SFP28-25G-L10-Cxx

25GBase SFP28
1270nm - 1370nm
10km SMF

Datasheet | product specifications

Class 1 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.

ESD threshold 1kV for SFI pins and 2kV for all other electrical input pins, tested per MIL-STD-883G, Method 3015.4 /JESD22-A114A (HBM). However, normal ESD precautions are still required during the handling of this module.

Features

- Has a reach up to 10km SMF
- Maximum power consumption of 1.2W
- Operating case temperature: 0°C to 70°C
- Supports 25.78 Gb/s data rate
- Hot-pluggable SFP28 footprint
- Class 1 laser product complies with EN 60825-1

Applications

- Suitible for 25GBASE-LR usage
- Suitible for eCPRI usage

Compliances

- Compliant with SFP28 MSA
- Compliant with SFF-8431
- Compliant with RoHS

Overview

Part Number	Data Rate	Output Power	Reach	Temperature
SFP28-25G-L10-Cxx	25.78Gb/s	0 to 6 dBm	10km	0 - 70 °C

Ordering Information

Part Number	Product Description
SFP28-25G-L10-Cxx	25GBase SMF SFP28 CWDM XX=1270nm-1370nm 10km-13dB 0°C to 70°C LC Duplex DDM

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PIN Description

PIN	Symbol	Name - Description	Notes
1	VEET	Transmitter Ground (Common with Receiver Ground)	
2	TFAULT	Transmitter Fault. Not Supported.	1
3	TDIS	Trnsmitter Disable. Laser output disabled on high or open.	2
4	MOD_DEF(2)	Module Definition 2. Data line for Serial ID.	1
5	MOD_DEF(1)	Module Definition 1. Clock line for Serial ID.	1
6	MOD_DEF(0)	Module Definition 0. Grounded within the module.	1
7	Rate Select	No Connection Required	
8	LOS	Loss of Signal Indication. Logic 0 indicates normal operation.	3
9	VEER	Receiver Ground	
10	VEER	Receiver Ground	
11	VEER	Receiver Ground	4
12	RD-	Receiver Inverted Data Out. AC Coupled	4
13	RD+	Receiver Non-Inverted Data Out. AC Coupled	
14	VEER	Receiver Ground	
15	VCCR	Receiver Power Supply	
16	VCCT	Transmitter Power Supply	
17	VEET	Transmitter Ground	
18	TD+	Transmitter Non-Inverted Data In. AC Coupled	5
19	TD-	Transmitter Inverted Data In. AC Coupled	5
20	VEET	Transmitter Ground	

Notes:
1. Open collector/drain output, which should be pulled up with a 4.7kΩ to 10kΩ resister on the host board if intended for use. Pull up voltage should be between 2.0V to 3.6V. A high output indicates a transmitter fault caused by either the TX bias current or the TX output power exceeding the preset alarm thresholds. A low output indicates normal operation. In the low state, the ouput is pulled to <0.8V.
2. Laser output disabled on TX_Disable >2.0V or open, enabled on TX_Disable <0.8V.
3. LOS is open collector output. Should be pulled up with 4.7kΩ to 10kΩ on host board to a voltage between 2.0V and 3.6V. Logic 0 indicates normal operation; logic 1 indicates loss of signal.
4. RD-/+: These are the differential receiver outputs. They are internally AC-coupled 100Ω differential lines which should be terminated with 100Ω (differential) at the user SERDES.
5. TD-/+: These are the differential transmitter inputs. They are internally AC-coupled, differential lines with 100Ω differential termination inside the module.

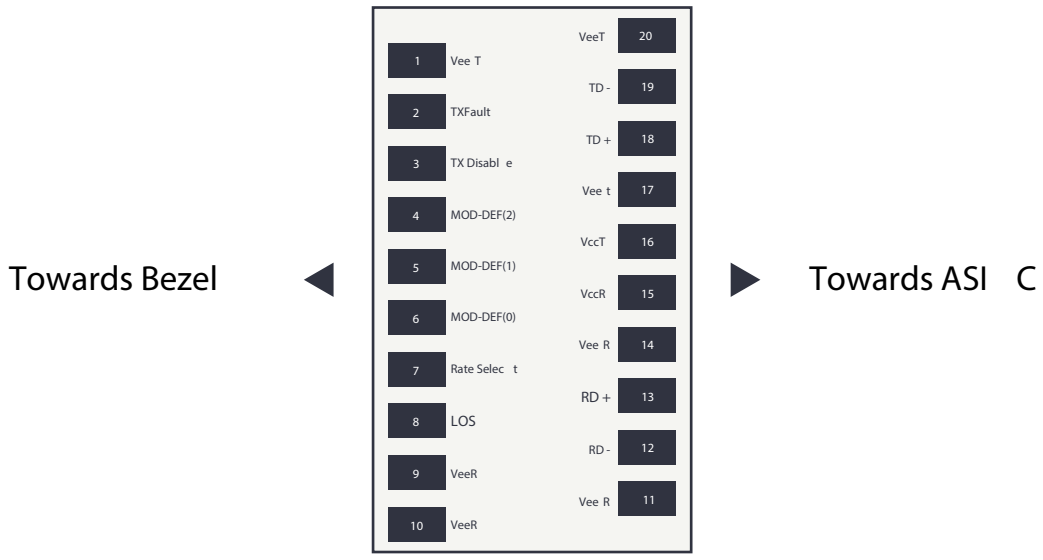

Figure 1: Diagram of host board connector block pin numbers and names

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Recommended Operating Conditions

