

ROSA: P1RX-LX4

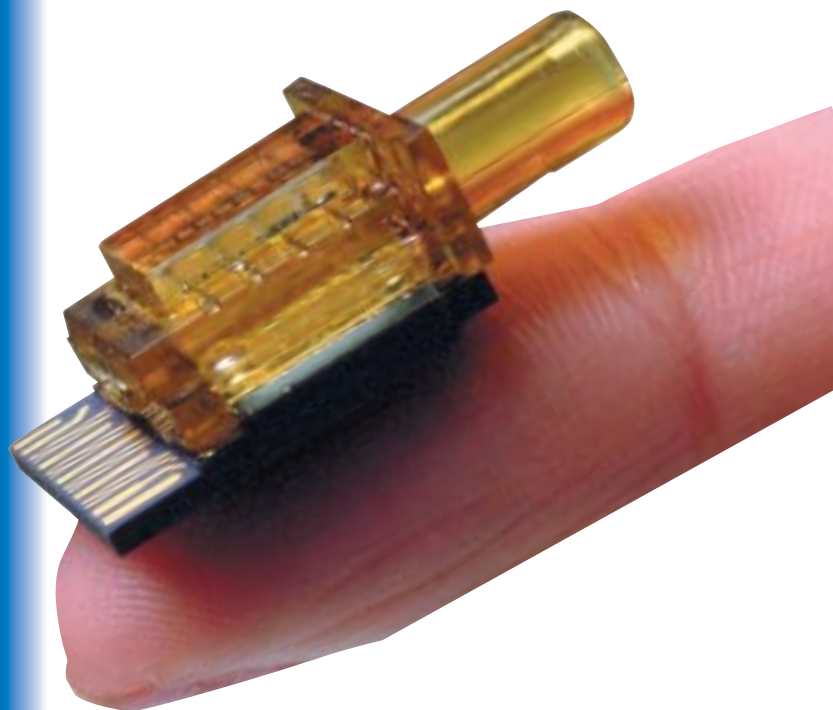
Coming soon TOSA: P1TX-LX4

The Afterburner LX4 is a protocol independent, CWDM-based optical subassembly (OSA), capable of receiving (Rx) (and soon Transmitting) 4 optical channels from one fiber.

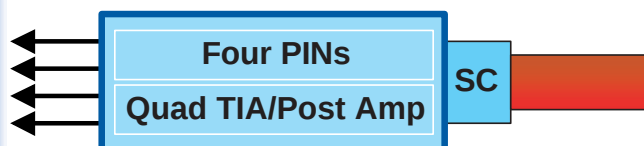
Features

- Fully integrated ROSA
- XENPAK & X2 compliant
- Scalable to XFP
- Hermetically sealed
- Integrated ferrule
- Optional RSSI & signal detect
- Optional space-saving integrated limiting Amp
- 4 channels on one fiber
- Data rate of 155Mbps up to 3.2Gbps
- Transmission distance of over 300m of 62.5 μ or 50 fiber at 3.125Gbps
- Pluggable design to enable more configuration options
- SC Optical Interface
- Can either aggregate data at a maximum rate of 12.5Gbps or operate as independent data channels
- Output signals are limited and 100 Ω differential

4 Channel CWDM Receive Optical Subassembly



Functional Blocks



Absolute Maximum Ratings

Parameter	Symbol	Min	Typ	Max	Units	Notes
Storage Temperature	Tst	-40		85	°C	1
3.3 Volt Supply	Vcc	-0.3		4	V	1
Relative Humidity	RH	8		80	%	3

Notes:

1. Stresses listed may be applied without causing damage. Functionality at or above the values listed is not implied. Exposure to these values for extended periods may affect reliability.
2. See outline drawing for measurement point (page 10).

