

INTEGRATED TAP PHOTO DETECTOR
PHOTO DETECTOR ARRAY
IPD-8/10, PDA-8/10

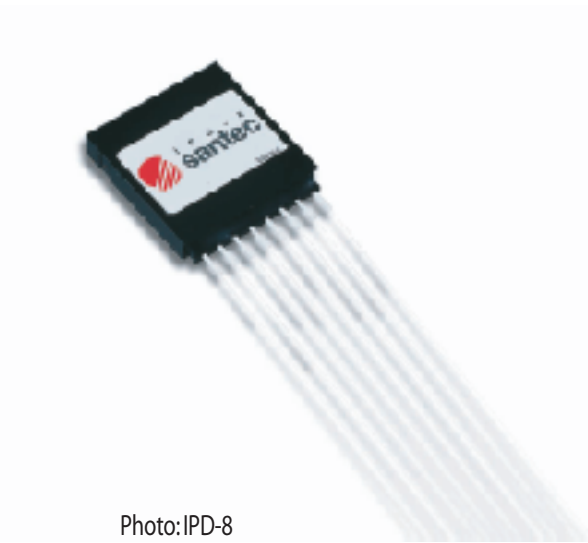


Photo: IPD-8

The IPD-10 is a multi-channel optical power monitoring device which consists of individual tap-integrated photodetectors. These in-line tap detectors are very compact and are easily mounted on a PCB board for system use. Optical properties are excellent and include a broad wavelength range covering both C and L-bands, low back-reflection and high sensitivity. The IPD modules eliminate the redundant use of an optical fiber coupler/splitter and a photodetector and saves significant space on a PCB board as DWDM channel counts rise. Applications include multi-channel power monitoring at DWDM multiplexers/demultiplexers or in optical amplifiers.

Features

- ▶ Wide operating wavelength range (1510 -1630 nm)
- ▶ Operating temperature range from 0-70 °C with no thermal control
- ▶ 8 and 10 channel versions available
- ▶ Wide input power dynamic range

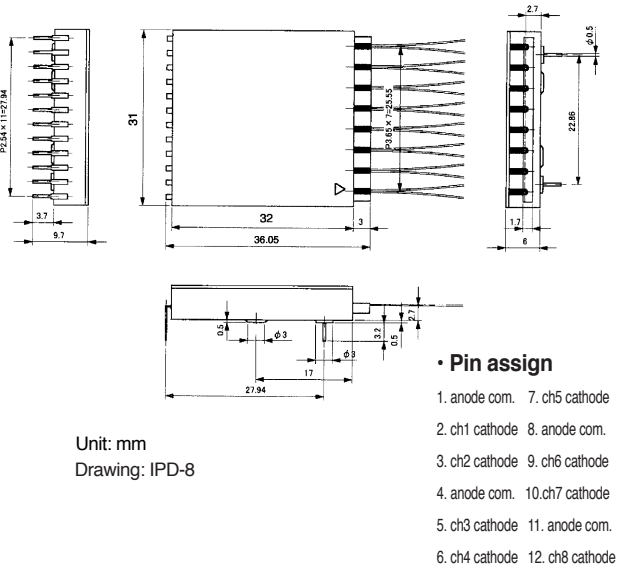
Applications

- ▶ DWDM mux / demux channel monitoring
- ▶ Gain monitoring in amplifier systems
- ▶ Multi-channel optical switch monitoring

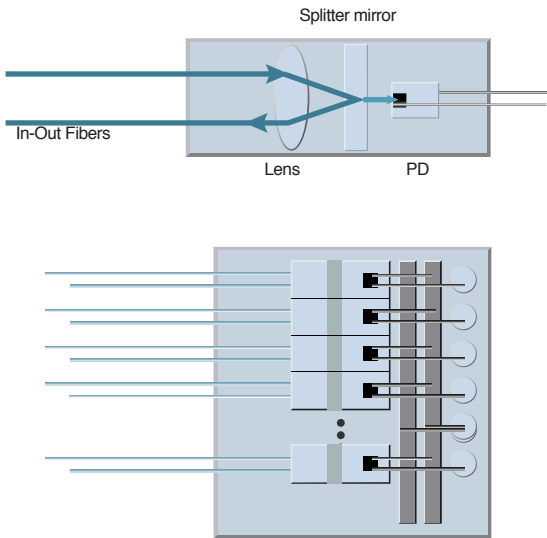
Package Details

Each module inside the IPD-8/10 package includes one input and one output fiber, a coupling lens, a partially-transmitting splitter mirror, and a hermetically-sealed photodetector. Up to 8/10 individual photo-detector modules are packaged in a plastic case; the output pin (cathode) of each PD is connected to a corresponding pin on the main package (all PD anodes are common, and the individual PD grounds are tied to the case).

Dimensions



Configuration



Model	No. of Channels	Built-in Tap
IPD-8	8□	Yes
IPD-10	10□	Yes
PDA-8	8□	No
PDA-10	10	No

Specifications

Parameter	Unit	IPD-8/10				PDA-8/10	Notes
		VH	H	L	VL	-	
Insertion Loss	Max. dB	1.0	0.8	0.7	0.6	-	
Detector Sensitivity	mA/W	70 ~ 120	40 ~ 60	20 ~ 50	> 8	0.8 A/W	
PDL	Max. dB	0.1					0.03 typ.
Wavelength Range	nm	1510 ~ 1610					
Maximum Optical Power	dBm	10					Saturation limit (Max. rating: 20 dBm)
Return Loss	Min. dB	45					
Fiber Type		SMF -28					0.25 mm coating
Wavelength Dependence of Detector Sensitivity	Max. dB	0.3					0.6 dB@ < 1630 nm (dB in optical)
Temperature Dependence of Detector Sensitivity	Max. dB	0.3					0.6 dB@ < 1630 nm (dB in optical)
Dark Current	Max. nA	20					@70 °C, 5 Vbias
Capacitance	Min. pF	20					
Max Rating Bias	Min. V	20					
Max Rating Forward Current	Max. mA	2					
Rise Time	Max. nsec	1					
Fall Time	Max. nsec	1					
Package Dimensions	mm	31 x 32 x 6					10 - detector package 8 - detector package
Reliability							Hermetically sealed package Telcordia GR - 000468 certified 0 to + 70 °C operating temp, 90 % humidity - 40 to + 80 °C storage temp.

The device's performance remains within the ranges specified above throughout the specified wavelength range, for all temperatures between 0 and 70 °C, and for all states of polarization

Ordering Code

