

# Compact Sonet OC-24 PIN-Transimpedance Amplifier Optical Receiver Modules

## Features

- InGaAs PIN Photodiode and GaAs Transimpedance Amplifier
- Meets Sonet sensitivity and overload requirements
- Automatic gain control
- Integrated 4-pin package
- Connector receptacle and fiber pigtailed versions

## Applications

- Sonet receivers  
Add/Drop Multiplexers  
Digital Crossconnects  
Test Equipment
- Fiber Channel receivers
- Digital video
- Fiber optic receivers from 10 Mbps to 1.5 Gbps

## Preliminary Performance Specifications

### AC/Optical Electrical Characteristics

( $V_{DD} = 5.0V$ ,  $T_A = 25^\circ C$ ,  $R_L = 50\Omega$ )

Package	FJS			RST, RFC, RSC			Units
	Min.	Typ.	Max.	Min.	Typ.	Max.	
Parameter							
Gain <sup>1</sup>	0.75	1.2		0.7	1.0		V/mW
Bandwidth	850	1000		850	1000		MHz
Sensitivity <sup>2</sup>	-28.0	-29.5		-27.5	-29.0		dBm
Overload	-3	0		-3	0		dBm
AGC Threshold Power		100			100		$\mu W$
AGC Time Constant		5.6			5.6		us
Output Impedance		50			50		$\Omega$

## Maximum Ratings

Parameter	Rating	Units
Supply Voltage $V_{dd}$	7.0	V
Detector Voltage $V_{pd}$	-25.0	V
Optical Input Power <sup>3</sup>	2.0	mW
Operating Temp. $T_A$	-40 / +85	$^\circ C$
Storage Temp.	-40 / +85	$^\circ C$

## DC / Electrical Characteristics

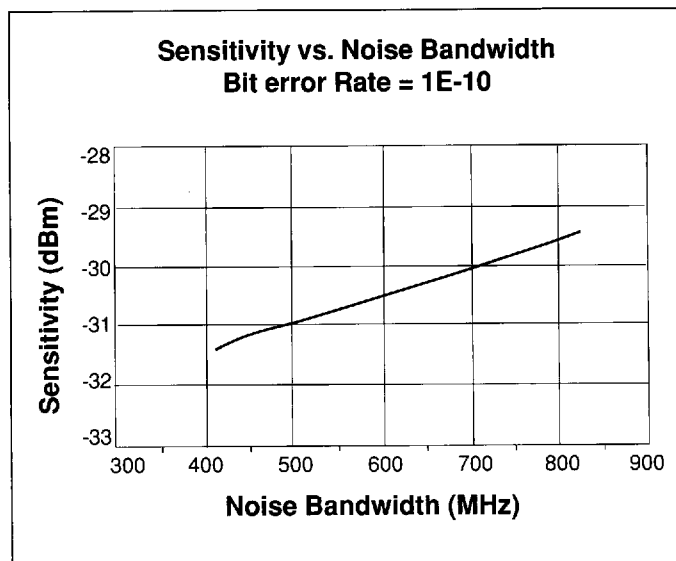
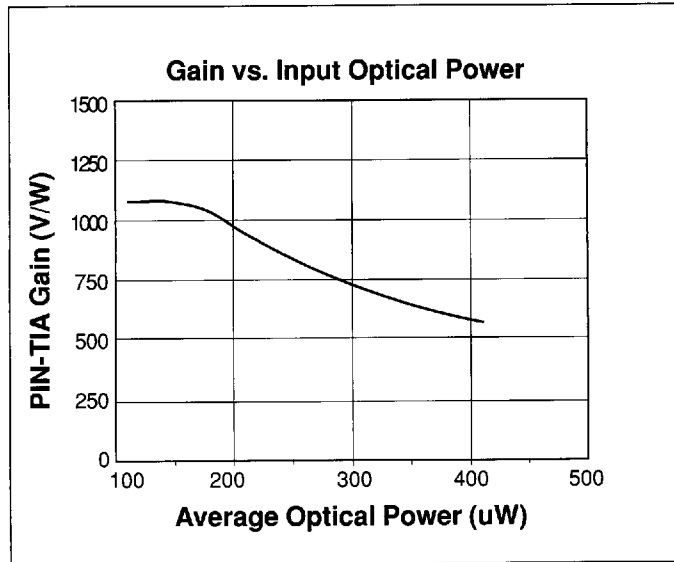
Parameter	Min.	Typ.	Max.	Units
Supply Voltage $V_{dd}$	4.5	5.0	6.0	V
Detector Voltage $V_{pd}$	0	-5.0	-25.0	V
Output Offset Voltage $V_{os}$	1.3	1.8	2.2	V
Supply Current $I_{dd}$		35		mA

