D-TECH SFP 10G BIDI Tx1550/Rx 1490nm DDM

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Variants

80km LC

Details

The **10G SFP+ BIDI Optical Transceiver – 80KM** is a high-performance single-fiber optical module designed for long-distance **10G Ethernet, ISP backbone, telecom transmission, enterprise fiber, and data center interconnect** applications.

Using **Bi-Directional (BIDI) transmission technology**, this module transmits and receives data over one single mode fiber strand, helping reduce fiber usage and deployment cost. It supports transmission up to **80 km** with stable optical performance and low power consumption.

Data Rate	**10G**
Distance	

80KM

Fiber Type

Single Fiber

Connector

LC BIDI

Key Features

? Supports 10G High-Speed Optical Transmission

? Single-Fiber BIDI Communication Technology

? Up to 80 km Transmission Distance

? DFB Laser Transmitter with APD Receiver

? Digital Diagnostics Monitoring (DDM / DOM)

? Low Power Consumption Design

? Hot-Pluggable SFP+ Form Factor

? Metal Enclosure for Superior EMI Protection

Technical Specifications

Category	Specification

Product Type	SFP+ Optical Transceiver (BIDI)
Data Rate	Up to 11.1 Gbps (Typical 10.3125 Gbps)
Transmission Distance	Up to 80 km
Fiber Type	Single Mode Fiber (9/125 µm)
Wavelength	Tx: 1550 nm / Rx: 1490 nm (Reverse option available)
Transmitter Type	DFB Laser
Receiver Type	APD Photodiode
Connector Type	LC BIDI Single Fiber
Interface	2-Wire Serial Interface (I2C, SFF-8472)
Digital Diagnostics	DDM / DOM Supported
Monitoring Parameters	Temperature, TX Power, RX Power, Voltage, Bias Current
Power Supply	+3.3V
Power Consumption	? 1.8W
EMI Protection	Metal Enclosure
Compliance	SFP+ MSA, SFF-8431, SFF-8472
RoHS	RoHS-6 Compliant

Environmental Specifications

Operating Temperature (Commercial)	0°C to +70°C
Extended Temperature	-10°C to +80°C
Industrial Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Humidity	5% – 95% Non-condensing

Electrical Specifications

Operating Voltage	3.135 – 3.465V
Typical Voltage	3.3V
Control Voltage (High)	? 2V
Control Voltage (Low)	? 0.8V

Applications

- 10G Ethernet Networks
- ISP Backbone Infrastructure
- Telecommunication Systems
- Data Center Interconnect

Enterprise Fiber Networks

Long Distance Optical Transmission

DWDM / CWDM Fiber Networks

Note: BIDI optical transceivers must be used in matched wavelength pairs, such as Tx1550/Rx1490 on one side and Tx1490/Rx1550 on the opposite side.

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