FTLF8546P4BCV-SKY

Finisar® FTLF8546P4BCV Compatible 10/16GBase-SR/SW FC SFP+ Transceiver Multi-Rate (MMF, 850nm, 100m, LC, DOM)

Product Description

This Finisar® FTLF8546P4BCV compatible multi-rate SFP+ transceiver provides 10/16GBase-SR/SW Fibre Channel throughput up to 100m over multi-mode fiber (MMF) using a wavelength of 850nm via an LC connector. It can operate at temperatures between 0 and 70C. Our transceiver is built to meet or exceed OEM specifications and is guaranteed to be 100% compatible with Finisar®. It has been programmed, uniquely serialized, and tested for data-traffic and application to ensure that it will initialize and perform identically. All of our transceivers comply with Multi-Source Agreement (MSA) standards to provide seamless network integration. Additional product features include Digital Optical Monitoring (DOM) support which allows access to real-time operating parameters. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

Skylane's transceivers are RoHS compliant and lead-free.

Features:

- Up to 16Gbps Fiber Channel Serial Line Rate
- Duplex LC Connector
- Up to 10Gbps Ethernet
- OM3
- AC/AC Coupling Interface
- 850nm VCSEL
- Commercial Temperature: 0 to 70 Celsius
- Multi-Mode Fiber
- Metal with Lower EMI
- Hot Pluggable
- Excellent ESD Protection
- RoHS Compliant and Lead-Free

Applications:

- 10GBase-SR Ethernet
- Datacenter and Enterprise
- Tri-Rate 4G/8G/16G Fibre Channel

For your product safety, please read the following information carefully before any manipulation of the transceiver:

ESD

This transceiver is specified as ESD threshold 1kV for SFI pins and 2kV for all others electrical input pins, tested per MIL-STD-883G, Method 3015.4 /JESD22-A114-A (HBM). However, normal ESD precautions are still required during the handling of this module.

LASER SAFETY

This is a Class1 Laser Product according to IEC 60825-1:2007. This product complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated (June 24, 2007).

The optical ports of the module need to be terminated with an optical connector or with a dust plug in order to avoid contamination.

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power Supply Voltage	Vcc	-0.5		4	V
Storage Temperature	Tstg	-40		85	°C
Operating Case Temperature	Tc	0	25	70	°C
Relative Humidity	RH	0		85	%

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power Supply Voltage	Vcc	3.15	3.3	3.46	V
Supply Current	Icc			300	mA
Transmitter					
Input Differential Impedance	RIN		100		Ω
Single-Ended Data Input Swing	VIN,pp	90		800	mV
Transmit Disable Voltage	VD	2		Vcc	V
Transmit Enable Voltage	VEN	Vee		Vee+0.8	V
Receiver					
Single-Ended Data Output Swing	VOUT,pp	185		425	mV
LOS Fault	$VLOS_{fault}$	2		Host_Vcc	V
LOS Normal	$VLOS_{norm}$	Vee		Vee+0.8	V
Power Supply Rejection	PSR	100			mVp-p
Receiver Deterministic Jitter @14.025Gbps	DJ			0.22	UI
Receiver Deterministic Jitter @8.5Gbps	DJ			0.42	UI

Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Data Rate	BR	4.25		14.025	Gbps	
Bit Error Rate	BER			10^{-12}		1
Transmitter						
Center Wavelength	λ	840		860	nm	
RMS Spectral Width	σ			0.6	nm	
Average Optical Power	Pavg	-8.4		2.4	dBm	2
Optical Modulation Amplitude	OMA	-6.4		3	dBm	
Extinction Ratio	ER	2			dB	
Optical Return Loss Tolerance	ORLT			12	dB	
Receiver						
Center Wavelength	λ	840		860	nm	
Damage Threshold		3.4			dBm	
Receiver Power Overload		2.4			dBm	
Receiver Sensitivity	SENS			-10.3	dBm	
LOS Assert	LOSA	-30			dBm	
LOS De-Assert	LOSD			-13	dBm	
LOS Hysteresis	LOSH	0.5			dB	

Notes:

1. PRBS 2^7-1 for 8GFC. PRBS 2^{31}-1 for 16GFC.
2. Class 1 Laser Safety limits CDRH and EN60825 standards.

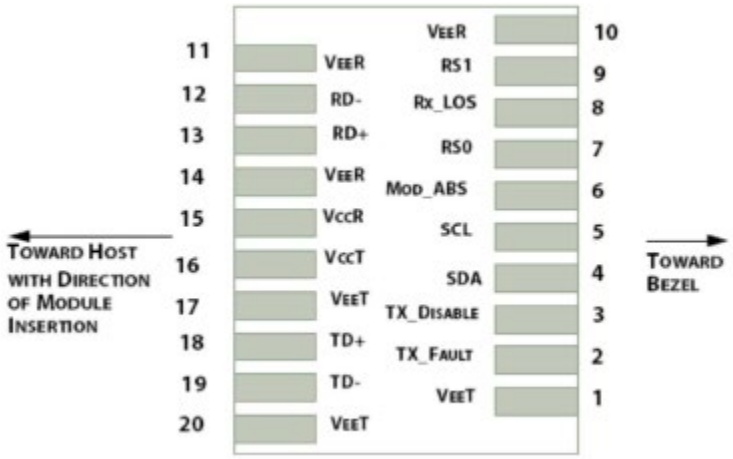
Pin Descriptions

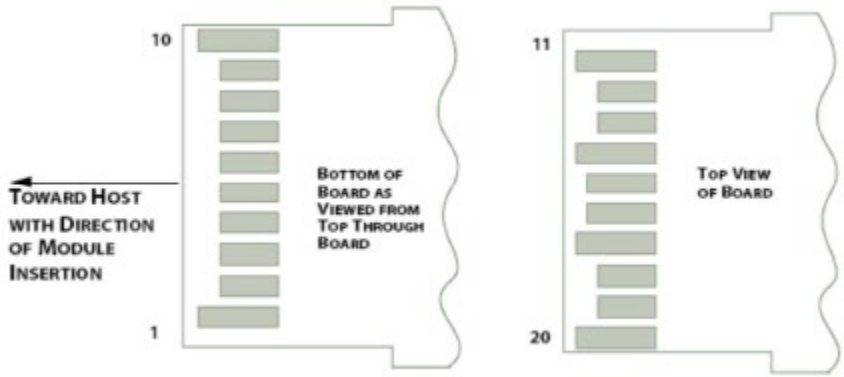
Pin	Logic	Symbol	Name/Description	Notes
1		VeeT	Module Transmitter Ground.	1
2	LVTTL-O	Tx_Fault	Module Transmitter Fault.	2
3	LVTTL-I	Tx_Disable	Transmitter Disable. Turns off the transmitter laser output.	3
4	LVTTL-I/O	SDA	2-Wire Serial Interface Data.	
5	LVTTL-I	SCL	2-Wire Serial Interface Clock.	
6		MOD_ABS	Module Absent. Connected to the VeeT or VeeR in the module.	2
7	LVTTL-I	RS0	Rate Select 0. Optionally controls the SFP+ module receiver. When "high," the input signaling rate is >4.25GBd. When "low," the input signal rate is ≤4.25GBd.	
8	LVTTL-O	Rx_LOS	Receiver Loss of Signal Indication.	2
9	LVTTL-I	RS1	Rate Select 1. Optionally controls the SFP+ module transmitter. When "high," the input signaling rate is >4.25GBd. When "low," the input signal rate is ≤4.25GBd.	
10		VeeR	Module Receiver Ground.	1
11		VeeR	Module Receiver Ground.	1
12	CML-O	RD-	Receiver Inverted Data Output.	
13	CML-O	RD+	Receiver Data Output.	
14		VeeR	Module Receiver Ground.	1
15		VccR	3.3V Module Receiver Power Supply.	
16		VccT	3.3V Module Transmitter Power Supply.	
17		VeeT	Module Transmitter Ground.	1
18	CML-I	TD+	Transmitter Non-Inverted Data Input.	
19	CML-I	TD-	Transmitter Inverted Data Input.	
20		VeeT	Module Transmitter Ground.	1

Notes:

