

Sonet OC-1 & OC-3

Compact PIN-Transimpedance Amplifier

Optical Receiver Modules

Features

Electro-Optical

- InGaAs PIN Photodiode with GaAs Transimpedance Amplifier
- Exceeds Sonet / SDH sensitivity and overload requirements
- High V/W gain
- Single +5 V operation
- -40 to +85 °C operating range

Packaging

- Integrated 4-pin coaxial package
- Connector receptacle and fiber pigtailed versions
- Smaller mechanical footprint than ERM501/504 series

Applications

- Sonet receivers
 - Add/Drop Multiplexers
 - Digital Loop Carriers
 - Digital Crossconnects
 - Optical Network Units
- Fiber optic receivers from 10 to 300 Mbps

Preliminary Performance Specifications

AC/Optical Electrical Characteristics

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

Model	ERM531			ERM534			
Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Gain ¹	12	18		4	5		kV/W
Bandwidth	50	60		150	200		MHz
Sensitivity ²	41.5	-43.0		-36.0	-37.5		dBm
Overload	-3	0		-3	0		dBm
AGC Threshold Power		5			20		uW
AGC Time Constant		0.7			0.7		mSec
Output Impedance	35	50	65	35	50	65	Ω
Output Voltage ³		1.0	1.5		1.0	1.5	V_{PP}

