

GWTR-24 transceiver is a high performance, cost effective module compliant with Gigabit Ethernet and IEEE-802.3 standards. GWTR-24 transceiver 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 Standard of IEEE-802.3 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 1/1M Laser product complies with IEC825, FDA21, CFR1040.10 and CFR1040.11
- 2 Compliant with RoHS

### Applications:

- 2 Gigabit Ethernet
- 2 Fiber Channel

### Specifications:

#### GWTR-24-331-X1XX2 (1310nm FP/20Km) :

TX Parameter	Symbol	Min	Typ	Max	Unit
Data Rate	B	-	1250	-	Mb/s
Centre wavelength	$\lambda_c$	1290	1310	1330	nm
Output Spectral Width	$\Delta\lambda$	Compliant with ITU-T G.957			nm
Average Output Power	$P_o$	-9	-	-3	dBm
Extinction Ratio	EXT	9	-	-	dB
Supply Current	$I_{CC}$	-	-	70	mA
Output Optical Eye	Compliant with IEEE802.3Z				
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	-	1250	-	Mb/s
Receive Sensitivity	$P_{min}$	-	-23	-22	dBm
Maximum Input Power	$P_{MAX}$	-3	-	-	dBm
Signal Detection-Asserted	$P_{H-L}$	-35	-	-	dBm
Signal Detection-Deserted	$P_{L-H}$	-	-	-24	dBm
Operating Wavelength	$\lambda_c$	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-24-131-X1XX2 (1310nm FP/40Km) :**

<b>TX Parameter</b>	<b>Symbol</b>	<b>Min</b>	<b>Typ</b>	<b>Max</b>	<b>Unit</b>
Data Rate	B	-	1250	-	Mb/s
Centre wavelength	$\lambda_c$	1290	1310	1330	nm
Output Spectral Width	$\Delta\lambda$	Compliant with ITU-T G.957			nm
Average Output Power	$P_o$	-3	0	+2	dBm
Extinction Ratio	EXT	9	-	-	dB
Supply Current	$I_{CC}$	-	-	70	mA
Output Optical Eye	Compliant with IEEE802.3Z				
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
<b>RX Parameter</b>	<b>Symbol</b>	<b>Min</b>	<b>Typ</b>	<b>Max</b>	<b>Unit</b>
Data Rate	B	-	1250	-	Mb/s
Receive Sensitivity	$P_{min}$	-	-24	-23	dBm
Maximum Input Power	$P_{MAX}$	-3	-	-	dBm
Signal Detection-Asserted	$P_{H-L}$	-35	-	-	dBm
Signal Detection-Deserted	$P_{L-H}$	-	-	-25	dBm
Operating Wavelength	$\lambda_c$	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-24-152-X1XX2 (1550nm DFB/80Km) :**

<b>TX Parameter</b>	<b>Symbol</b>	<b>Min</b>	<b>Typ</b>	<b>Max</b>	<b>Unit</b>
Data Rate	B	-	1250	-	Mb/s
Centre wavelength	$\lambda_c$	1480	1550	1580	nm
Output Spectral Width	$\Delta\lambda$	Compliant with ITU-T G.957			nm
Average Output Power	$P_o$	-2	0	+3	dBm
Extinction Ratio	EXT	10	-	-	dB
Supply Current	$I_{CC}$	-	-	70	mA
Output Optical Eye	Compliant with IEEE802.3Z				
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
<b>RX Parameter</b>	<b>Symbol</b>	<b>Min</b>	<b>Typ</b>	<b>Max</b>	<b>Unit</b>
Data Rate	B	-	1250	-	Mb/s
Receive Sensitivity	$P_{min}$	-	-	-24	dBm
Maximum Input Power	$P_{MAX}$	-3	-	-	dBm
Signal Detection-Asserted	$P_{H-L}$	-35	-	-	dBm
Signal Detection-Deserted	$P_{L-H}$	-	-	-27	dBm
Operating Wavelength	$\lambda_c$	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

