

Features

- Duplex SC connector ,1×9 pin package and plastic package
- +5V or 3.3V Single power supply, PECL or LVPECL interface logic level
- Operates data rates 1250Mb/s(NRZ)
- Class I laser product complies with IEC 60825-1
- Complies with Telcordia GR-468-CORE
- Compliant ROHS and lead free

Application

- SONET/SDH
- ATM
- Ethernet

Performance Specifications

Table1. Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit	
Storage Temperature	Tst	-40	+85	°C	
Input Voltage	Vin	GND	Vcc	V	
Power Supply Voltage	Vcc-Vee	SSTR3151-15-	0	+6.0	V
		SSTR3151-13-	0	+3.6	
Lead Soldering Temperature/Time	-	-	240/10	°C/S	

Note: Stress in excess of maximum absolute ratings can cause permanent damage to the module

Tabel2. Operating Environment

Parameter	Symbol	Min	Max	Unit	
Power Supply Voltage	Vcc	SSTR3151-15-	+4.75	+5.25	V
		SSTR3151-13-	+3.1	+3.5	
Ambient Operating Temperature	TA	SSTR3151-1*-113+	0	+70	°C
		SSTR3151-1*-213+	-40	+85	

Tabel 3. Optical and Electrical Characteristics

(T=25°C, 5V:Vcc=+4.75~+5.25V, 3.3V:Vcc=+3.1~+3.5V Input and output PECL or LVPECL signal)

Parameter	Symbol	Min	Typ	Max	Unit	Note
Transmitter						
Center Wavelength	λ_p	1285	1310	1343	nm	-
Spectral Width (RMS)	$\Delta\lambda$	-	-	3	nm	-
Output Power	Po	-10	-	-3	dBm	-
Extinction Ratio	Er	8.2	-	-	dB	-
Optical Rise/Fall Time (20%~80%)	Tr/Tf	-	-	0.26	ns	-
Power Supply Current	Icc	-	70	180	mA	1
Output Eye	Compliant with IEEE802.3Z					
Data Inputs	PECL/LVPECL					
Receiver						
Parameter	Symbol	Min	Typ	Max	Unit	Note
Sensitivity	Pr	-	-	-22	dBm	2
Maximum Input Power	Ps	-3	-	-	dBm	2
Signal Detect Assert Level	Pa(SD H-L)	-35	-	-	dBm	Low-I level: Alarm
Signal Detect Deassert Level	Pd(SD L-H)	-	-	-22	dBm	
Signal Detect Hysteresis	-	-	2	-	dB	
Operating Current	Icc	-	80	180	mA	1
Data Outputs	PECL/LVPECL					
Alarm Output	PECL/LVPECL					

PECL or LVPECL Input Pins TD+ and TD-

Parameter	Symbol	Min	Typ	Max	Unit	Note
Input High Voltage	V _{IH}	VCC - 1165	-	VCC - 880	mV	3
Input Low Voltage	V _{IL}	VCC - 1810	-	VCC - 1475	mV	3

PECL or LVPECL Output Pins SD, RD+ and RD-

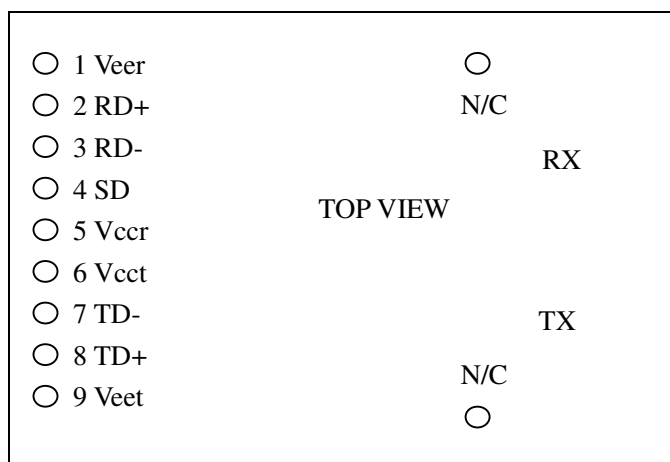
Parameter	Symbol	Min	Typ	Max	Unit	Note
Low-level Output Voltage	V _{OL}	VCC - 1840	-	VCC - 1600	mV	3
High-level Output Voltage	V _{OH}	VCC - 1100	-	VCC - 900	mV	3

Note:

- The current excludes the output load current.
- Minimum Sensitivity and saturation levels for a 2^7 -1 PRBS test pattern 1.25Gb/s.
- RL=50 R (Ohms) connected to a level of VCC-2V

Pin Definitions

Pin Diagram

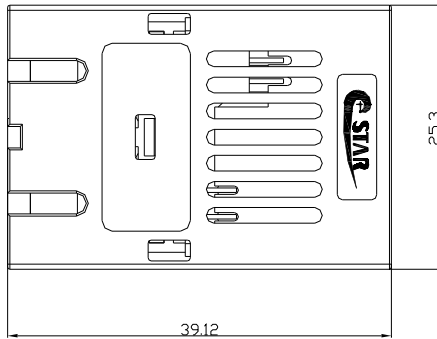
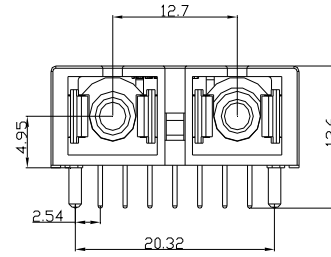
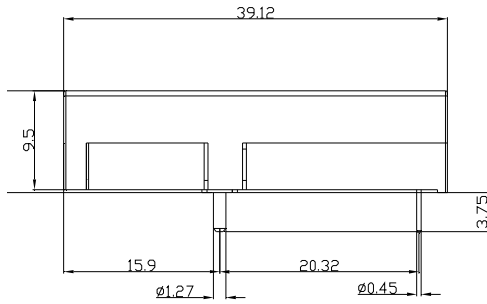


