



1 Features

- a. Dual single mode fibers with SC/FC/ST connector
- b. Single +5V/+3.3V Power Supply
- c. Up to 2.048Mbps with TTL signal for control

2 Applications

Industry control system
Telephone system
232/485 system



3 Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage Temperature	T _s	-40	+85	°C
Operating Temperature	T _{OP}	-20	+70	°C
Supply Voltage	V _{CC}	+4	+6	V
Voltage on Any Pin	V _{IN}	0	V _{CC}	V
Soldering Temperature ,Time	-		260°C, 10 S	°C,S

4 Recommended Operating Conditions

Parameter	Symbol	Min.	Typ	Max.	Unit
Ambient Temperature	T _{AMB}	-20	-	70	°C
Power Supply Voltage	V _{CC} -V _{EE}	4.75	5	5.25	V

5 Operating Conditions

5.1 Transmitter (T=25°C, V_{CC}=4.75~5.25V (+5V))

Parameter		Symbol	Min.	Typ	Max.	Unit
Center Wavelength		☒	1520	1550	1580	nm
			1280	1310	1340	
Spectral width		△☒	FP@RMS	2	4	nm
			DFB@-20dB FWHM	-	1	
Output Power	20km	Po(TX1310nmFP/RX1550)	-14	-	-7	dBm
		Po(TX1550nmFP/RX1310)	-14	-	-7	
	40km	Po(TX1310nmFP/RX1550)	-9	-	-4	
		Po(TX1550nmFP/RX1310)	-9	-	-4	
	60KM	Po(TX1550nmDFB/RX1310)	-8		-3	
	80km	Po(TX1550nmDFB/RX1310)	-5		0	
Extinction Ratio		ER	10		-	dB
Supply Current		I _{CC} T	-		100	mA
Data Input Voltage - Low		V _{IL}	0		0.8	V
Data Input Voltage - High		V _{IH} -V _{CC}	2		-	V

5.2 Receiver (T=25°C, Vcc=4.75~5.25V (+5V))

Parameter		Symbol	Min.	Typ	Max.	Unit
Wavelength Range		λ_c	1100		1610	nm
Sensitivity	20km	P_{MIN}	-	-	-22	dBm
	40/60/80km		-	-	-24	
MAX. Input Power (Saturation)		P_{MAX}	-3	-	-	
Signal Detect Assert		P_A	-	-	-32	
Signal Detect De-assert		P_D	-50	-	-	
Signal Detect Hysteresis		P_{HYS}	1	-	4	
Supply Current		I_{CCR}	-	-	120	mA
Data output Voltage - High		V_{OH}	2.4	-	-	V
Data output Voltage - Low		V_{OL}	0	-	0.8	
Signal Detect Voltage - High		V_{SDHC}	2.4	-	-	
Signal Detect Voltage - Low		V_{SDL}	0	-	0.8	
Cross talk		CRT	-	-	-45	dB

Notes:

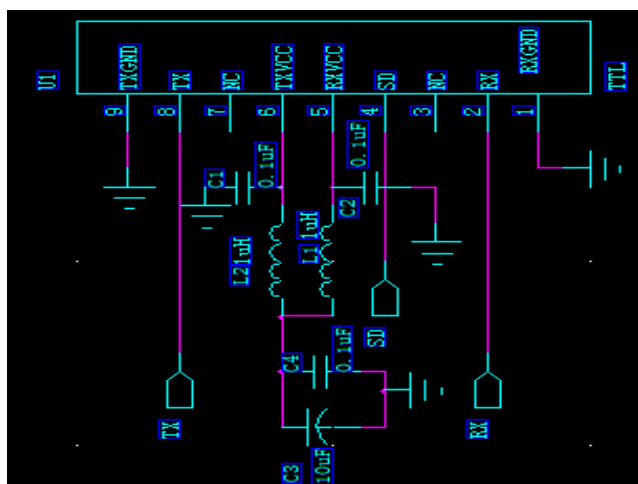
switch from a high state to a low state.