Notes:

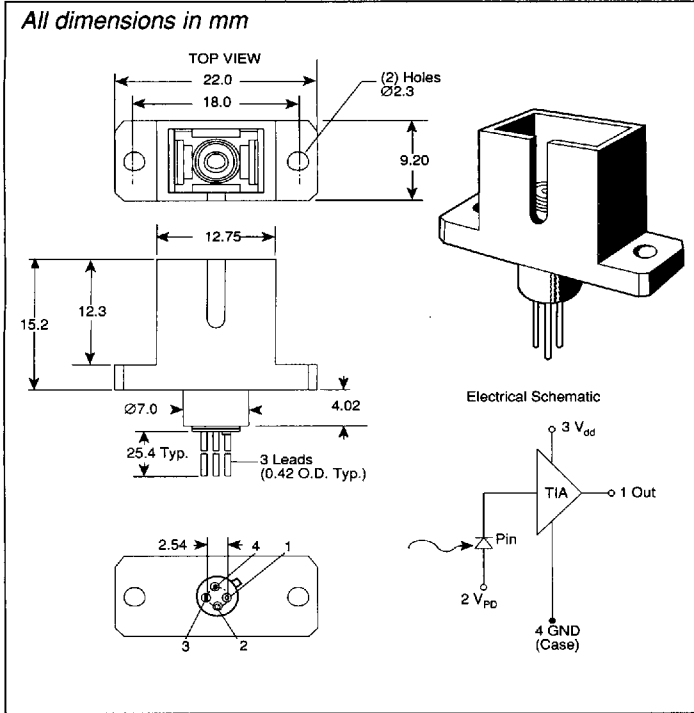
<sup>1</sup> When input optical power is below AGC threshold level.

<sup>2</sup> Bit error rate of 1E-10. Noise bandwidth of 415 MHz

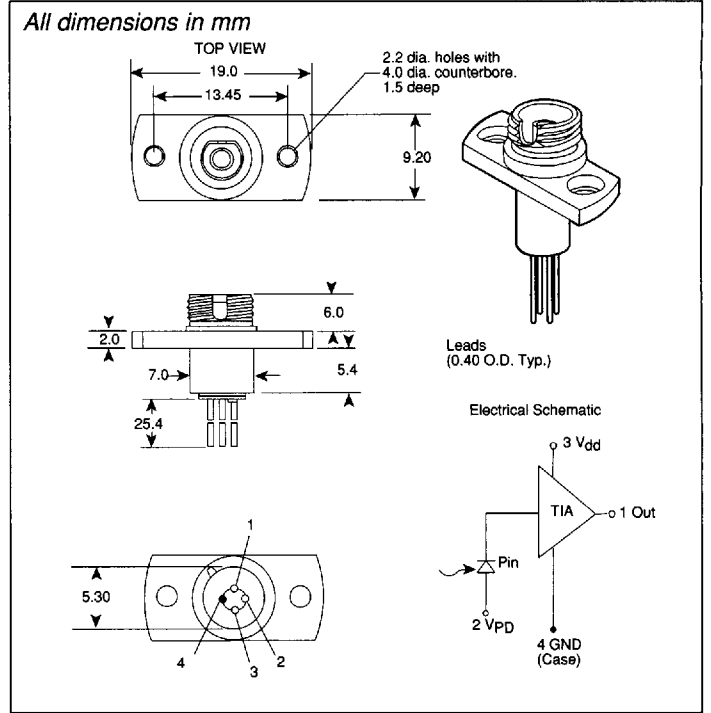
<sup>3</sup> Damage may occur if maximum power rating is exceeded



