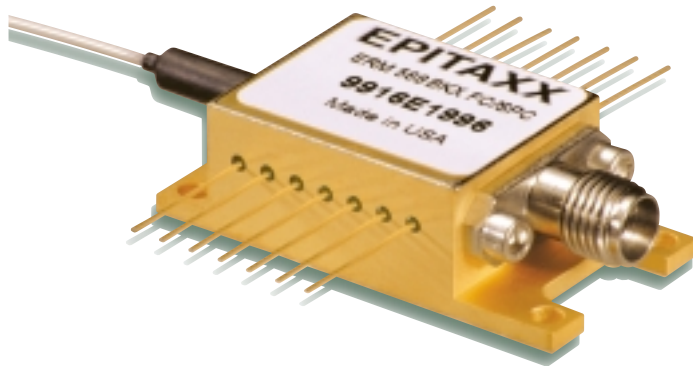


Product Bulletin



ERM 568BKX 10 Gb/s SONET/SDH PIN-TIA Optical Receiver Module

Preliminary Specifications

Conditions (unless noted):

Temperature = 25°C, $\lambda = 1550 \text{ nm}$, $R_L = 50\Omega$, $V_{dd} = +8V$, $V_{pd} = 11.5V$

All specifications without connector.

Parameter	Measurement Conditions	Min	Typ	Max	Units
PIN Responsivity	$\lambda = 1550 \text{ nm}$	0.75	0.85		A/W
Bandwidth		8			GHz
Low Frequency Cut-off				30	KHz
Output Return Loss	130 kHz to 8 GHz		10		dB
Optical Return Loss				-27	dB
Sensitivity	10 Gb/s PRBS = $2^{31} - 1$ NRZ BER = 10^{-12}		-17	-16	dBm
Overload	10 Gb/s PRBS = $2^{31} - 1$ NRZ BER = 10^{-12}	0			dBm
Transimpedance	F = 250 MHz	400			Ω
Power Dissipation				1	W

1. RF output is internally DC coupled.

2. RF output is non-inverted.

ERM 5x8 series are high speed receivers designed to meet the requirements of long and short haul 10Gb/s backbone and metro network architecture. The devices offer high bandwidth, low output return loss, and are well suited for operations with optical amplifiers.

Key Features

Electro-optical

- Low dark current, low capacitance, InGaAs PIN photodiode with very low noise GaAs transimpedance amplifier
- High optical sensitivity
- Wide bandwidth

Packaging

- 14-pin butterfly
- 50 Ω SMA compatible output connector
- single mode 900 μm jacketed fiber pigtail
- available with LC, SC and FC connectors

Applications

- Short haul receivers for SONET/SDH ADMs
- DWDM transponders and receivers
- Optical Cross-connects

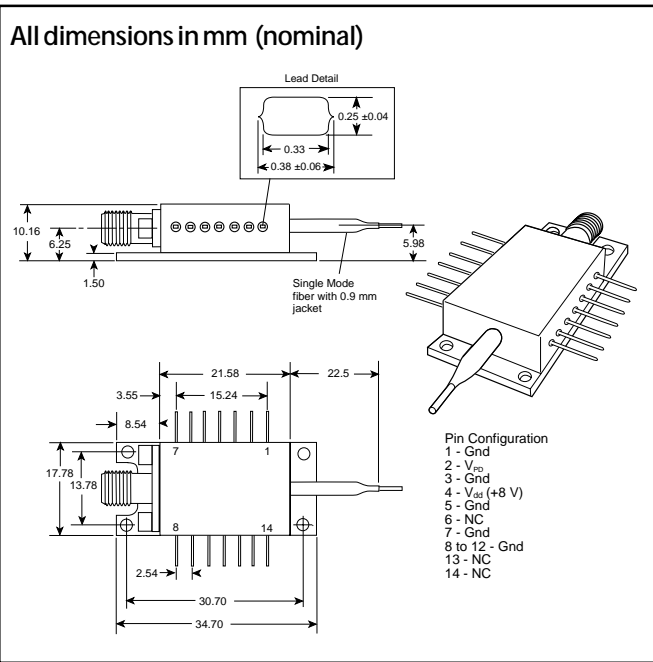
DC/Electrical Characteristics

Parameter	Min	Typ	Max	Units
Supply Voltage	7.6	8.0	8.4	V
PD Supply Voltage	5.0		13.5	V

Maximum Ratings

Parameter	Min	Typ	Max	Units
Supply Voltage V_{dd}	0		8.5	V
Supply Voltage V_{PD}			12	V
Maximum Optical Input Power			3	dBm
Operating Case Temperature	0		70	°C
Storage Temperature	-40		85	°C

Mechanical Dimensions



Ordering Information

Product Model	Fiber Description
ERM 568BKX FC/SPC	900 μ m buffer with FC/SPC connector
ERM 568BKX SC/SPC	900 μ m buffer with SC/SPC connector
ERM 568BKX LC/SPC	900 μ m buffer with LC/SPC connector

Precautions for Use

ESD protection is imperative. Use of grounding straps, anti-static mats, and other standard ESD protective equipment is required when handling or testing an InGaAs PIN or any other junction photodiode.

Soldering temperature of the leads should not exceed 260 °C for more than 10 seconds.

Fiber feed through tube temperature should not exceed 120 °C.

Fiber pigtailed should be handled with less than 10 N pull and with a bending radius greater than 1".

Quality Vision

We have a leadership position in the optoelectronic industry with a vision for excellence in quality. The company is committed to providing customers with the highest levels of quality and reliability in design and manufacturing. The top priorities remain continuous process improvement and total customer satisfaction. We obtained ISO 9001 certification in 1996. In addition, the company maintains a strict quality control program to ensure that all products meet or surpass customer requirements.

