

OTC155-XXA25XCR

155M / OC-3 / STM-1 CWDM 1X9 Duplex SC/ST/FC Transceiver Module, 120km Reach

FEATURES

- Up to 120km over SMF
- Data-rate of 155Mbps operation
- Duplex SC/ST/FC Connector
- 8 Wavelength CWDM DFB Transmitter
- Differential PECL Inputs & Outputs
- Single 5V Power Supply
- PECL Signal Detection Output
- Industry Standard 1×9 Package
- Compatible with RoHS
- Operating case temperature: 0 to +70°C

**APPLICATIONS**

- ATM 155 Mbps Links
- SONET OC-3
- SDH STM-1
- Fast Ethernet 100 Mb/s Links
- Fiber media converters

DESCRIPTION

The Optcore OTC155-XXA25XCR CWDM 1X9 footprint fibre optical transceivers is a high performance and cost-effective module for serial optical data communication applications. It can be used to implement a range of Fast Ethernet, SDH and ATM (Asynchronous Transfer Mode) designs at the 155Mb rate. The CWDM 1X9 footprint fibre optical transceiver consists of a transmitter optical subassembly, a receiver optical subassembly and an electrical subassembly. It operate at the wavelength of CWDM Channel and complies with the industry standard 1x9 footprint. The 155M CWDM 1x9 fibre optical transceiver are Class 1 laser products comply with EN60825.

Absolute Maximum Ratings					
Parameter	Symbol	Min.	Max.	Units	Note
Storage Temperature	Ts	-40	85	°C	-
Power Supply Voltage	Vcc	-0.5	6	V	-
Soldering Temperature	-	-	260	°C	10 seconds on leads only

Input Voltage	V _{in}	GND	V _{cc}	V	-
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Recommended Operating Conditions					
Parameter	Symbol	Min.	Typ.	Max.	Units
Power Supply Voltage	V _{cc}	4.75	5.0	5.25	V
Operating Temperature	T _{op}	0	-	70	°C
Data Rate	-	-	155	-	Mbps
Power Supply Current	I _{cc}	-	150	300	mA

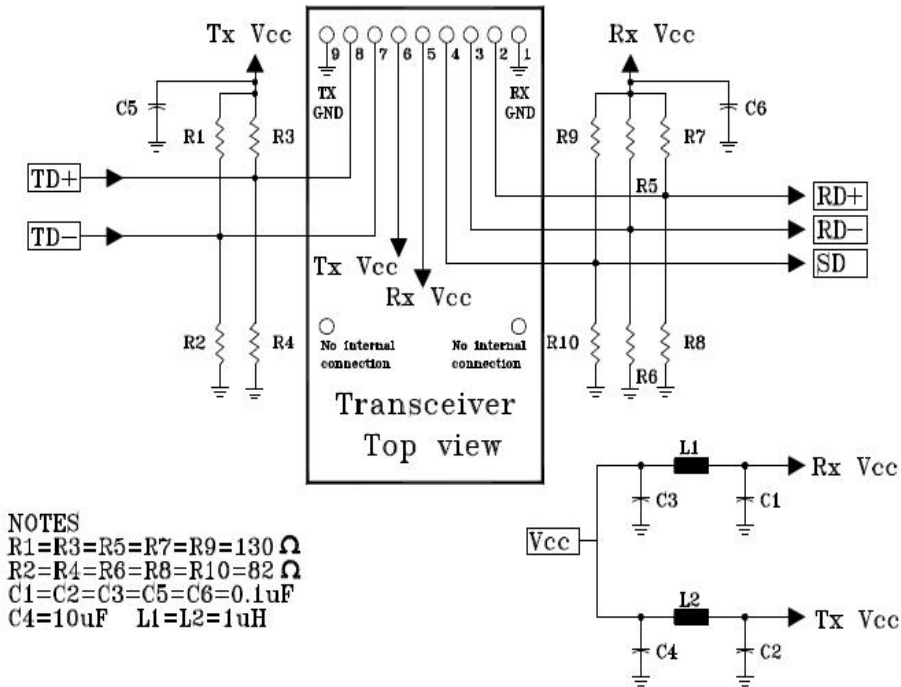
Transmitter Specifications (0°C < T _{op} < 70°C, 4.75V < V _{cc} < 5.25V)					
Parameter	Symbol	Min.	Typ.	Max.	Units
Optical					
Optical Transmit Power	P _o	0	-	5	dBm
Optical Center Wavelength	λ _c	λ-5.5	λ	λ+7.5	nm
Output Spectrum Width	Δλ	-	-	1	nm (-20dB Width)
Side Mode Suppression Ratio	SMSR	30	-	-	dB
Extinction Ratio	E _R	10	-	-	dB
Output Eye	Compliance with IEEE802.3z				
Optical Rise Time	t _r	-	-	2	ns
Optical Fall Time	t _f	-	-	2	ns
Electrical					
Differential Input Voltage	V _{IH} -V _{IL}	0.3	-	2.2	V
Common-mode Input Voltage	V _{COM} -V _{CC}	-1.38	-	-0.47	V
PECL Output Voltage-Low	V _{OL} -V _{CC}	-1.810	-	-1.620	V
PECL Output Voltage-High	V _{OH} -V _{CC}	-1.025	-	-0.880	V

