InGaAs PINTIA Photodiode Module With FC Receptacle

Data Sheet

OPX1155-FRE

Features

- Hermetically sealed
- Data Rates: up to 155 Mbps
- High Sensitivity: -36 dBm
- FC Receptacle with TO-46
- Spectral Response Range: 1270nm to 1625nm
- Single Power Supply: +3.3 V
- Operating Temperature: -40°~ +85°C

Applications

- Telecom and datacom networking systems
- Optical transmission systems: SONET OC-3/ STM-1
- LAN

Description

The OPX1155-FRE is a hermetically sealed InGaAs PINTA photodiode module in a small TO-46 package with FC receptacle.

The photodiode is designed for use in data communications systems and telecommunications systems over singlemode fiber, and can operate in temperatures of -40°C to +85°C. The photodiode module is designed for data transmission of up to 155 Mbps between spectral bandwidths of 1270 to 1625 nm.

Safety

Device contains gallium arsenide (GaAs) which can be hazardous to your health. Please embrace all customary precautions and discretion while handling this device. Observe governmental laws and regulations when discarding this device.

Performance Specifications

Absolute Maximum Ratings

Stresses in excess of the absolute maximum ratings can cause damage to the optical device. Operations of the optical device are suggested to remain within the recommended operating conditions. Exposure to the absolute maximum ratings for extended periods can adversely affect device reliability.

Parameter	Symbol	Value	Unit
Storage Temperature	T_{stg}	-40 to +85	°C
Operating Case Temperature	T_{op}	-40 to +85	°C
Peak Optical Power	P_O	0	dBm
Power Supply Voltage	V_P	3.6	V
Soldering Temperature	S_{temp}	260	°C
Soldering Time	S_{time}	10	sec

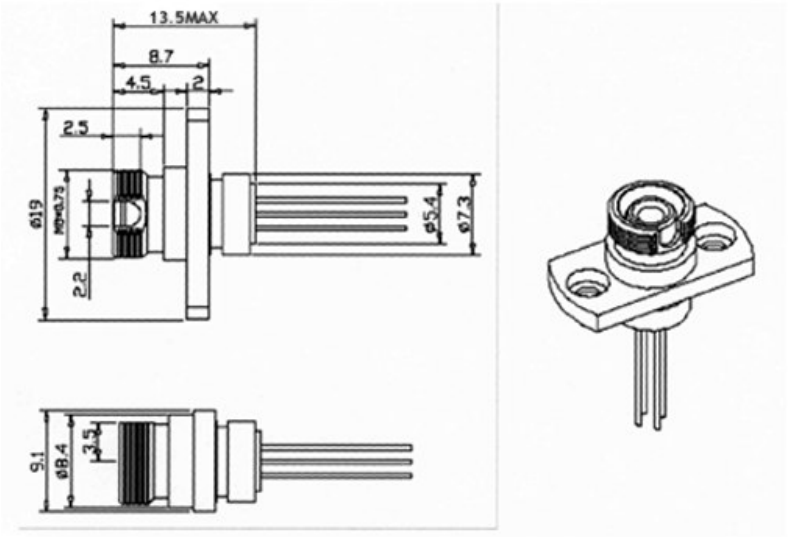
Electrical and Optical Characteristics (T_C=25°C unless otherwise noted)

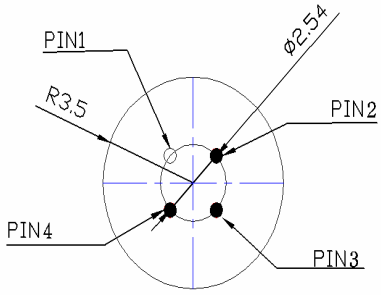
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage	V_{CC}		3.0	3.3	3.6	V
Supply Current	I_{CC}	P_{IN} = 0µW, R_L = 50Ω		22	32	mA
Output Voltage (differential)	V_{OUT}	P_{IN} = 10µW, R_L = 50Ω		200		mV
Wavelength	λ		1270	1310	1625	nm
Upper -3dB Bandwidth	BW	R_L = 50Ω	100	140		MHz
Responsivity	R	λ = 1310 nm, R_L = 50Ω, P_{IN} = 10µW, AC Coupled		5500		V/W
Sensitivity	S	λ = 1310 nm, 155 Mbps, 2^{23}-1 PRBS, BER = 10^{-10}		-36	-34	dBm
Rise/Fall Time	T_R/T_F	V_{CC} = 3.3V, 20% ~ 80%		1.6	2.0	ns

Physical Characteristics

Outline Diagram

Dimensions for the device package are given in millimeters.





PIN1 : GND
PIN2 : Vcc
PIN3 : Inverted Output
PIN4 : Non-Inverted Output

Additional Information

Contact

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