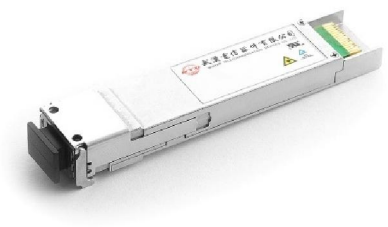
NGPON2 OLT Transceiver XFP Module β version



RTXM266-71x β version product is designed for OLT module based on NGPON2 technology with SOA. The product is an integrated module containing a micro-optic component and semiconductor material. The module could implement DDM function. It could be used at key locations in optical networks.

Features

- XFP package with SC receptacle optical interface compliant
- Hot-Pluggable
- 9.953Gbps downstream 9.953Gbps upstream
- +3.3V single power supply
- ROHS Compliant

Applications

- Optical transceiver for NGPON2 OLT

Standards

- ITU-T G.989
- MSA SFF-8077iv4.5

Specifications

Parameter	Symbol	Unit	Value		
			Min	typical	Max
Electrical Characteristics					
Supply Current	Icc	mA			1200
Differential Input Swing (note1)	-	mV	120		1000
Differential Output Swing (note2)	-	mV	400		1600
Optical transmitter Characteristics					
Launch Optical Power	Po	dBm	+5.5		+9
Center Frequency (note 3)	Fc	THz	187.5		187.8
Wavelength (note 4)	λ	nm	-0.16	λc	+0.16
Spectral Excursion		GHz			+/-20
Extinction Ratio -10G	EX	dB	8.2		
Spectral Width(@-20dB)	Δλ	nm			1
Side Mode Suppressing Ratio	SMSR	dB	30		
Eye Diagram	Complies with G.989.2				
Dispersion Penalty	-	dB			1.0
Pout @TX-Disable Asserted	Poff	dBm			-39
Optical receiver Characteristics					
Receiver Optical Wavelength (note5)	λIN	nm	-0.16	λc	+0.16
Receiver Sensitivity (note6)	S	dBm		-28.5	-26.5
Overload Input Optical Power	Pin	dBm	-7		
SD Assert		dB			-30
SD De-assert		dB	-45		
Receiver Settling Time		ns			400

1. AC coupled internally;
2. DC coupled internally;
3. Center Frequency is 187.5, 187.6, 187.7, 187.8 THz;
4. λc is 1598.89, 1598.04, 1597.19, 1596.34nm;
5. λc is 1535.04, 1534.25, 1533.47, 1532.68nm;
6. Measured with a PRBS 2^{31}-1 NRZ test pattern, @9.953Gb/s, EX=9dB, BER<10^{-3}.

Ordering Information

Part No	Specification								
	Package	Data rate	Laser	Power	Detector	Sensitivity	Temp	Reach	TX/RX wavelength (nm)
RTXM266-714	XFP SC	9.953/9.953	EML	+5.5~+9dBm	APD	< -26.5dBm	0~70℃	40km	1598.89/1535.04
RTXM266-713	XFP SC	9.953/9.953	EML	+5.5~+9dBm	APD	< -26.5dBm	0~70℃	40km	1598.04/1534.25
RTXM266-712	XFP SC	9.953/9.953	EML	+5.5~+9dBm	APD	< -26.5dBm	0~70℃	40km	1597.19/1533.47
RTXM266-711	XFP SC	9.953/9.953	EML	+5.5~+9dBm	APD	< -26.5dBm	0~70℃	40km	1596.34/1532.68