Pin Description

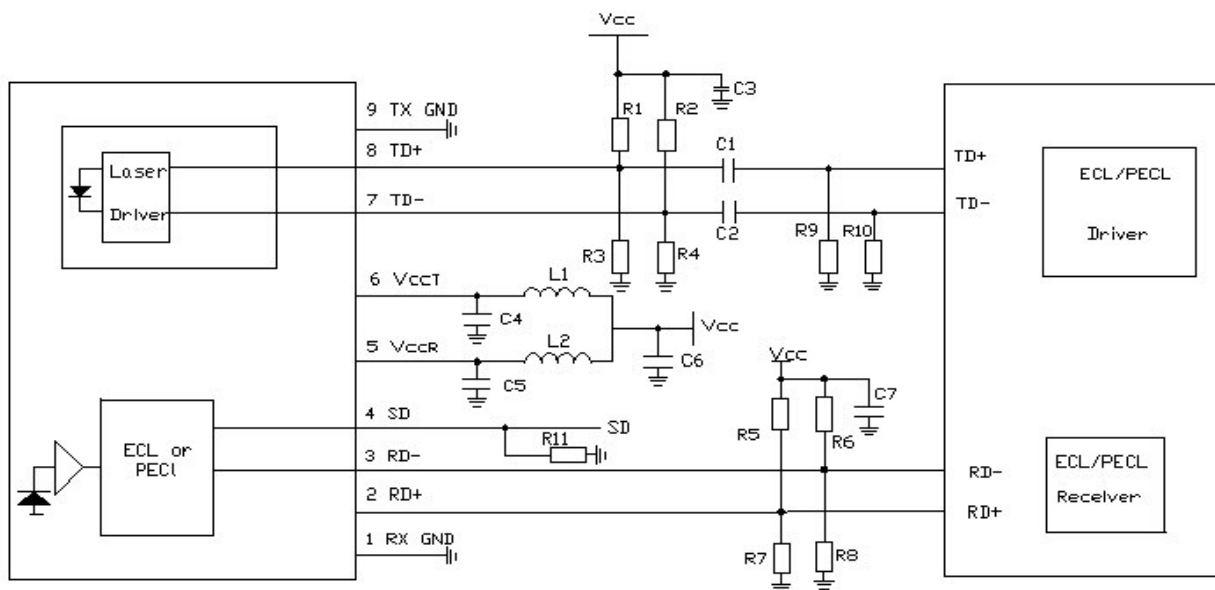
Pin #	Pin Name		Logic Level	Description
N/C	Mounting Studs		-	The two pins are not connected to the transceiver internal circuit.
1	VEER	RX Ground	N/C	Directly connect this pin to receiver signal ground plane.
2	RD+	RX Output Data	PECL/LVPECL	
3	RD-	RX Output Inverted Data	PECL/LVPECL	
4	SD	RX Signal Detect	PECL/LVPECL	Normal Operation: Logic "1" output, represents that optical is present at receiver input. Fault Condition: Logic "0" output
5	VCCR	RX Power Supply	N/C	Provide +5V/+3.3V DC through the recommended power supply filter circuit. Place the filter circuit as close as possible to the VCCR pin.
6	VCCT	TX Power Supply	N/C	Provide +5V/+3.3V DC through the recommended power supply filter circuit. Place the filter circuit as close as possible to the VCCT pin
7	TD-	TX Invert Data Input	PECL/LVPECL	-
8	TD+	TX Data Input	PECL/LVPECL	-
9	VEET	TX Ground	N/C	Directly connect this pin to transmitter signal ground plane.

Package Information

Unit: mm



Recommended Circuit



SD: PECL

C1=C2=C3=C4=C5=C7=0.1uF C6=4.7uF L1=L2=1uH

Vcc=3.3V : R1=R2=R5=R6=82Ω R3=R4=R7=R8=130Ω R9=R10=R11=180Ω

Vcc=5V : R1=R2=R5=R6=68Ω R3=R4=R7=R8=180Ω R9=R10=R11=300Ω

Obtaining Document

Please visit our website:

[Http://www.staropto.com](http://www.staropto.com)

Ordering Information

SSTR3 1 5 1 - 1 * - * 1 3 +

Wavelength (nm)	LD Type	Data Rate (Mb/s)	Package Type	Output power (dBm)	Operation Voltage	Operation Temperature	Data/Alarm Interface	Connector	Compliant ROHS
3: 1310	1: FP	5: 1250	1: 1*9	1: -10~-3	3: 3.3V 5: 5V	1: 0~70°C 2: -40~+85°C	1: Data/PECL Alarm/PECL	3: SC/PC	