

1310/1550 Bi-Di Transceiver Module[PT8352 Series]

Description

The PT8352 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 an edge filter (1310nm transmitting/1550nm reflecting) to separate 1310nm output light (including 1310nm light reflected back) and 1550nm input light. Together with PT8552, the most compact and cost-effective 1310/1550nm WDM with single fiber provided, a duplex optical link can be built for a wide variety of data communication applications with high-speed up to 1Gb/s signal rate, long distance up to 20km. They use optional FC or SC/PC connector.



Transmitter Characteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit	
Center Wavelength	-3□-1	λ	CW	1261	1310	1360	nm
	-3□-2			1263	1310	1360	nm
Power PT8352	-3□-1	Po	-	-15	-10	-8	dBm
	-3□-2			-5	-3	0	dBm
Spectral Width	Δλ	CW(RMS)	-	-	4	nm	
Extinction Ratio	EX	-	10	-	-	dB	
Operating Current	Iop	3.3V/5.0V	-	100	120	mA	

Receiver Characteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Wavelength	λ	ΔR<10%	1480	1550	1600	nm
Optical Isolation	-	1310/1550	30	-	-	dB
Full Duplex Sensitivity	-	Po=-10dBm	-	-	-35	dBm
Signal Detect Assert Level	-	-	-45	-	-	dBm
Signal Detect Deassert Level	-	-	-	-	-36	dBm
Operating current	Iop	3.3V/5.0V	-	80	100	mA

Absolute Maximum Ratings

Parameter	Condition	Min	Max	Unit
Operating Temperature	Top	-40	+85	°C
Storage Temperature	Tstg	-40	+85	°C
Lead Soldering Temperature/Time	Tsld	-	240/10	°C/S
Optical Return Loss	PC connector	14	-	dB

Features

- MQW F-P 1310nm laser diode with driver as transmitter
- InGaAs PIN with TIA and preamplifier (5V or optional 3.3V) as receiver.
- 1310nm wavelength output, output power -10dBm typically
- 1550nm wavelength input, responsivity 0.7A/W
- Isolation >30dB and cross talk <-45dB, full duplex sensitivity -35dBm
- Integrated WDM coupler (1310nm transmitting/1550nm reflecting)
- 1X9 DIP package
- Operation temperature from 0 to 70°C (or -40 to 85 °C)

