · Power and Channel Monitoring for WDM Systems
- · Power Control Monitoring for Amplifier
- · Optical Monitoring for Switching Systems
- · Supervisory for Equipment Systems

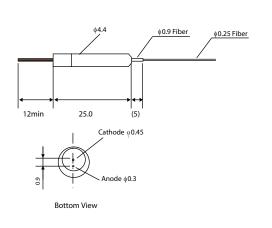
# **Configuration**

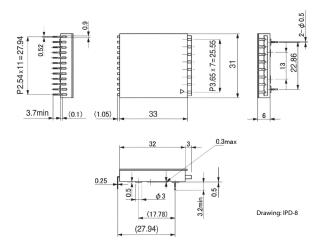


# **Specifications**

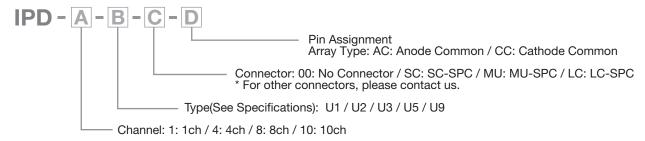
| Parameter                   | Unit |      | Туре         |          |          |          | Notes                              |
|-----------------------------|------|------|--------------|----------|----------|----------|------------------------------------|
| Parameter                   |      |      | U1           | U2       | U5       | U9       | Notes                              |
| Insertion Loss              | Max. | dB   | 0.5          | 0.5      | 0.6      | 0.8      | All Operating Conditions           |
| Directivity                 | Min. | dB   | 33           |          |          |          | -                                  |
| Return Loss                 | Min. | dB   | 45           |          |          |          | -                                  |
| PD Responsivity             | -    | mA/W | 8 to 20      | 14 to 24 | 40 to 70 | 70 to120 | All Operating Conditions, 5 V Bias |
| Dark Current                | Max. | nA   | 5            |          |          |          | 70 °C,5 V Bias                     |
| Reverse Voltage             | Max. | V    | 10           |          |          |          | -                                  |
| Forward Current             | Max. | mA   | 5            |          |          |          | -                                  |
| Wavelength Range            | -    | nm   | 1510 to 1610 |          |          |          | -                                  |
| Storage Temperature Range   | -    | °C   | -40 to 85    |          |          |          | Non condensation                   |
| Operating Temperature Range | -    | °C   | -5 to 70     |          |          |          | Non condensation                   |
| Input Optical Power         | Max. | dBm  | +23          | +20      | +16      | +13      | -                                  |
| Fiber Length                | Min. | mm   | 1000+/-100   |          |          |          | 0.25 mm coating SMF                |
| Dimension                   | -    | mm · | 4.4(D)x25(L) |          |          |          | IPD-1                              |
|                             |      |      | 17.5x32x6    |          |          |          | IPD-4                              |
|                             |      |      | 31x32x6      |          |          |          | IPD-8                              |
|                             |      |      | 39x32x6      |          |          |          | IPD-10                             |

## **Dimensions** Unit [mm]





# **Ordering Code**





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