**Absolute Maximum Ratings (T<sub>C</sub>=25°C)**

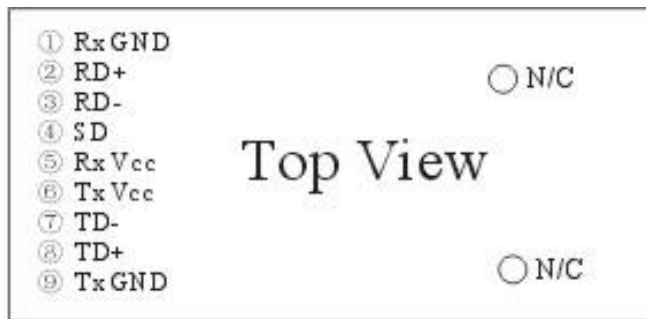
Parameter	Symbol	Min	Max	Unit
Storage Temperature	T <sub>ST</sub>	-40	+85	°C
Operating Temperature	T <sub>IP</sub>	0 (-40)	+70 (+85)	°C
Supply Voltage	V <sub>CC</sub>	0	+3.6	V
		0	+6	V
Input Voltage	V <sub>IN</sub>	0	V <sub>CC</sub>	V
RX Data Difference Input Voltage	±TX_DAT	0	2000	mV p-p
Soldering Temperature & Time	-		240/10	°C / S

**I Recommend Operation Environment:**

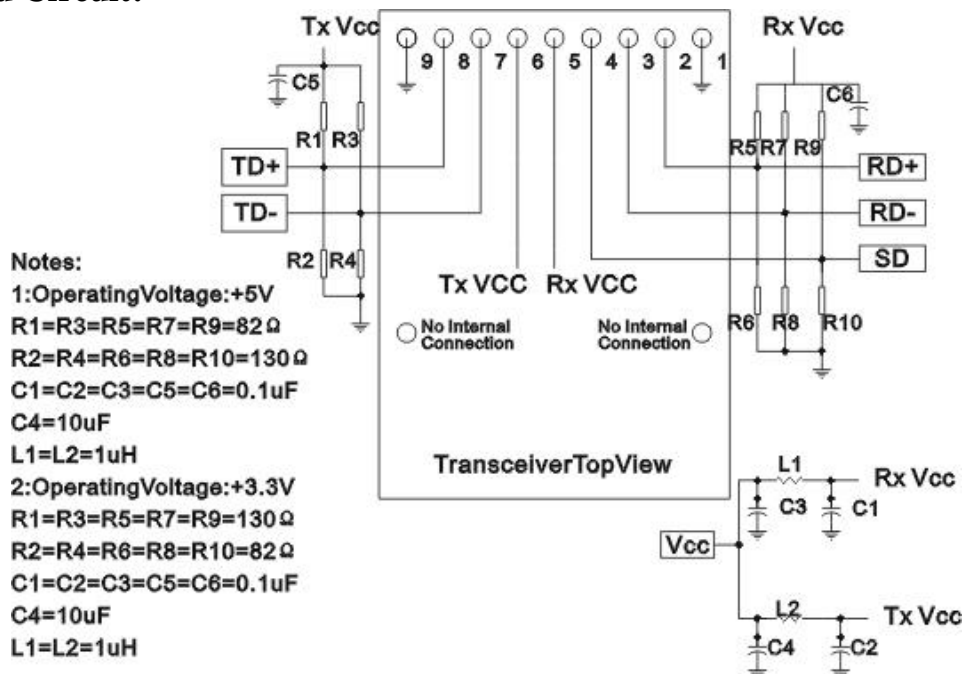
Parameter	Symbol	Min	Typ	Max	Unit
Supply Voltage	V <sub>CC</sub>	+3.1	3.3	+3.5	V
Supply Voltage	V <sub>CC</sub>	+4.75	5.0	+5.25	V
Operating Temperature	T <sub>IP</sub>	0 (-40)		+70 (+85)	°C

**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

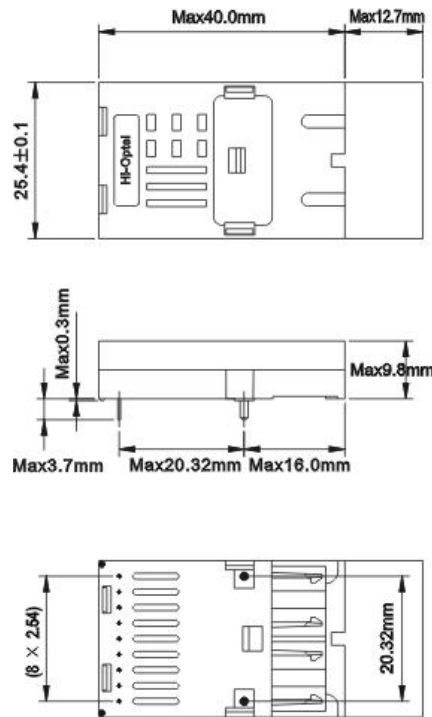


**Recommended Circuit:**



**Mechanical Dimensions:**

**SC Receptacle**



**Ordering Information:**

**GWTR - 24 - X X X - X 1 X X 2**