Applications

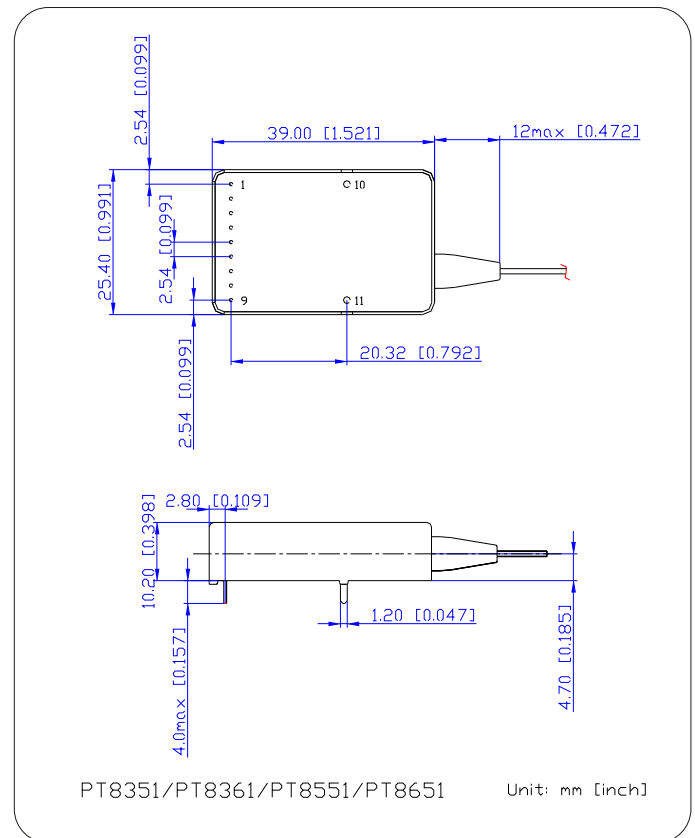
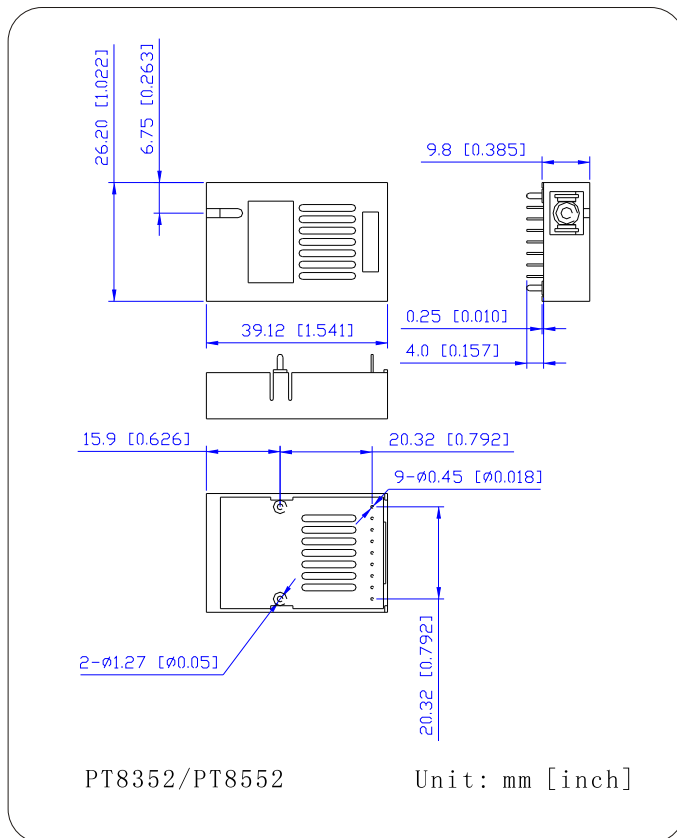
Telecommunication systems
Data communication systems

Bi-Di Transceiver Module Information

Pin Description

P/N	1	2	3	4	5	6
Desc	Rx GND	OUT+	OUT-	Signal Det.	Rx Vcc	Tx Vcc
P/N	7	8	9	10	11	
Desc	DIN-	DIN+	Tx GND	NC	NC	

Mechanical Outline



Bi-Di Transceiver Module Information

Ordering information

PT8***: Bi-Di Transceiver Module

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Connector or Receptacle
FC: single FC Adapter
ST: single ST Adapter
SC: single SC Adapter
00: pigtail without Connector

Output power:

- 1: -15~-8 dBm (Transceiver), 100~400 μW (Diplexer)
- 2: -5~0 dBm (Transceiver), 400~1000 μW (Diplexer)
- 3: -3~+2 dBm (Transceiver), 1000 μW~ (Diplexer)

Working Condition:

- 1: 5V, 0~70°C
- 2: 5V, -40~+85°C
- 3: 3.3V, 0~70°C
- 4: 3.3V, -40~+85°C

Typical Data Rate

- 2: 52 Mb/s
- 3: 155 Mb/s
- 4: 622 Mb/s
- 5: 1200 Mb/s
- 6: 2500 Mb/s

Package Style:

- 1: 1X9 Single Pigtail
- 2: 1X9 Single SC Receptacle
- 3: 2X9 Single Pigtail
- 4: 2X9 Single SC Receptacle
- 5: 2X10 Single Pigtail
- 6: 2X10 Single SC Receptacle
- 7: 2X10 Single LC Receptacle
- 8: 2X5 Single Pigtail
- 9: 2X5 Single SC Receptacle
- 0: 2X5 Single LC Receptacle

Module structure:

- 1: LD Module + PIN (Dual Wavelength)
- 2: LD Module + PIN (Single Wavelength)
- 3: LD Module + PIN + TIA (Dual wavelength)
- 4: LD Module + PIN + TIA (Single wavelength)
- 5: LD Module + PIN + TIA + Post Amp (Dual wavelength)
- 6: LD Module + Driver + PIN + TIA + Post Amp. (Single wavelength)

Transmitter Device:

- 3: 1310nm FP-LD
- 4: 1310nm DFB-LD
- 5: 1550nm FP-LD
- 6: 1550nm DFB-LD