

SFP MODULE SYSTEM PRODUCTS

1.25Gbps SFP Optical Transceiver, 550m-120km Reach



FEATURE

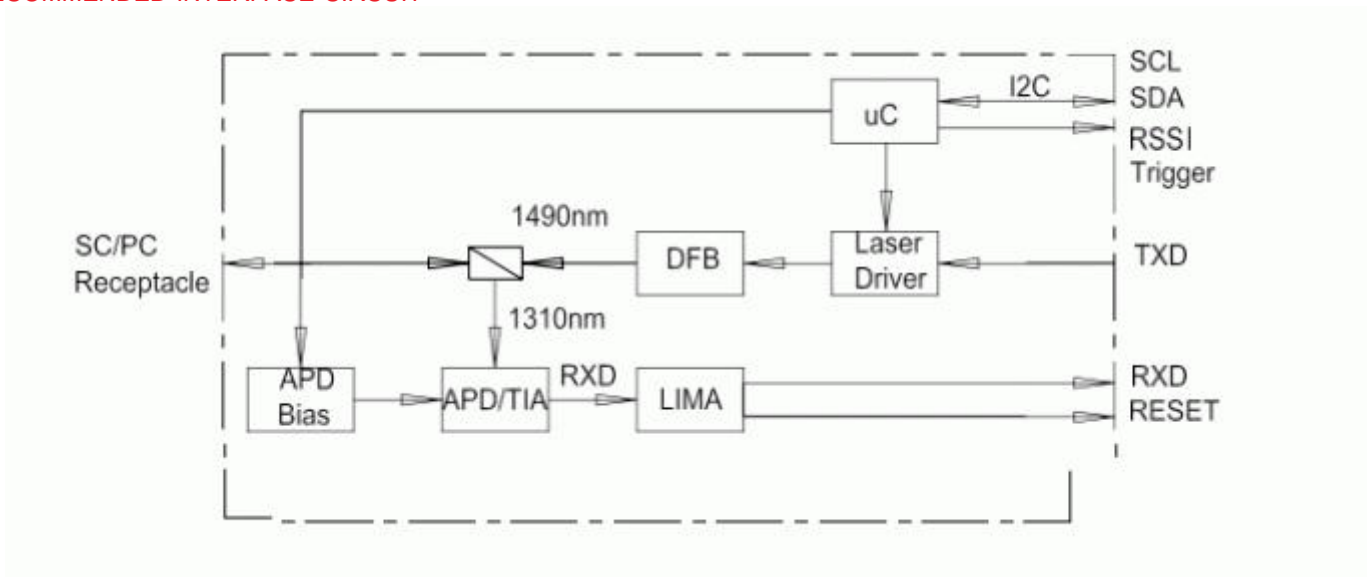
- 1 SFP with SC/PC Connector Transceiver
- 1490 nm DFB Tx with isolator
- 1310 nm APD Rx
- Digital diagnostics SFF-8472 Compliant
- 2488 Mbps continuous mode Transmission
- 1244 Mbps Burst mode receiver Data Rate
- RX Fast Burst Mode Detection
- Provide fast RSSI function
- Operation case temperature: 0~70°C or -40~85°C
- Class C+++ link budget
- Comply with ITU-T G984.2 Amendment 1
- Complies with RoHS directive (2002/95/EC)



APPLICATIONS

- GPON OLT Class C+++
- FTTx

RECOMMENDED INTERFACE CIRCUIT



RECOMMENDED OPERATING CONDITIONS

Parameter	Symbol	Min	Typical	Max	Unit
Storage Case Temperature	TSTC	-40		+85	°C
Operating Case Temperature	TC	0		+70	°C
Power Supply Voltage	Vcc	3.1		3.5	V
Power Supply Current	Icc			500	mA

TRANSMITTER CHARACTERISTICS

Parameter	Symbol	Min	Typical	Max	Unit
Optical Transmitter Power	P0	7		11	dBm
Optical Transmitter Power off	POFF			-39	dBm
Output Center Wavelength	λ	1480		1500	nm
Output Spectrum Width	$\Delta\lambda$			1.0	nm
Side Mode Suppression Ratio	SMSR	30			dB
Extinction Ratio	ER	9			dB
Optical Rise Time				160	ps
Optical Fall Time				160	ps
Optical Eye Diagram	Compliant with ITU-T G.984.2 Mask				
Tolerance to Tx Back Reflection		15			dB
Data Rate			2.488		Gb/s
Differential Input Voltage	VPP	300		1200	mV
Differential Input Impedance	ZIN	80	100	120	ohm
Tx_fault Output Voltage- High	VIH	2.4			V
Tx_fault Output Voltage- Low	VIL			0.4	V
Tx_Dis Input Voltage- High	VIH	2.0			V
Tx_Dis Input Voltage- Low	VIL			0.8	V

RECEIVER CHARACTERISTICS

Parameter	Symbol	Min	Typical	Max	Unit
Wavelength of Operation		1260		1360	nm
Data Rate			1.244		Gb/s
Sensitivity	Sen			-32	dBm
Saturation Optical Power	Set	-8			dBm
Burst Packet Detect sensitivity				-32	dBm
Receiver Reflectance				-12	dB
Receiver Burst-mode Dynamic Range		15			dB
Data Output Differential Swing		400		1600	mV
RSSI accuracy		-3		-3	dB
BPD Output Voltage- High	VIH	2.4			V
BPD Output Voltage- Low	VIL			0.4	V
Guard Time	TGUARD		32		bits
Rest Width	TRESET		16		bits
Reset-Low				0.8	V
Reset-High				Vcc	V
Receiver Amplitude Recovery Time	TRECOVERY		24	32	bits
Signal Detect De-Asset Time				12.8	ns

Signal Detect Assert Time			50	ns
Optical Signal During Time	TONT EN_DUR	300		ns
RSSI Trigger Delay	TC	0	3000	ns
RSSI Trigger Width	TW	300	TONT EN_DUR	ns

DIGITAL DIAGNOSTIC MONITORING ACCURACY

Parameter	Accuracy	Units	Notes
Transceiver Temperature	±3	°C	Temperature sensor
Power Supply Voltage	±3	%	Vcc=3.13~3.47V
TX Bias Current	±10	mA	
TX Optical Power	±3	dB	Average Power
Rx Power	±3	dB	

ORDER INFORMATION

PRODUCT	PART NUMBER
GPON SFP module	FO-SOGX4321-PSGB