

1310nm/1310nm Bi-Di Transceiver Module

Description

The PT8361 series contain a 1310nm MQW F-P laser diode as transmitter, an InGaAs photo-detector integrated with a trans-impedance amplifier (5V or optional 3.3V) into the TO-can and a post amplifier as receiver, and a splitter to separate input and output light. So a full duplex or half-duplex optical link can be built for a wide variety of data communication applications with high-speed up to 1Gb/s rate, long distance up to 40km, They use 9/125 μ m diameter single fiber with optional FC/APC or SC/APC connector .



Transmitter Characteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Center Wavelength	λ	CW	1260	1310	1360	nm
P_o (PT8361-3□-1)	P_o	-	-15	-10	-8	dBm
Spectral Width	$\Delta \lambda$	CW(RMS)	-	-	4	nm
Extinction Ratio	EX	-	10	-	-	dB
Operating Current	I_{op}	3.3V/5.0V	-	70	100	mA

Receiver Characteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Wavelength	λ	$\Delta R < 10\%$	1260	1310	1360	nm
Full Duplex Sensitivity	-	$P_o = -10\text{dBm}$	-	-	-30	dBm
Signal Detect Assert Level	-	-	-50	-	-	dBm
Signal Detect Deassert Level	-	-	-	-	-33	dBm
Operating Current	I_{op}	3.3V/5.0V	-	80	100	mA

Absolute Maximum Ratings

Parameter	Condition	Min	Max	Units
Operating Temperature	T_{op}	-40	+85	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-40	+85	$^{\circ}\text{C}$
Lead Soldering Temperature/Time	T_{sld}	-	240/10	$^{\circ}\text{C/s}$
Optical Return Loss	APC connector	45	-	dB

Features

- MQW F-P 1310nm laser diode as transmitter
- InGaAs PIN with TIA and post-amplifier (5V or optional 3.3V) as receiver
- 1310 nm wavelength output, output power -10dBm (typically)
- 1310 nm wavelength input, responsivity 0.5A/W (typically)
- Low cross talk -30dB, full duplex sensitivity -30dBm
- Integrated a splitter to separate input and output light
- 1 \times 9 compatible single mode fiber package with optional FC/APC or SC/APC connector
- Operation temperature from 0 to 70 $^{\circ}\text{C}$

Applications

- Telecommunication systems
- Data communication systems