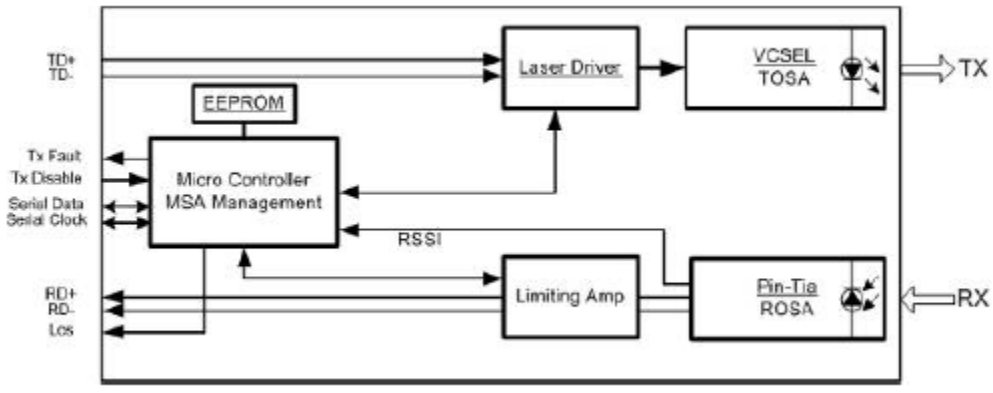
1. Module ground pins are isolated from the module case and chassis ground within the module.
2. Shall be pulled up with 4.7kΩ to 10kΩ to a voltage between 3.15V and 3.45V on the host board.
3. Shall be pulled up with 4.7kΩ to 10kΩ to the VccT in the module.

Electrical Pin-Out Details

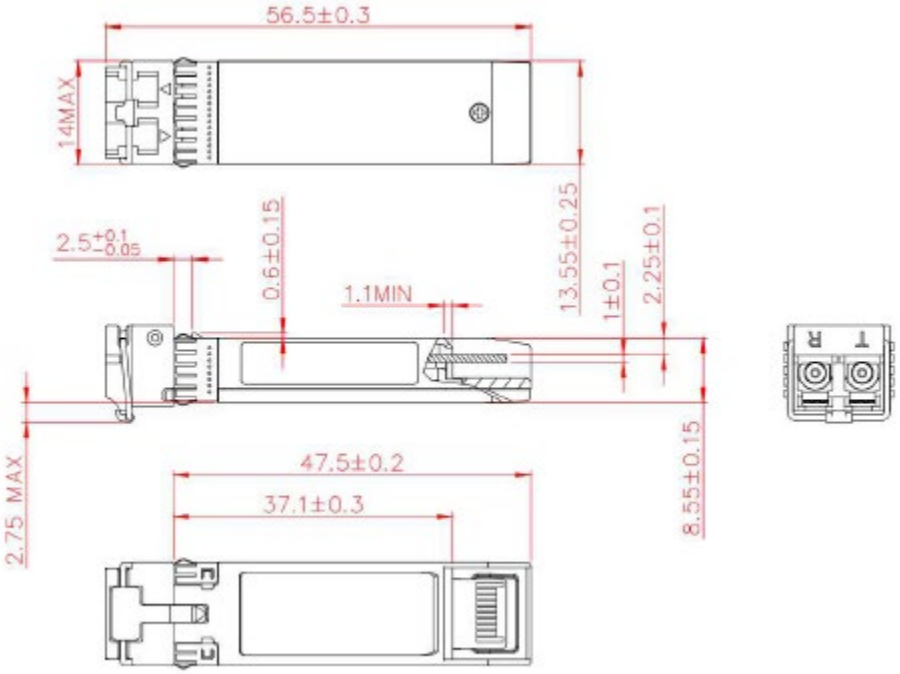




Transceiver Block Diagram



Mechanical Specifications



About Skylane Optics

Skylane is a leading provider of transceivers for optical communication.

We offer an extensive portfolio for the enterprise, access, datacenter and metropolitan fiber optical market as well as for smart home applications and home networks.

We cover the European, South American and North American market with a strong partner network and have offices in Belgium, Brazil, Sweden and USA.

Our offerings are characterized by high quality and performance. In combination with our strong technical support, we enable our customers to build cost optimized network solutions.

We offer an extensive range of high-quality products including transceivers (Optical and copper), Active Optical Cable (AOC), Direct Attach Cable (DAC), Mux/Demux, Coding Box.