- 1) Value of output power and sensitivity can be customized according to the demand
- 2) An increase in optical power of data signal above the specified level will cause the Signal Detect to switch from a low state to a high state.
- 3) A decrease in optical power of data signal below the specified level will cause the Signal Detect to switch from a high state to a low state.

6 Pin Assignment

Pin	Descriptions	Pin	Descriptions
1	Rx VEER :Receiver GND	6	Tx VCCT : Transmitter VCC
2	Rx Data Out+ : Receiver Data Out(TTL)	7	N.C.
3	N.C.	8	Tx Data In+ :Transmitter Data Input(TTL)
4	SD :Signal Detect Status Flag(TTL)	9	Tx VEET : Transmitter GND
5	Rx VCCR: Receiver VCC		

7 Recommend Circuit



8 Ordering Information

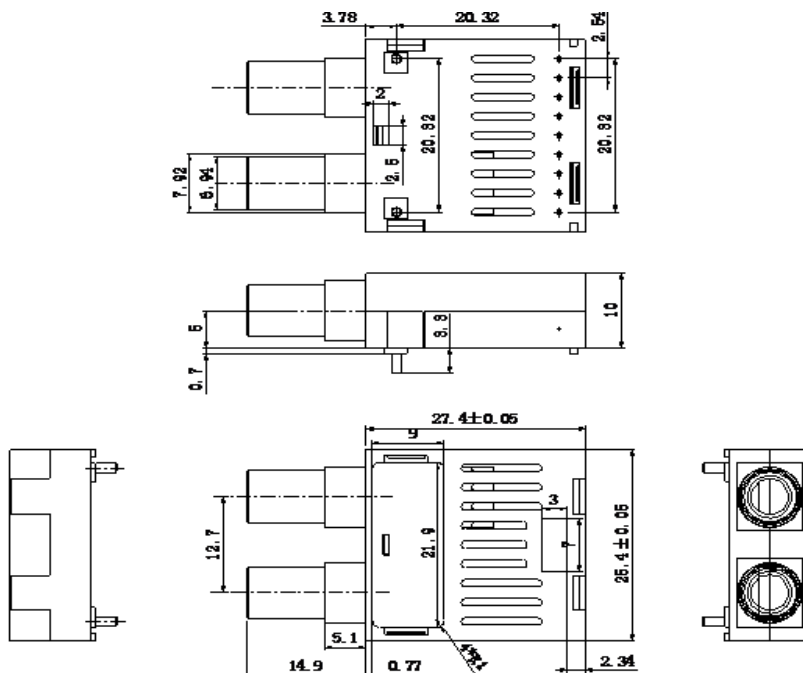
8.1 Example

DTR 3 00 -F 1 5 SC-20

Sign	Mean	Description					
DTR	Module type	DTR= Dual fibers transceiver receptacle			DTP= Dual fibers transceiver pigtail		
3	Center wave	3=1310nm		4=1490nm		5=1550nm	
00	Transmitter Rate	00=0~2M	01=52M	02=84m			
F	Laser type	F=FP		D=DFB		C=CWDM	V=VCSEL
1	Operating T	1=0~+70℃		2=-40~+85℃			
5	Voltage	3=3.3V DC		5=5V DC			
SC	Connector	SC=SC/UPC	SA=SC/APC	FC=FC	ST=ST		
20	Distance	022=220M		055=550M		5=5KM	10=10KM
		20=20KM		40=40KM		80=80KM	100=100KM

