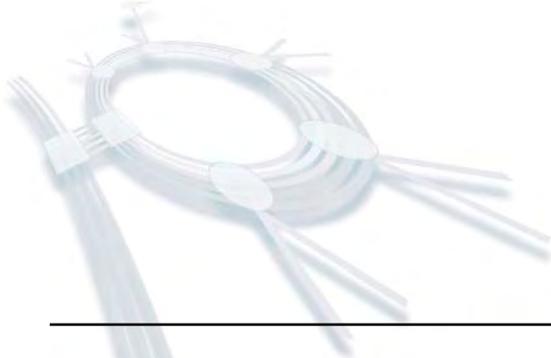


# SANTEC OPTICAL COMPONENTS

## Optical Power Monitors **IPM-8**

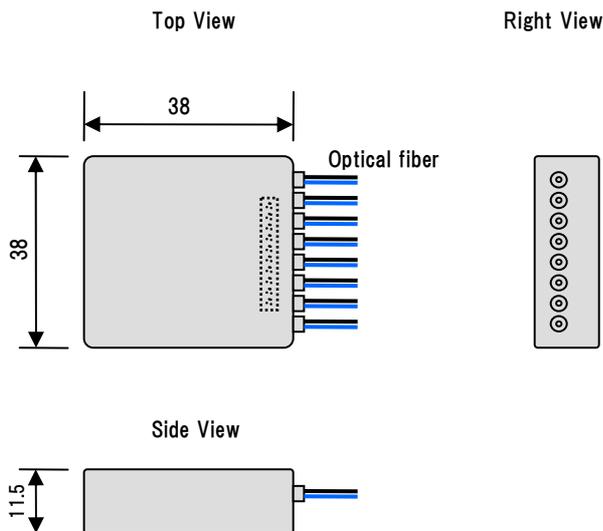
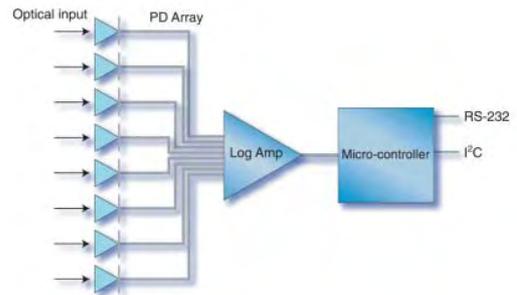


Santec's IPM-8 is an integrated tap-monitor and high dynamic range log-amplifier module for any DWDM application. This device detects optical signal, and calculates to absolute optical power using a calibration data. The optical power data can be accessed from electrical communication interface.



### Features

- Small package
- Good accuracy
- Wide dynamic range
- I<sup>2</sup>C and RS-232C interface



Pin#	Name	Comment
1	POWER_A	DC 5V supply (for analog circuit)
2	AGND	DC GND (for analog circuit)
3	POWER_D	DC 5V supply (for digital circuit)
4	DGND	DC GND (for digital circuit)
5	TX	RS-232C
6	RX	RS-232C
7	DGND	DC GND (RS-232/ I <sup>2</sup> C)
8	SCL	I <sup>2</sup> C Clock
9	SDA	I <sup>2</sup> C Data In
10	RESET	N/W Reset

## ■ Specifications

Parameter	Unit	IPM-8-10-ST		Comments	
		Min	Max		
Channel number	-	1	8	Standard: 8ch	
Wavelength range	nm	1525 1570	1570 1615	C or L-band	
Insertion loss	dB	-	0.6	Dependent built-in IPD's tap ratio	
Operating temperature range	°C	0	70		
Max. rating optical input power	dBm	-	+23		
Operating optical input power	dBm	-30	+10	Dependent built-in IPD's tap ratio	
Power accuracy	dB	-0.1	+0.1	@25°C, calibration wavelength	
	dB	-0.4	+0.4	@25°C	
	dB	-0.75	+0.75	All condition	
Interface	RS-232C	kbps	-	38.4	
	I <sup>2</sup> C	kHz	-	400	Fast mode
Response time	RS-232C	ms	-	50	Excluding communication time
	I <sup>2</sup> C	ms	-	7.5	Excluding communication time

## ■ Operating condition

Supply voltage	5.0±0.25V
Power consumption	1W (Max.)
Tx voltage	≲ ±25V
Rx volatge	≳ ±5.0V
I <sup>2</sup> C	3.3V pull-up°

## ■ Calibration condition

Wavelength	1550nm	Specified λ
Temperature	25°C	Room Temp.
Optical power	0 dBm	2 point calibration
	-20 dBm	



**SANTEC CORPORATION**  
5823 Ohkusa-Nenjoyozaka, 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. +1-201-488-5505 Fax +1-201-488-7702

**SANTEC EUROPE LIMITED**  
Magdalen Centre, Robert Robinson Ave., The Oxford Science Park, Oxford OX4 4GA, U.K. Tel. +44-1865-784960 Fax +44-1865-784961

**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