Receiver Specifications (0°C < Top < 70°C, 4.75V < V_{CC} < 5.25V)					
Parameter	Symbol	Min.	Typ.	Max.	Units
Optical					
Sensitivity	Sen	-	-	-37	dBm
Maximum Input Power(Saturation)	P _{MAX}	-3	-	-	dBm
Signal Detect – Asserted	P _a	-	-	-37	dBm
Signal Detect – Deasserted	P _d	-45	-	-	dBm
Signal Detect – Hysteresis	P _{hys}	1	-	4	dB
Wavelength of Operation	λ	1100	-	1600	nm
Electrical					
Data Output Voltage – Low	V _{IL} –V _{CC}	-1.83	-	-1.555	V
Data Output Voltage – High	V _{IH} –V _{CC}	-1.085	-	-0.88	V
Signal Detect Output Voltage – Low	V _{SIL} –V _{CC}	-2.0	-	-1.58	V
Signal Detect Output Voltage – High	V _{SIH} –V _{CC}	-1.1	-	-0.74	V

Pin Assignment

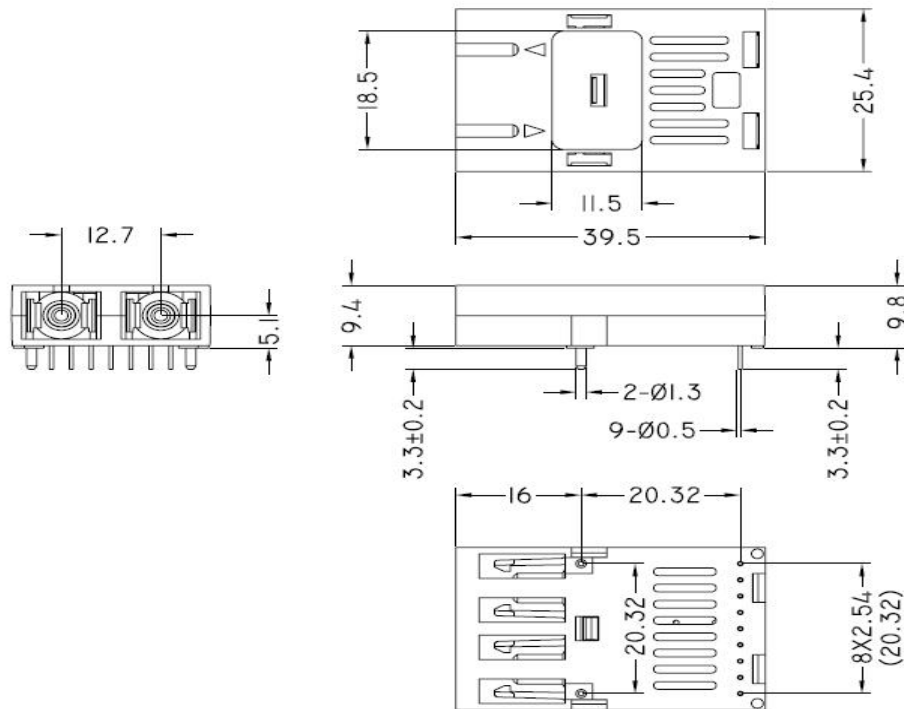
1 Receiver Signal Ground	
2 Receiver Data Out	O N.C.
3 Receiver Data Out Bar	
4 Signal Detect	
5 Receiver Power Supply	Top View
6 Transmitter Power Supply	
7 Transmitter Data In Bar	
8 Transmitter Data In	O N.C.
9 Transmitter Signal Ground	