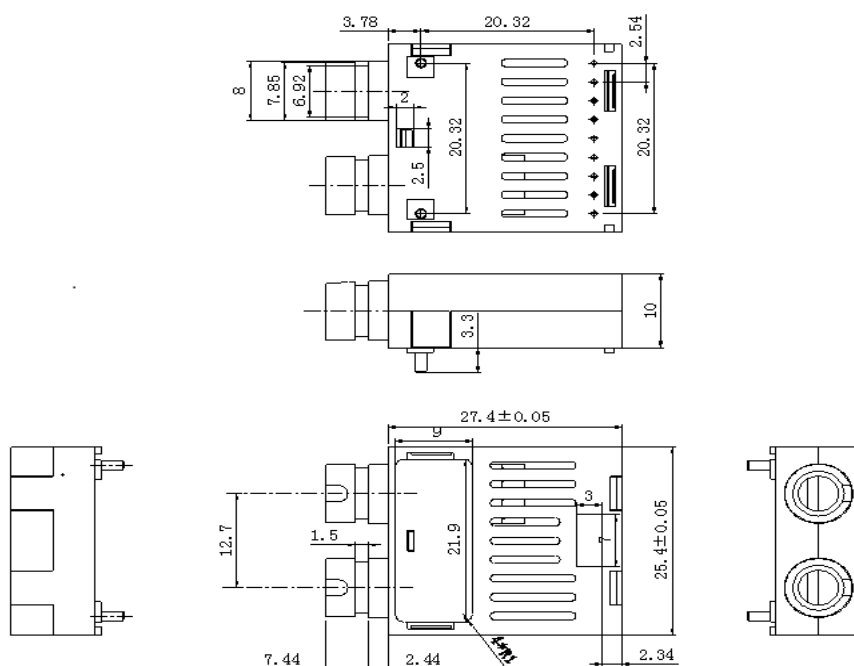
Part No.	Wavelength	Connector	Temp.	TX Power (dBm)	RX Sens (Max.) (dBm)	Distance
DTR300-F*-20	Tx1310FP/Rx xx	SC/FC/ST	-20 to 70	-14 to -7	-22	20km
DTR500-F*-20	Tx1550FP/Rx xx	SC/FC/ST	-20 to 70	-14 to -7	-22	20km
DTR300-F*-40	Tx1310FP/Rx xx	SC/FC/ST	-20 to 70	-9 to -4	-24	40km
DTR500-D*-60	Tx1550DFB/Rx xx	SC/FC/ST	-20 to 70	-8 to -3	-24	60km
DTR500-D*-80	Tx1550DFB/Rx xx	SC/FC/ST	-20 to 70	-5 to -0	-24	80km

8.2.1 ST connector

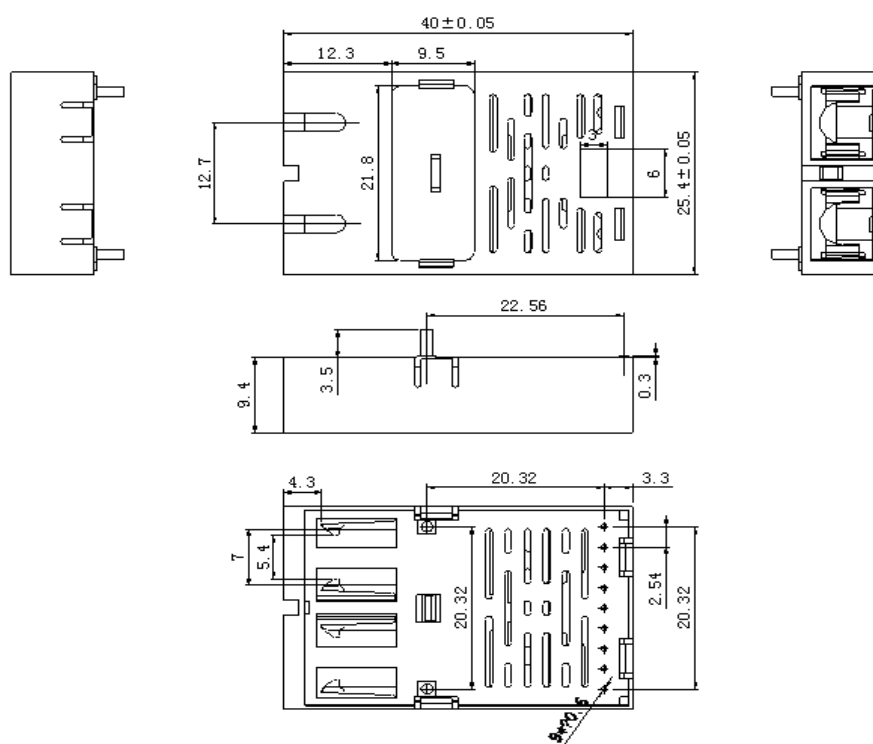




8.2.2 FC connector



8.2.3 SC connector



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