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 5mm is available
- High Quality (GR-468-CORE Qualified)
- RoHS Compliant

### Applications
- Power and Channel Monitoring for WDM
- Power Control Monitoring for Amplifier
- Optical Monitoring for Switching Systems
- Supervisory for Equipment Systems
## Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>Type</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Insertion Loss</td>
<td>dB</td>
<td>U1, U2, U3, U5, U9</td>
<td>w/o connectors</td>
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<tr>
<td>Directivity</td>
<td>dB</td>
<td>U1, U2, U3, U5, U9</td>
<td>Standard</td>
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<td>Return Loss</td>
<td>dB</td>
<td>U1, U2, U3, U5, U9</td>
<td>High Directivity</td>
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<tr>
<td>PD Sensitivity</td>
<td>mA/W</td>
<td>All Operating Conditions, 5V Bias</td>
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<tr>
<td>Dark Current</td>
<td>mA</td>
<td>U1, U2, U3, U5, U9</td>
<td>5V Bias</td>
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<tr>
<td>Reverse Voltage</td>
<td>V</td>
<td>U1, U2, U3, U5, U9</td>
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<tr>
<td>Forward Current</td>
<td>mA</td>
<td>U1, U2, U3, U5, U9</td>
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<tr>
<td>Wavelength Range</td>
<td>nm</td>
<td>1510 to 1610</td>
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<tr>
<td>Storage Temperature Range</td>
<td>°C</td>
<td>-40 to 85</td>
<td>Non-condensation</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>°C</td>
<td>0 to 70</td>
<td>Non-condensation</td>
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<tr>
<td>Fiber Optic Power</td>
<td>dBm</td>
<td>1000 to 100</td>
<td>0.25mm coating SMF</td>
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<td>Fiber Length</td>
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<tr>
<td>Dimension</td>
<td>mm</td>
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<td>IPD-10</td>
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</tbody>
</table>

### Ordering Code

**IPD-A-B-C-D-E**

- **A** = Channel  
  - Channel: 1 = 1ch, 4 = 4ch, 8 = 8ch, 10 = 10ch
- **B** = Type  (See Specifications)
  - U1, U2, U3, U5, U9
- **C** = Connector  
  - No Connector: 00
    - FS = FC-SPC, FA = FC-APC, SS = SC-SPC, SA = SC-APC, MU = MU-SPC, MJ = MUJ-SPC, LC = LC-SPC
- **D** = Pin Assignment  
  - Single Type: 2P = 2pinPD
  - Array Type: AC = Anode Common, CC = Cathode Common, SE = Pin Separate (IPD-4 Only)
- **E** = Directivity Type  
  - Standard Directivity Type: SD
  - High Directivity Type: HD

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**SANTEC CORPORATION**
5823 Ohkusa-Nenjyozaka, Komaki, Aichi 485-0802, Japan  Tel: +81-568-79-1959  Fax: +81-568-79-1718

**SANTEC U.S.A. CORPORATION**
433 Hackensack Ave., Hackensack, NJ 07601, U.S.A.  Toll Free: +1-800-726-8321 (santec-1)  Tel: +1-201-488-7505  Fax: +1-201-488-7702

**SANTEC EUROPE LIMITED**

**SANTEC (SHANGHAI) Co., Ltd.**
No.800 Zhangyang Road Changhang Tower, Pudong District, Shanghai 200122 China  Tel: +86-21-58361261, +86-21-58361262 Fax: +86-21-58361263