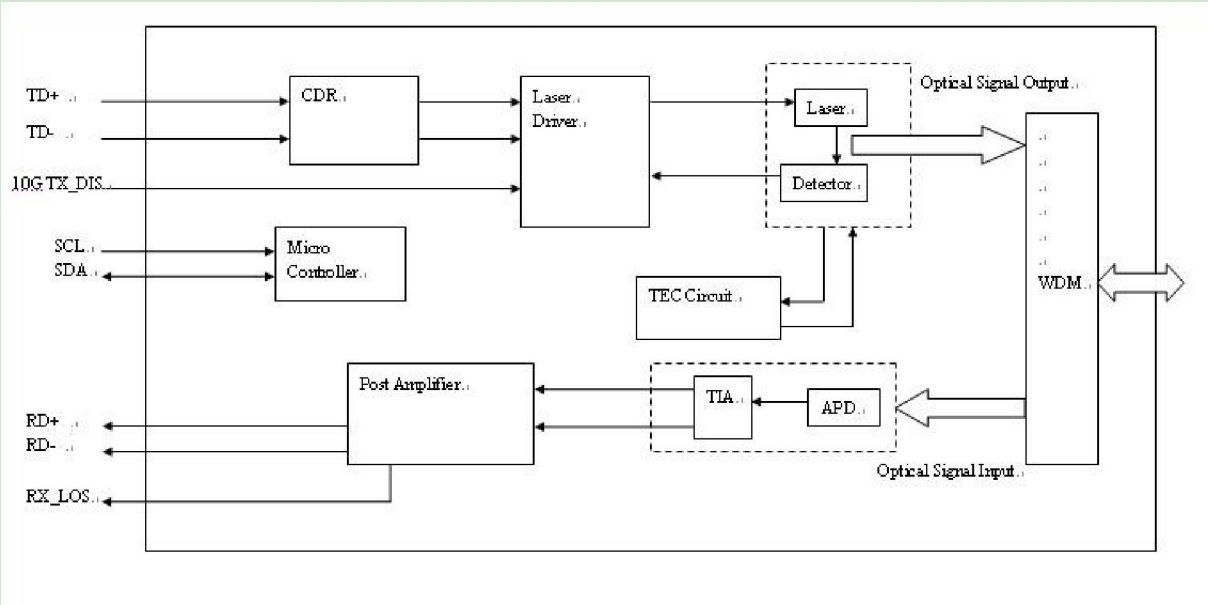
Absolute Maximum Ratings

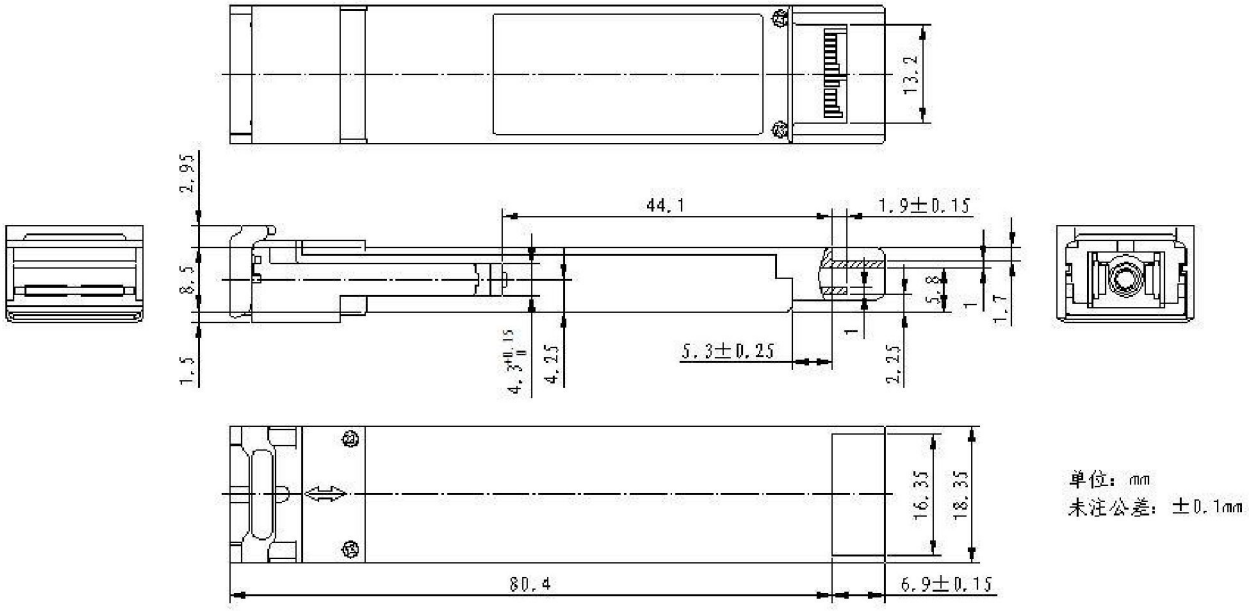
Parameter	Symbol	Unit	Min	Max
Storage Temperature Range	Ts	oC	-40	+85
Relative Humidity	RH	%	5	95
Power Supply Voltage	Vcc	V	0	+3.6

Recommended Operating Conditions

Parameter	Symbol	Unit	Min	Typ	Max
Operating Case Temperature Range	Tc	oC	0	-	70
Power Supply Voltage	Vcc	V	3.13	3.3	3.47
Power Consumption	P	W			4.5

Principle diagram





Regulatory Compliance

Feature	Test Method	Performance
RoHS	BS EN 1122: 2001 US EPA METHOD 3050B US EPA METHOD 3052 US EPA METHOD 3060A	Pb <1000ppm Cr6+ <1000ppm Hg <1000ppm PBB <1000ppm PBDE <1000ppm Cd <100ppm
Electrostatic Discharge (ESD) to the Electrical Pins	MIL-STD-883E Method 3015.7	Class 1 (>1.5kV) – Human Body Model
Electrostatic Discharge (ESD) Immunity	IEC61000-4-2	Class 2(>4.0kV)
Electromagnetic Interference (EMI)	CISPR22 ITE Class B FCC Class B CENELEC EN55022 VCCI Class 1	Compliant with standard
Immunity	IEC61000-4-3 Class 2	Typically show no measurable effect from a 3 V/m field swept from 80 to 1000MHz applied to the transceiver without a chassis enclosure.