Parameters	Symbols	Min	Typ	Max	Unit	Notes
Storage Temperature	TS	-40	-	80	°C	
Operating Case Temperature	TOP	0	-	70	°C	
Relative Humidity	RH	5	-	85	%	
Data Rate per Lane	-	-	25.78	-	Gb/s	9/125um SMF G.652
Link Distance	D	-	-	10	km	
Power Supply Voltage	Vcc	3.14	3.3	3.47	V	
Power Consumption	Po	-	-	1.2	W	
Power Supply Current	Icc	-	-	350	mA	

Wavelengths

xx	Symbols	Min	Typ	Max	Unit	Notes
27	λ	-	1271	-	nm	
29	λ	-	1291	-	nm	
31	λ	-	1311	-	nm	
33	λ	-	1331	-	nm	
35	λ	-	1351	-	nm	
37	λ	-	1371	-	nm	

Optical Characteristics

Parameters	Symbol	Min	Typ	Max	Unit	Notes
Transmitter						
Average Launch Power Each Lane	PAVG	0	-	6	dBm	
Average Launch Power of OFF transmitter	TOFF	-	-	-30	dBm	
Extinction Ratio	ER	3.5	-	-	dB	
RMS Spectral Width	λrms	-	-	1	nm	
Optical Return Loss Tolerance	TOL	-12	-	-	dB	
Receiver						
Center Wavelength	λ	1260	-	1520	nm	
Receiver Sensitivity	SEN	-	-	-13	dBm	
LOS Assert	LOSA	-30	-	-	dBm	
LOS Deassert	LOSD	-	-	-14	dBm	
LOS Hysteresis	LOSH	0.5	-	-	dB	
Receiver Overload	RxO	2.5	-	-	dBm	

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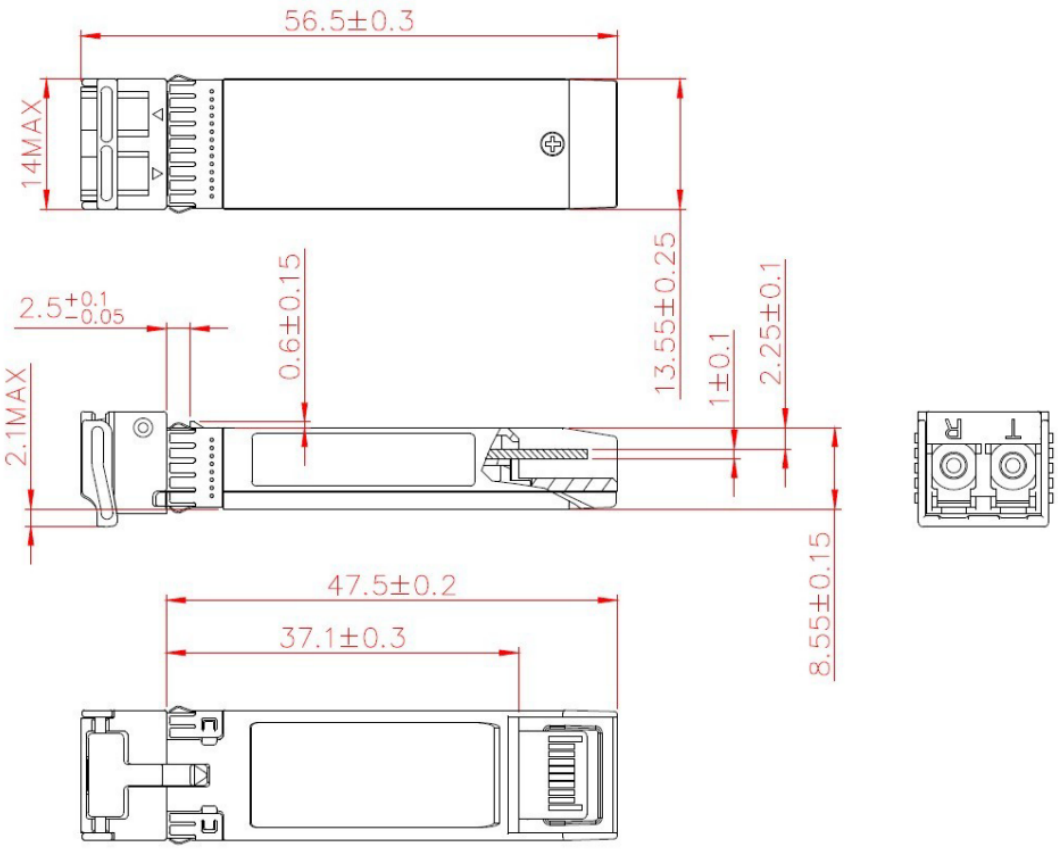
Mechanical Dimensions



Revision History

Revision	Doc. #	Date	Author	Description
Version 1.0	N/A	01/03/2023	SHN	Initial Document

Note: Nexgen A/S reserves the right to change this document without notice.