

1.25Gb/s Bidirectional Single-Fiber SFP Transceiver with SC Connector

Features and Benefits

Works with Olson's Model OTDV-1250 Transport Link to provide 1.25Gb/s bidirectional data.

These SFP Modules do not include DMM monitoring..

Multiple dual wavelength configurations available for various distances.

Single 3.3V power supply and TTL logic interface.

Hot-pluggable SFP footprint with compact simplex LC or SC optical connector.

Fully metallic enclosure assures low EMI.

Transmits up to 80km over a single 9/125µm single-mode fiber.

Ideal for SONET/SDH equipment interconnects, Fiber Channel links, and WDM Gigabit Ethernet links.

Can be used to create a very high quality video, audio, data, and Ethernet broadcast contribution/distribution network.



The Olson Model OTOLS-BIYY-ZZ Bidirectional 1.25Gb/s Single-Mode Small Form Pluggable (SFP) Fiber Optic Transceiver is one of several module options available for the Model OTDV-1250 as well as a number of Olson fiber optic Ethernet transport products. The module is compatible with gigabit Ethernet and 1000BASE-SX. The SFP module may be swapped in the field.

The link can be ordered in a variety of wavelengths for varying distances and LC or SC connectors. All models operate over a single 9/125µm single-mode fiber only. These SFP modules do not include DMM monitoring.

Ordering Information

OTOLS-BI35SC-20	SFP, 1.25Gb/s, 20km, SC, 1310nm Tx/1550nm Rx
OTOLS-BI53SC-20	SFP, 1.25Gb/s, 20km, SC, 1550nm Tx/1310nm Rx
OTOLS-BI35SC-40	SFP, 1.25Gb/s, 40km, SC, 1310nm Tx/1550nm Rx
OTOLS-BI53SC-40	SFP, 1.25Gb/s, 40km, SC, 1550nm Tx/1310nm Rx
OTOLS-BI45SC-80	SFP, 1.25Gb/s, 80km, SC, 1490nm Tx/1550nm Rx
OTOLS-BI54SC-80	SFP, 1.25Gb/s, 80km, SC, 1550nm Tx/1490nm Rx
OTOLS-BI35LC-20	SFP, 1.25Gb/s, 20km, LC, 1310nm Tx/1550nm Rx
OTOLS-BI53LC-20	SFP, 1.25Gb/s, 20km, LC, 1550nm Tx/1310nm Rx
OTOLS-BI35LC-40	SFP, 1.25Gb/s, 40km, LC, 1310nm Tx/1550nm Rx
OTOLS-BI53LC-40	SFP, 1.25Gb/s, 40km, LC, 1550nm Tx/1310nm Rx
OTOLS-BI45LC-80	SFP, 1.25Gb/s, 80km, LC, 1490nm Tx/1550nm Rx
OTOLS-BI54LC-80	SFP, 1.25Gb/s, 80km, LC, 1550nm Tx/1490nm Rx

System Specifications

Recommended Operating Conditions

	Min	Typ	Max	Units
Absolute Max. Ratings				
Power Supply Voltage	-0.5		+3.6	V
Storage Temperature	-40		+85	°C
Normal Operating Conditions				
Operating Temperature	0		+70	°C
Power Supply Voltage	3.15	3.3	3.45	V
Power Supply Current			190	mA
Surge Current			+30	mA
Baud Rate		1.25		GBaud
Total Supply Current			+300	mA

Physical Characteristics

	Min	Typ	Max	Units
Weight		0.8		oz.
		23		g
Dimensions (L x W x H)	2.68 x 0.47 x 0.28			in.
	68 x 12 x 7			mm

Performance Specifications - Electrical

	Min	Typ	Max	Units
Transmitter				
CML/PECL Inputs (Differential) (1)	400		2500	mVp-p
Input Impedance (Differential) (2)	85	100	115	Ohms
Tx_Disable Input Voltage - High	2		3.45	V
Tx_Disable Input Voltage - Low	0		0.8	V
Tx_Fault Output Voltage - High (3)	$V_{cc}-0.5$		$V_{cc}+0.3$	V
Tx_Fault Output Voltage - Low (4)	0		0.5	V
Receiver				
CML Outputs (Differential)(5)	400	800	1200	mVp-p
Output Impedance (Differential)	85	100	115	Ohms
Rx_LOS Output Voltage High (3)	$V_{cc}-0.5$		$V_{cc}+0.3$	V
Rx_LOS Output Voltage Low (4)	0		0.8	V

NOTES:

- 1) Ac coupled inputs.
- 2) $R_N > 100$ kOhms @ DC.
- 3) $I_o = 400\mu A$; Host V_{cc} .

4) $I_o = -4.0mA$.

5) AC coupled outputs.

Optical and Electrical Characteristics

	Min	Typ	Max	Units
Distance (9/125 μ m)	20		80	km
Data Rate		1.25		Gb/s
Transmitter				
Wavelength (1310)	1270	1310	1350	nm
Wavelength (1490nm)	1480	1490	1510	nm
Wavelength (1550nm)	1530	1550	1570	nm
Spectral Width (RMS)			4	nm
Spectral Width (-20dB)			1	nm
Optical Output Power (1310nm)	-9.0		-3.0	dBm
Optical Output Power (1550nm)	-8.0		-3.0	dBm
Extinction Ratio	9			dB
Rise/Fall Time (20%-80%)			90	ps
Output Optical Eye	IUT-T G.957 Compliant			
Data Input Swing Differential	500		2000	mV
Input Differential Impedance	90	100	110	Ohms
Enable Tx_Disable	2.0		$V_{cc}+0.3$	V
Disable Tx_Enable	0		0.8	V
Tx_Fault = Fault	2.0		$V_{cc}+0.3$	V
Tx Fault = Normal	0		0.8	V
Tx_Disable Assert Time			10	s
Receiver				
Wavelength (1310nm)	1270	1310	1350	nm
Wavelength (1490nm)	1480	1490	1510	nm
Wavelength (1550nm)	1530	1550	1570	nm
Sensitivity		-20		dBm
Output Differential Impedance	90	100	110	Ohms
Data Output Swing Differential	370		2000	mV
Rise/Fall Times			2.2	ns
LOS De-assert			-24	dBm
LOS Assert	-40			dBm