Recommended Operating Conditions

Parameter	Symbol	Min	Typ	Max	Units	Notes
Data Rate	DR	0.1552		3.2	Gbps	
Run Length	RL			80	Bits	
Ceramic (substrate) Temperature	Ta	0		85	°C	
3.3 Volt Supply	Vcc-Vee	3.15		3.45	V	
3.3 Volt Supply Current	Icc		200	260	mA	

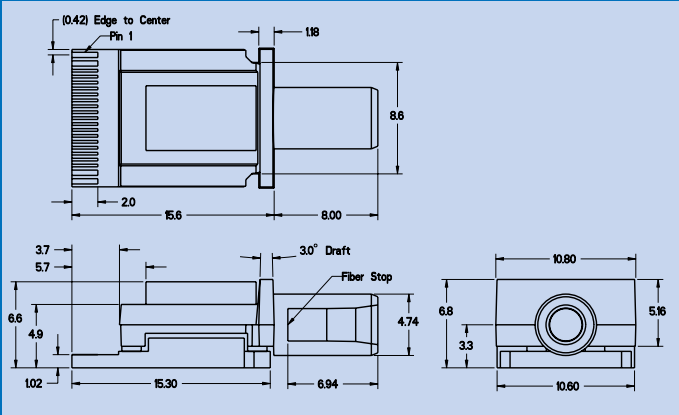
Parameter	Min	Typ	Max	Units
Wavelength Range	1269.0		1355.9	nm
Output Rise/Fall Times		70		ps
Output Impedance, Differential		100		Ω
Receive Differential Output Voltage				
-02TL	500	600	660	mVp-p
-02T/Tr	220	280	400	mVp-p
OMA Sensitivity (single-mode fiber)	-14.45	-17		dBm
OMA Sensitivity (multi-mode fiber)	-14.25	-17		dBm

	TIA	Limiting Amp	RSSI	Signal Detect
LX4T	●			
LX4TL	●	●	●	●
LXTR	●		●	

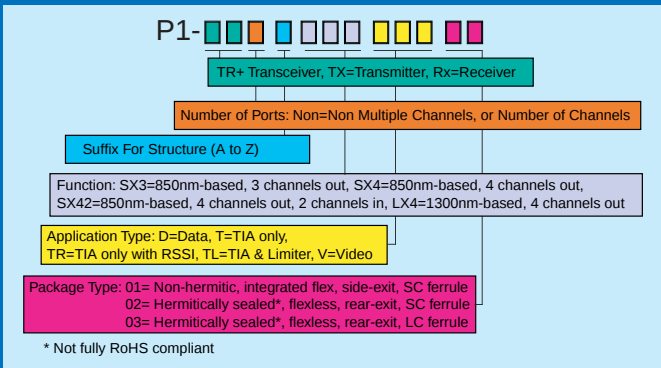
Pin Out

Pin	Signal	Description	Width (mm)	Center Position (mm)
1	VCC2	Limiting Amplifier and Output Driver Power Supply.	0.406	0.0
2	GND	Ground	0.406	0.660
3	SQUELCH	Leave unconnected or connect to 3.3V to activate squelch. Connect to GND to disable squelch.	0.203	1.219
4	OUT_0_N	Negative Data Output (1275nm)	0.203	1.676
5	OUT_0_P	Positive Data Output (1275nm)	0.203	2.134
6	IMON_0	L0 Current monitor. Connect 1kW Resistor to VCC1 to monitor current.	0.203	2.591
7	SD_0	Signal Detect for Lane 0	0.203	3.048
8	OUT_1_N	Negative Data Output (1300nm)	0.203	3.505
9	OUT_1_P	Positive Data Output (1300nm)	0.203	3.962
10	IMON_1	L1 Current monitor. Connect 1kW Resistor to VCC1 to monitor current	0.203	4.420
11	SD_1	Signal Detect for Lane 1	0.203	4.877
12	OUT_2_N	Negative Data Output (1325nm)	0.203	5.334
13	OUT_2_P	Positive Data Output (1325nm)	0.203	5.791
14	IMON_2	L2 Current monitor. Connect 1kW Resistor to VCC1 to monitor current.	0.203	6.248
15	SD_2	Signal Detect for Lane 2	0.203	6.706
16	OUT_3_N	Negative Data Output (1350nm)	0.203	7.163
17	OUT_3_P	Positive Data Output (1350nm)	0.203	7.620
18	IMON_3	L3 Current monitor. Connect 1kW Resistor to VCC1 to monitor current.	0.203	8.077
19	SD_3	Signal Detect for Lane 3	0.203	8.534
20	GND	Ground	0.406	9.093
21	VCC1	Transimpedance Amplifier Power Supply.	0.406	9.754

Mechanical Dimensions



Building A Part Number



* Not fully RoHS compliant

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