DC / Electrical Characteristics

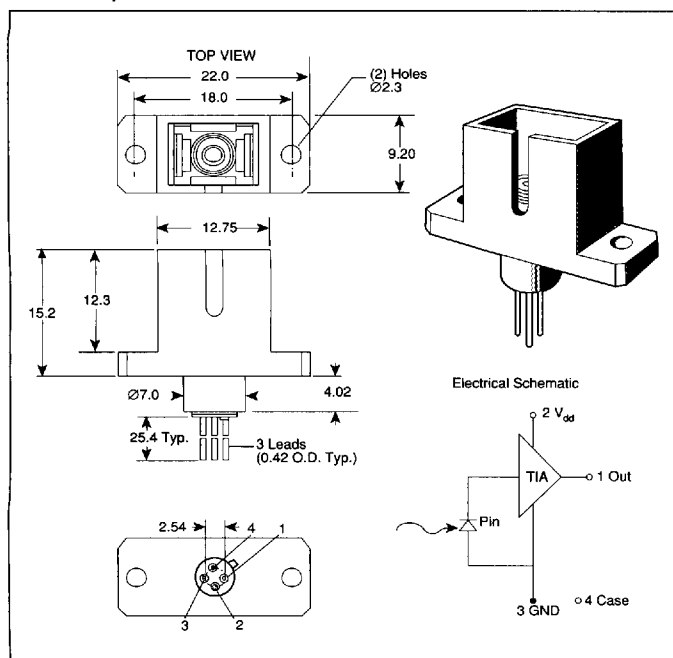
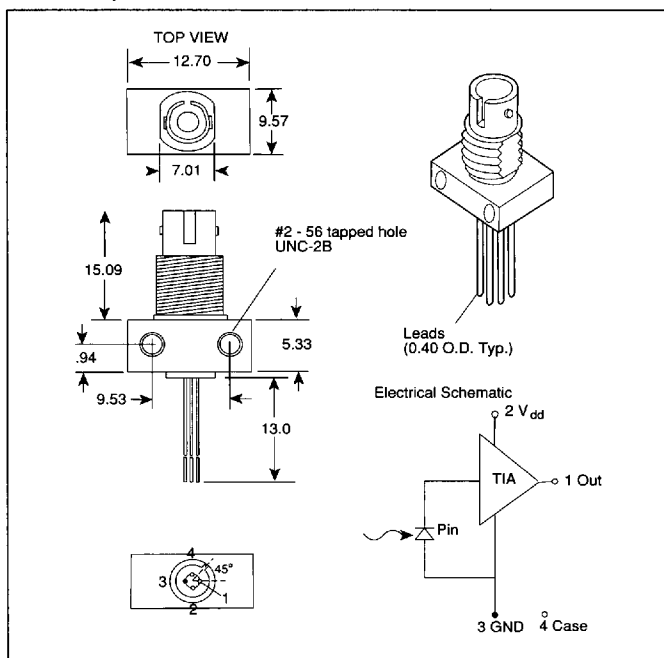
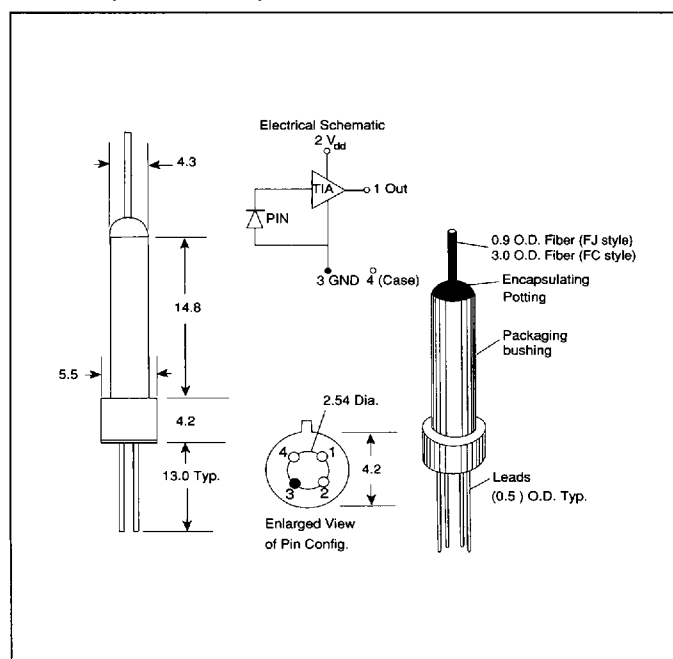
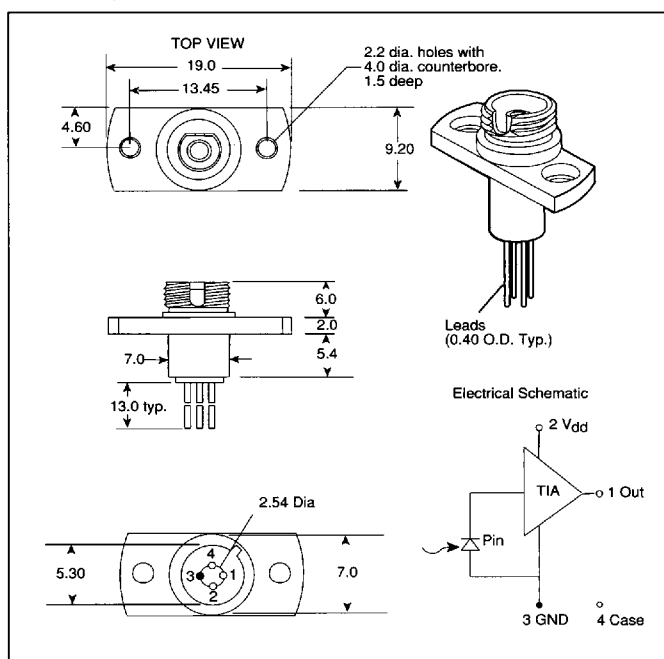
Parameter	Min.	Typ.	Max.	Units
Supply Voltage V_{DD}	4.5	5.0	6.0	V
Output Offset Voltage V_{OS}	1.1	1.8	2.2	V
Supply Current	15	35	50	mA

Maximum Ratings

Parameter	Rating	Units
Supply Voltage V_{DD}	7.0	V
Optical Input Power	2	mW
Operating Temp. T_A	-40 / +85	°C
Storage Temp.	-40 / +85	°C

Mechanical Dimensions

All dimensions in mm

ERM531/ERM534RFC**ERM531/ERM534RST****ERM531/ERM534FJ/FC****ERM531/ERM534RFC2**

EPITAXX, Inc. believes the information contained in this document to be accurate. However, no responsibility is assumed for its use nor for any infringement of the rights of third parties. EPITAXX, Inc. reserves the right to introduce changes without notice.

EPITAXX
 OPTOELECTRONIC DEVICES

Corporate Headquarters

7 Graphics Drive • West Trenton, NJ 08628
 TEL (609) 538-1800 • FAX (609) 538-1684

West Coast Sales Office

Los Angeles, CA 90067
 TEL (310) 551-6507 • FAX (310) 551-6577

■ 3360406 0000339 799 ■