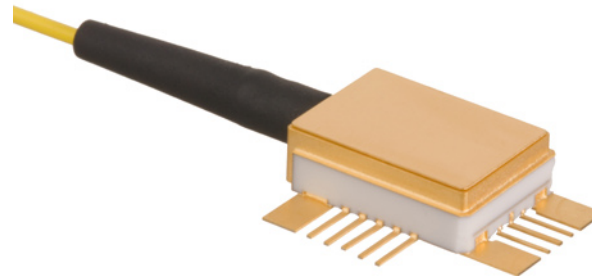


# PT-15SFA



Product Bulletin (Preliminary) • June 2007

- PIN/TIA receiver module
- High data rate, up to 15 Gb/s
- High sensitivity, -16.5 dBm
- 1200–1650 nm wavelength range
- AC or DC coupled
- MSA 17-pin package



The **PT-15SFA** is a -16 dBm sensitivity, differential-output receiver module for OC-192 / STM-64 transmission system receive applications up to 15 Gb/s, providing overhead room for Forward Error Correction algorithms.

It couples a high responsivity (0.7 A/W), back-illuminated PIN photodiode, usable from 1200 nm to 1650 nm, with a transimpedance gain stage of 850  $\Omega$ . This combination produces a receiver with a 12.3 GHz bandwidth and conversion gain of 700 V/W.

The differential-output module is offered in a 17-pin MSA package with single-mode fiber input and the output is available either AC- or DC-coupled. The receiver meets Telcordia GR-468 qualification standards.

## Specifications

	Minimum	Typical	Maximum	Units
Wavelength range	1200		1650	nm
Bandwidth (-3dB electrical)	11.8	12.3		GHz
Low frequency cutoff <sup>1</sup>		30		kHz
Sensitivity <sup>2</sup>		-16.5	-15.5	dBm
Overload		+3		dBm
Responsivity @ 1550 nm	0.7	0.75		A/W
Conversion gain (differential)	550	700		V/W
Output Return Loss (< 15 GHz)			-10	dB
Optical Return Loss			-30	dB
Power dissipation			0.27	W

## DC Electrical

Photodiode voltage	+5	+6	+7	V
Amplifier voltage	+3.1	+3.3	+3.5	V

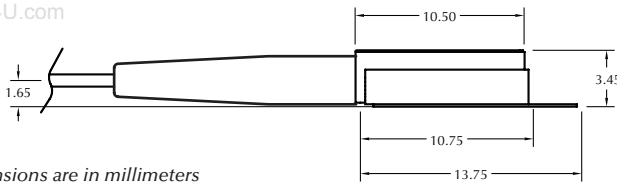
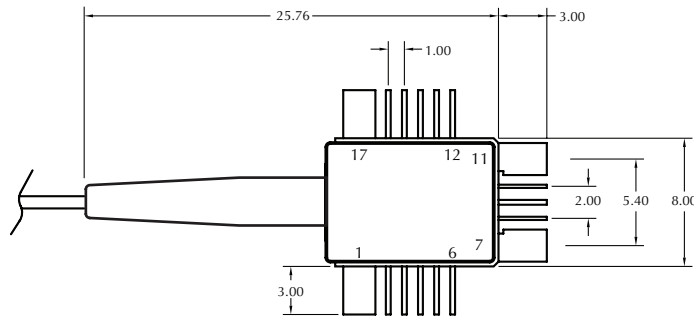
## Mechanical

Package type			17-pin surface mount	
Operating temperature	-5		+75	°C
Storage temperature	-40		+85	°C

<sup>1</sup> With AC-coupled version

<sup>2</sup> 10<sup>-12</sup> BER, PRBS 2<sup>31</sup>-1, 12.5 Gb/s

# Product Specifications



Dimensions are in millimeters

Pin	Description	Pin	Description
1	GND	10	Data Out Positive
2	V <sub>PD</sub>	11	GND
3	NC	12	GND
4	Feedback Input	13	NC
5	NC	14	V <sub>AMP</sub>
6	GND	15	NC
7	GND	16	NC
8	Data Out Negative	17	GND
9	GND		

## PT-15SFA Ordering Information

Base model	PT-15SFA
Option format	/Package/Coupling/Fiber connector
Package option	17LP
Coupling options	AC or DC
Fiber connector options	FC, SC or LC

## Application Notes

Electrostatic discharge (ESD) will cause permanent damage to the product. Please avoid any ESD to the input pins or output connector. Use standard ESD protective equipment when handling this product.

Temperature and fiber restrictions are as follows:

Lead soldering: 250°C for no more than 10 seconds

Fiber feed-through tube: 120°C

Fiber pull force: 10 N

Fiber bending radius: 1 inch or less

Exceeding these conditions can cause permanent damage to the device.

## Quality Vision

As a leader in ultrafast optical receivers, Picometrix is committed to providing the highest quality ultrafast products on the market. This quality vision commits us to continually improving our product designs and manufacturing processes, in order to ensure the highest level of customer satisfaction. The company maintains a stringent quality control program to ensure that all products meet or surpass customer requirements.



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