Recommended Circuit

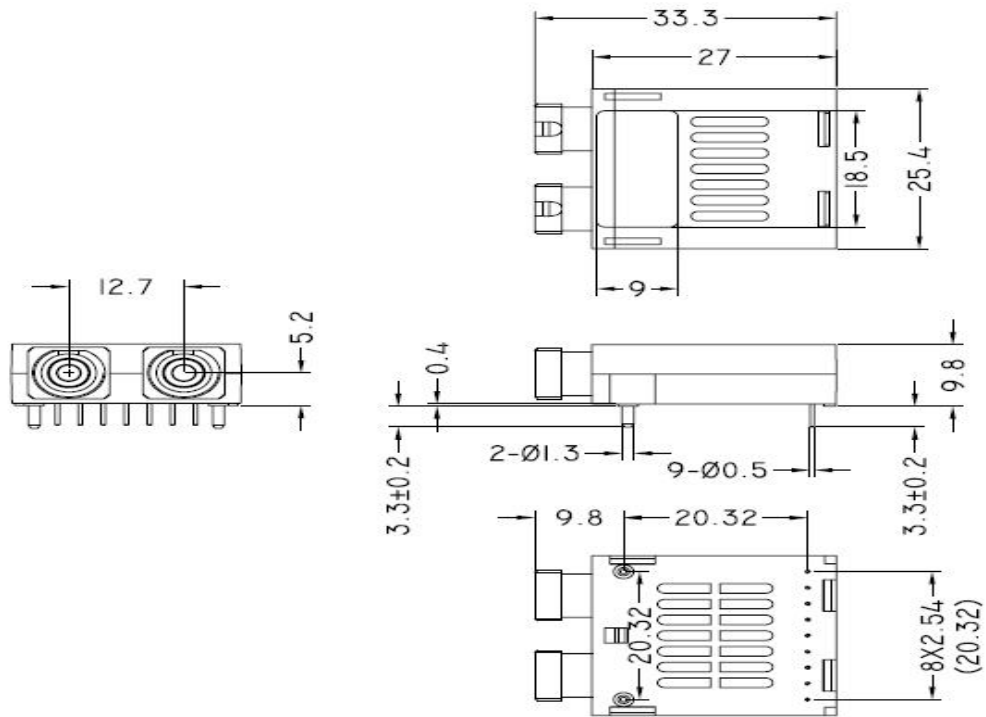


Mechanical Dimensions

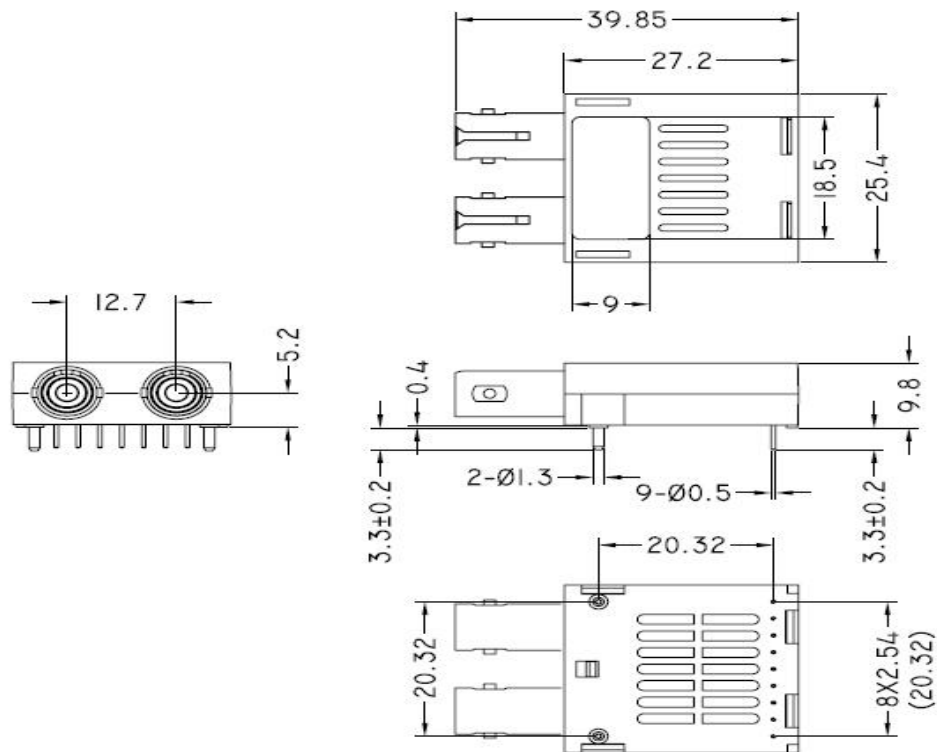
SC



FC



ST



Ordering information

Part number	Description
OTC155-47A25X ₁ CR	OC-3/STM-1/155M CWDM 1x9 Duplex SC/ST/FC Transceiver Module,1470nm, 120km
OTC155-49A25X ₁ CR	OC-3/STM-1/155M CWDM 1x9 Duplex SC/ST/FC Transceiver Module,1490nm, 120km
OTC155-51A25X ₁ CR	OC-3/STM-1/155M CWDM 1x9 Duplex SC/ST/FC Transceiver Module,1510nm, 120km
OTC155-53A25X ₁ CR	OC-3/STM-1/155M CWDM 1x9 Duplex SC/ST/FC Transceiver Module,1530nm, 120km
OTC155-55A25X ₁ CR	OC-3/STM-1/155M CWDM 1x9 Duplex SC/ST/FC Transceiver Module,1550nm, 120km
OTC155-57A25X ₁ CR	OC-3/STM-1/155M CWDM 1x9 Duplex SC/ST/FC Transceiver Module,1570nm, 120km
OTC155-59A25X ₁ CR	OC-3/STM-1/155M CWDM 1x9 Duplex SC/ST/FC Transceiver Module,1590nm, 120km
OTC155-61A25X ₁ CR	OC-3/STM-1/155M CWDM 1x9 Duplex SC/ST/FC Transceiver Module,1610nm, 120km

X₁ : Connector Type

X₁=S, SC Connector

X₁=T, ST Connector

X₁=F, FC Connector

Warnings

Handling Precautions: This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended. Follow guidelines according to proper ESD procedures.

Laser Safety: Radiation emitted by laser devices can be dangerous to human eyes. Avoid eye exposure to direct or indirect radiation.

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The information presented is subject to change without notice.

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