

## Features

- RoHS compliant
- 155Mbps, 622Mbps, and 1.25Gbps data rates
- Industry standard 1x9 footprint
- Dual-fiber, or Single Bi-directional fiber connection
- Single +5V or +3.3 V supply
- Differential LVPECL inputs and outputs
- Compatible with solder and aqueous wash processes
- Class 1 laser product complies with EN 60825-1



PD-LD Inc. offers laser diode based fiber optic transceiver modules in convenient industry standard 1x9 style packages. The PTRxxx series modules are designed to operate at 155 Mbps, 622Mbps, or 1.25 Gbps data rate over either multimode or 9/125um single mode optical fiber.

The transmitter section consists of a FP or DFB laser in an eye safe optical subassembly (OSA) which mates to the fiber cable. A LD driver IC that converts differential input LVPECL logic signals into an analog laser driving current drives the laser of OSA. The receiver utilizes a PIN photodiode mounted together with a trans-impedance preamplifier IC also in an OSA. This OSA is connected to a circuit providing post-amplification quantization, and optical signal detection

For single-fiber models, the laser diode and the InGaAs PIN photodiode are integrated with a WDM filter to form a bi-directional single fiber optical subassembly (BOSA) to provide the single fiber connection.

Signal Detect indicates the receiving of a good optical signal. This is a single-ended LVPECL output. When the input optical power decreases, Signal Detect will change from high state to low state at a level (de-assert point) below the sensitivity. As the input optical power increases, Signal Detect will change back from low state to high state at assert point. The assert level is at least 1.0 dBm higher than the de-assert level.

## Ordering Information

### Single Bi-directional Fiber Models:

Part Number	Data Rate	TX Output Power	RX Sensitivity	Temperature
PTR155-B35-01	155 Mbps	1310 nm FP, -3 to -9 dBm	1550 nm, -31 dBm	0°C to 70°C
PTR155-B35-02				-40°C to 85°C
PTR155-B53-01	155 Mbps	1550 nm FP, -3 to -9 dBm	1310 nm, -31 dBm	0°C to 70°C
PTR155-B53-02				-40°C to 85°C
PTR622-B35-01	622 Mbps	1310 nm FP, -3 to -9 dBm	1550 nm, -28 dBm	0°C to 70°C
PTR622-B35-02				-40°C to 85°C
PTR622-B53-01	622 Mbps	1550 nm FP, -3 to -9 dBm	1310 nm, -28 dBm	0°C to 70°C
PTR622-B53-02				-40°C to 85°C

**Dual-Fiber Models:**

Part Number	Data Rate	TX Output Power		RX Sensitivity	Temperature
PTR155-M01		850 nm VCSEL, -4 to -10 dBm (into 62.5/125 MMF)		850 nm, -24 dBm	0°C to 70°C
PTR155-M02					-20°C to 85°C
PTR155-S01	155 Mbps	1310 nm FP, -8 to -15 dBm		1310nm, -34 dBm	0°C to 70°C
PTR155-S02					-40°C to 85°C
PTR155-L01		1310 nm FP, 0 to -5 dBm		1310nm, -34 dBm	0°C to 70°C
PTR155-L02					-40°C to 85°C
PTR622-S01	622 Mbps	1310 nm FP, -8 to -15 dBm		1310 nm, -28 dBm	0°C to 70°C
PTR622-S02					-40°C to 85°C
PTR622-L01		1310 nm DFB, +2 to -3 dBm		1310 nm, -28 dBm	0°C to 70°C
PTR622-L02					-40°C to 85°C
PTR1.2-M01	1.25 Gbps	850 nm VCSEL, -4 to -10 dBm (into 62.5/125 MMF)		850 nm, -18 dBm	0°C to 70°C
PTR1.2-S01		1310 nm FP, -4 to -10 dBm		1310 nm, -20 dBm	0°C to 70°C
PTR1.2-S02					-40°C to 85°C
PTR1.2-L01		1310 nm DFB, +5 to 0 dBm		1310 nm, -24 dBm	0°C to 70°C
PTR1.2-L02					-40°C to 85°C

- **SC receptacle is standard. ST receptacle and Pigtail with ST, FC, or SC connector is optional.**
- **Models with higher data rates, and longer reaches are available upon request**

**For enquiries/quote contact PDL D Inc.,  
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