

GWTR-48 transceiver is a cost effective module compliant with SONET OC-48/SDH STM-16 recommendation. This module operates at 1310nm or 1550nm wavelength. The transmitter section incorporates a high performance FP or DFB Laser and driver IC with temperature compensation and automatic power control function. The receiver section incorporates an efficient InGaAs/InP PIN photodiode and transimpedance with wide dynamic range AGC. The transceiver has excellent immunity and reliability.



Features:

- 2 Compliant with SDH and SONET Requirements
- 2 Compliant with ITU-T G.957, G.958 and Telcordia GR-468-CORE
- 2 Independent Transmitter and Receiver
- 2 Industry Standard 1×9 Package
- 2 Single Power supply (+3.3 V/5V)
- 2 PECL Differential /LVPECL Input, Output Electrical Interfaces
- 2 Class I Laser product complies with IEC825, FDA21, CFR1040.10 and CFR1040.11
- 2 Compliant with RoHS

Applications:

- 2 SDH STM-16
- 2 SONET OC-48
- 2 ATM and other Optical Data Transmission

Specification:

I Electrical and Optical Characteristics (Condition: $T_a=T_{OP}$)

GWTR-48-331-X1XX2 (1310nm FP/2Km):

TX Parameter	Symbol	Min	Typ	Max	Unit
Data Rate	B	-	2.5	-	Gb/s
Centre wavelength	λ_c	1260	1310	1360	nm
Output Spectral Width	$\Delta\lambda$	-	-	4	nm
Average Output Power	P_o	-9	-	-3	dBm
Extinction Ratio	EXT	8.2	-	-	dB
Supply Current	I_{CC}	-	90	120	mA
Output Optical Eye	Compliant with ITU-T G.957				
Data Input Voltage-High, Low	$V_{IH-V_{CC}}$	-1.49	-1.3	-1.19	V
Input Differential Voltage	V_{ID}	0.5	-	1.6	V
RX Parameter	Symbol	Min	Typ	Max	Unit
Data Rate	B	-	2.5	-	Gb/s
Receive Sensitivity	P_{min}	5V	-	-22	dBm
		3.3V	-	-21	
Maximum Input Power	P_{MAX}	-3	-	-	dBm
Signal Detection-Asserted	P_{H-L}	-34	-	-	dBm
Signal Detection-Deserted	P_{L-H}	-	-	-23	dBm
Operating Wavelength	λ_c	1100	-	1600	nm
Supply Current	I_{CC}	-	80	100	mA
Data Output High Voltage	$V_{OH-V_{CC}}$	-1.1	-	-0.879	V
Data Output Low Voltage	$V_{OL-V_{CC}}$	-1.89	-	-1.548	V

GWTR-48-232-X1XX2 (1310nm DFB/40Km) :

TX Parameter	Symbol	Min	Typ	Max	Unit
Data Rate	B	-	2.5	-	Gb/s
Centre wavelength	λ_c	1260	1310	1360	nm
Output Spectral Width	$\Delta\lambda$	-	-	1	nm
Average Output Power	P_o	-5	-	0	dBm
Extinction Ratio	EXT	8.2	-	-	dB
Supply Current	I_{CC}	-	90	120	mA
Output Optical Eye	Compliant with ITU-T G.957				
Data Input Voltage-High, Low	$V_{IH-V_{CC}}$	-1.49	-1.3	-1.19	V
Input Differential Voltage	V_{ID}	0.5	-	1.6	V
RX Parameter	Symbol	Min	Typ	Max	Unit
Data Rate	B	-	2.5	-	Gb/s
Receive Sensitivity	P_{min}	5V	-	-22	dBm
		3.3V	-	-21	
Maximum Input Power	P_{MAX}	-3	-	-	dBm
Signal Detection-Asserted	P_{H-L}	-34	-	-	dBm
Signal Detection-Deserted	P_{L-H}	-	-	-23	dBm
Operating Wavelength	λ_c	1100	-	1600	nm
Supply Current	I_{CC}	-	80	100	mA
Date Output High Voltage	$V_{OH-V_{CC}}$	-1.1	-	-0.879	V
Date Output Low Voltage	$V_{OL-V_{CC}}$	-1.89	-	-1.548	V

GWTR-48-152-X1XX2 (1550nm DFB/70Km) :

TX Parameter	Symbol	Min	Typ	Max	Unit
Data Rate	B	-	2.5	-	Gb/s
Centre wavelength	λ	1520	1550	1580	nm
Output Spectral Width	$\Delta\lambda$	-	-	1	nm
Average Output Power	P_o	-3	0	+2	dBm
Extinction Ratio	EXT	8.2	-	-	dB
Supply Current	I_{CC}	-	-	120	mA
Output Optical Eye	Compliant with ITU-T G.957				
Data Input Voltage-High, Low	$V_{IH-V_{CC}}$	-1.49	-1.3	-1.19	V
Input Differential Voltage	V_{ID}	0.5	-	1.6	V
RX Parameter	Symbol	Min	Typ	Max	Unit
Data Rate	B	-	2.5	-	Gb/s
Receive Sensitivity	P_{min}	5V	-	-22	dBm
		3.3V	-	-21	
Maximum Input Power	P_{MAX}	-3	-	-	dBm
Signal Detection-Asserted	P_{H-L}	-34	-	-	dBm
Signal Detection-Deserted	P_{L-H}	-	-	-23	dBm
Operating Wavelength	λ_c	1100	-	1600	nm
Supply Current	I_{CC}	-	80	100	mA
Date Output High Voltage	$V_{OH-V_{CC}}$	-1.1	-	-0.879	V
Date Output Low Voltage	$V_{OL-V_{CC}}$	-1.89	-	-1.548	V

