

# 25G SFP28 1310nm 10km DOM Transceiver

SFP-25G-LR-S-LL



## Application

- Data Center Backbone
- Ethernet Switches
- High-speed Servers
- High-performance Computing Clusters
- SAN, Routers, Hubs, Load Balancer

## Features

- 25Gbps serial optical interface
- 1310nm DFB transmitter and PIN PD receiver
- Wide Operating Temperature(0°C~70°C)
- Maximum link length of 10km via Single Mode Fiber (SMF)

## Description

The Technologies SFP28-25GLR-31 is a single-Channel, Pluggable, Fiber-Optic SFP28 for 25 Gigabit Ethernet and Infiniband SAN Applications. It is a high performance module for long-range data communication and interconnect applications which operate at 25.78125Gbps up to 10 km using single mode fiber(SMF).

This module is designed to operate over singlemode fiber systems using a nominal wavelength of 1310nm. The electrical interface uses a 20 contact edge type connector. The optical interface uses duplex LC receptacle. This module incorporates Technologies proven circuit and DFB technology to provide reliable long life, high performance, and consistent service.

## Product Specifications

### I. Optical and Electrical Characteristics

Parameter	Symbol	Min	Typ.	Max	Unit
<b>Power Consumption</b>	P			1.2	W
<b>Supply Current</b>	I <sub>cc</sub>			300	mA
<b>Transmitter(T=25° C, unless noted)</b>					
<b>Data Rate</b>	R		25.8	28.05	Gbps
<b>Centre Wavelength</b>	$\lambda_c$	1290	1310	1330	nm
<b>Spectral Width (-20dB)</b>	$\Delta\lambda$			1	nm
<b>Average Optical Power</b>	P <sub>avg</sub>	-4.5		2	dBm
<b>Optical Power OMA</b>	P <sub>OMA</sub>	-6.4			dBm
<b>Extinction Ratio</b>	ER	3.5			dB
<b>Differential data input swing</b>	V <sub>IN,PP</sub>	180		700	mV
<b>Input Differential Impedance</b>	R <sub>in</sub>		100		$\Omega$

## Receiver(T=25° C, unless noted)

<b>Center Wavelength</b>	$\lambda_r$	1270	1360	nm
<b>Damage Threshold</b>		3.5		dBm
<b>Overload</b>	Sat	2		dBm
<b>Receiver Reflectance</b>	$R_{rx}$		-12	dB
<b>Receiver Sensitivity (OMA)</b>	Sen		-8.6	dBm
<b>LOS Assert</b>	$LOS_A$	-30		dBm
<b>LOS De-Assert</b>	$LOS_D$		-11	dBm
<b>LOS Hysteresis</b>	$LOS_H$	0.5	5	dB

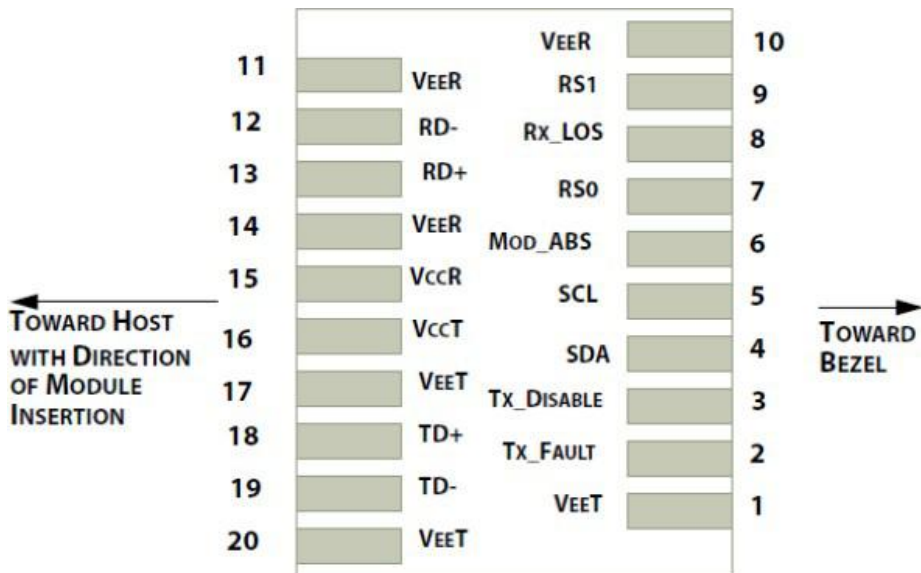
## II. Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
<b>Storage Temperature</b>	$T_S$	-40	85	°C
<b>Relative Humidity</b>	RH	5	95	%

## III. Recommended Operating Conditions

Parameter	Symbol	Min	Typ.	Max	Unit
<b>Case Temperature</b>	$T_c$	0		+70	°C
<b>Power Supply Voltage</b>	$V_{CC}$	3.15	3.3	3.45	V
<b>Signaling Rate each Channel</b>			25.78125		Gbps

### IV. PIN ASSIGNMENT

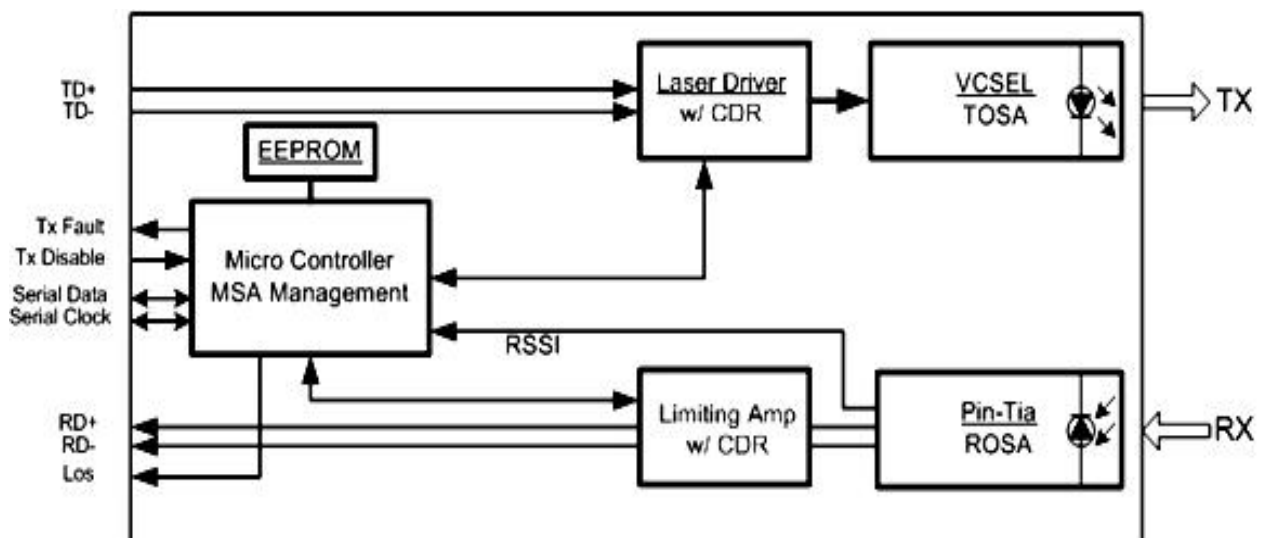


### Pin Description

Pin	Logic	Symbol	Name/Description
1		VeeT	Module Transmitter Ground
2	LVTTTL-O	TX_Fault	Module Transmitter Fault
3	LVTTTL-I	TX_Dis	Transmitter Disable; Turns off transmitter laser output
4	LVTTTL-I/O	SDA	2-Wire Serial Interface Data Line
5	LVTTTL-I	SCL	2-Wire Serial Interface Clock
6		MOD_DEFO	Module Definition, Grounded in the module
7	LVTTTL-I	RS0	Receiver Rate Select
8	LVTTTL-O	RX_LOS	Receiver Loss of Signal Indication Active LOW
9	LVTTTL-I	RS1	Transmitter Rate Select (not used)

10		VeeR	Module Receiver Ground
11		VeeR	Module Receiver Ground
12	CML-O	RD-	Receiver Inverted Data Output
13	CML-O	RD+	Receiver Data Output
14		VeeR	Module Receiver Ground
15		VccR	Module Receiver 3.3 V Supply
16		VccT	Module Receiver 3.3 V Supply
17		VeeT	Module Transmitter Ground
18	CML-I	TD+	Transmitter Non-Inverted Data Input
19	CML-I	TD-	Transmitter Inverted Data Input
20		VeeT	Module Transmitter Ground

### V. Transceiver Block Diagram



## VI. Mechanical Dimensions