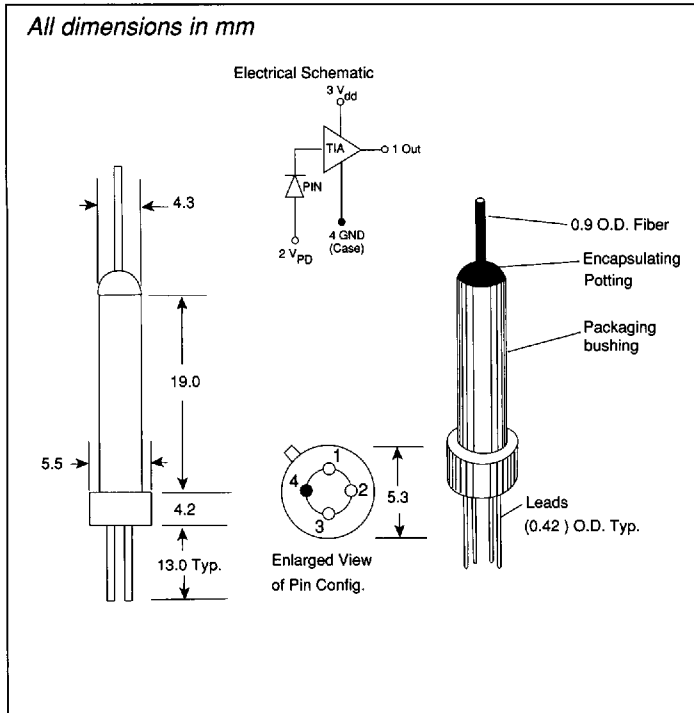
**ERM536RSC-FM**



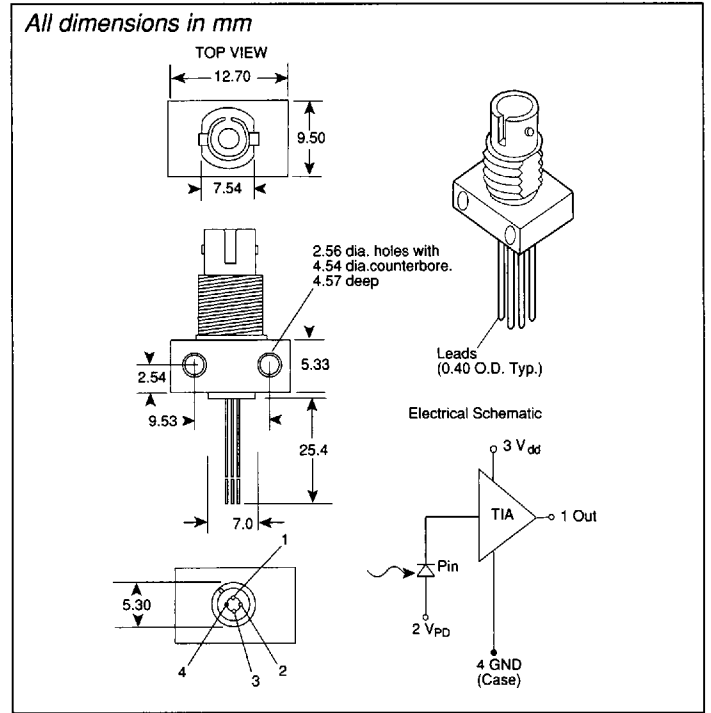
**ERM536RFC2**



**ERM536FJ-S**



**ERM536RST**



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