I Absolute Maximum Ratings (T_C=25°C)

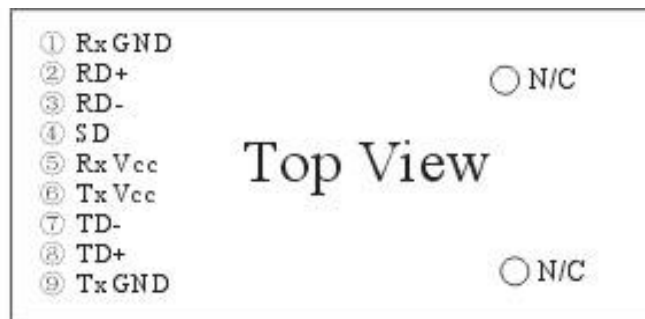
Parameter	Symbol	Min	Max	Unit
Storage Temperature	T _{ST}	-40	+85	°C
Supply Voltage	V _{CC}	0	+6	V
Input Voltage	V _{IN}	0	V _{CC}	V
Soldering Temperature &Time	-	-	260/10	°C/S

I Recommend Operation Environment:

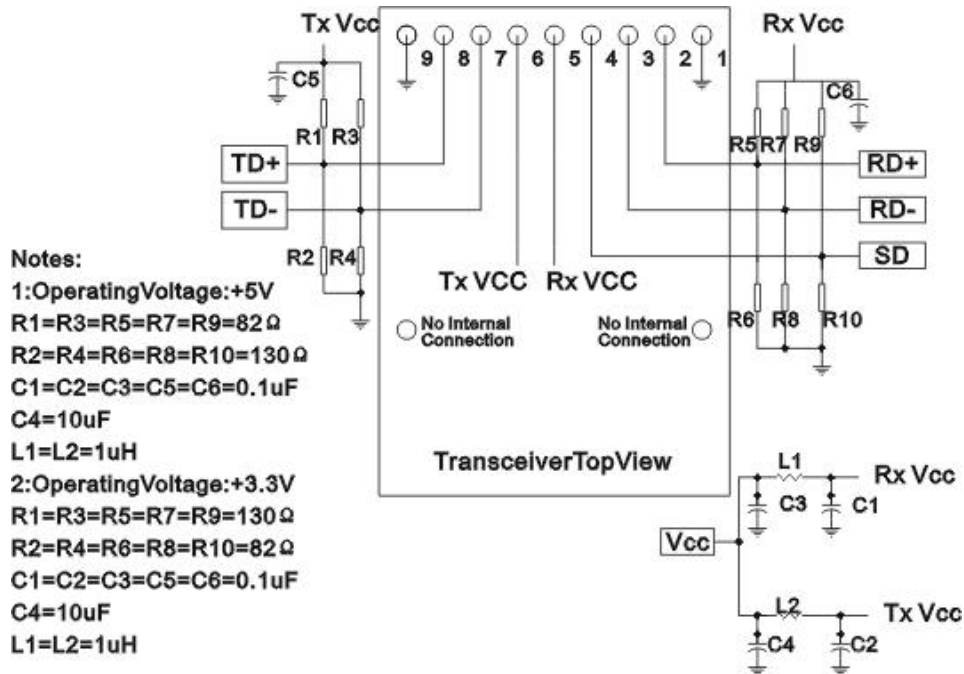
Parameter	Symbol	Min	Typ	Max	Unit
Supply Voltage	V _{CC}	+3.1	3.3	+3.5	V
Supply Voltage	V _{CC}	+4.75	5.0	+5.25	V
Operating Temperature	T _{OP}	0	-	+70	°C
Operating Temperature		-40	-	+85	

Pin Assignment:

Receiver Signal Ground
 Receiver Data Out
 Receiver Data Out Bar
 Signal Detect
 Receiver Power Supply
 Transmitter Power Supply
 Transmitter Data In
 Transmitter Data In Bar
 Transmitter Signal Ground

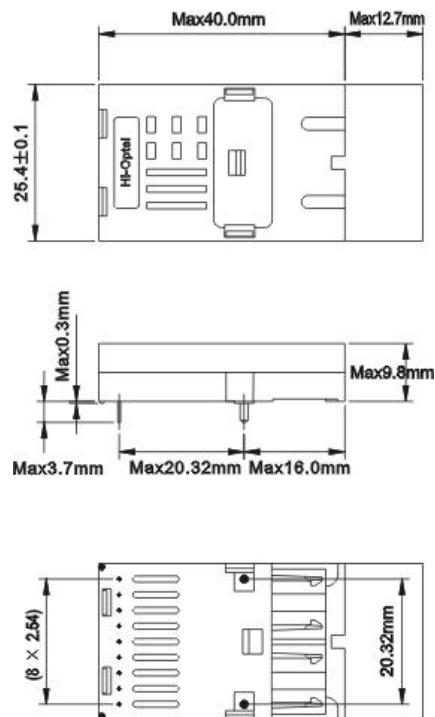


Recommended Circuit:



Mechanical Dimensions:

SC Receptacle



Ordering Information:

