

## Data Sheet

# 10Gb/s DWDM X2 Ethernet Transceiver, 80km Hot Pluggable, Duplex SC, DWDM EML-LD, APD Receiver SM, PX2-0D71SF-XX

Issue: November 2010



### Features:

- XAUI Electrical Interface: 4 Lanes @ 3.125Gbit/s
- Hot Z-Pluggable
- SC-Duplex Optical Receptacle
- MDIO, DOM Support
- Uncooled DWDM EML-LD
- APD Receiver
- Operating Case Temperature: 0 to 70 °C
- Compliant to IEEE 802.3ae 10GBASE-ZR Application
- Compliant to X2 MSA
- Mechanical Footprint: 91mm L x 36mm W x 13.46\* H [\*Other heights available]
- RoHS Compliant Part



### Applications:

- 10 Gigabit Ethernet
- 80KM 10G Fiber Channel
- DWDM Networks

### Description

PeakOptical's PX2-0D71SF-XX is a hot pluggable in the Z-direction module that is usable in typical router line card applications, Storage, IP network and LAN and compliant to X2 MSA. The PX2-0D71SF-XX is a fully integrated 10.3Gbit/s optical transceiver module that consists of a 10.3Gbit/s optical transmitter and receiver, XAUI interface, Mux and Demux with clock and data recovery(CDR). This transceiver uses an uncooled direct modulation (DM) DWDM EML Laser Diode to achieve 80km over standard single mode fiber as 10GBASE-ZR of the IEEE 802.3ae.

### Specification:

#### Optical Characteristics: (Condition: $T_a = T_{op}$ )

Parameters	Symbols	Min.	Typ.	Max.	Unit
Center Wavelength (BOL)	$\lambda$	$\lambda-0.1$	$\lambda$	$\lambda+0.1$	nm
Center Wavelength (EOL)	$\lambda$	$\lambda-0.25$	$\lambda$	$\lambda+0.25$	nm
Signaling speed		-	10.3125	-	Gbit/s
Signaling speed variation from nominal		-100	-	+100	ppm
Optical modulation amplitude	OMA	-5.2	-	-	dBm
Optical Output Power	Pf	-1	-	+4	dBm
Side Mode Suppression Ratio	Sr	30	-	-	dB
Extinction Ratio	Er	3.5	-	-	dB
Off Transmit Power	Poff	-	-	-30	dBm
Optical Output turn-off Time	TTX-OFF	-	-	100	$\mu$ s
Receiver Sensitivity in OMA	OMArmin	-	-	-24	dBm
Receiver Overload	Rro	-	-	-9	dBm
Receiver Return Loss	RL	12	-	-	dB

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### Absolute Maximum Ratings:

Parameter	Symbol	Min.	Max.	Unit
Supply Voltage	VCC1	0	+5.5	V
Supply Voltage	VCC2	0	+3.6	V
Supply Voltage	VCC3	0	+1.5	V
Optical Receiver Input	PIMAX	-	+1.5	dBm
Case Temperature (Figure 1)	Tc	0	+70	°C
Storage Temperature	TSTR	-40	+85	°C

### Recommended Operating Environment:

Parameter	Symbol	Min.	Typical	Max.	Unit
Supply Voltage	VCC1	4.75	5	5.25	V
Supply Voltage	VCC2	3.135	3.3	3.465	V
Supply Voltage	VCC3	1.152	1.2	1.248	V
Case Temperature (Figure 1)	TC	0	25	70	°C

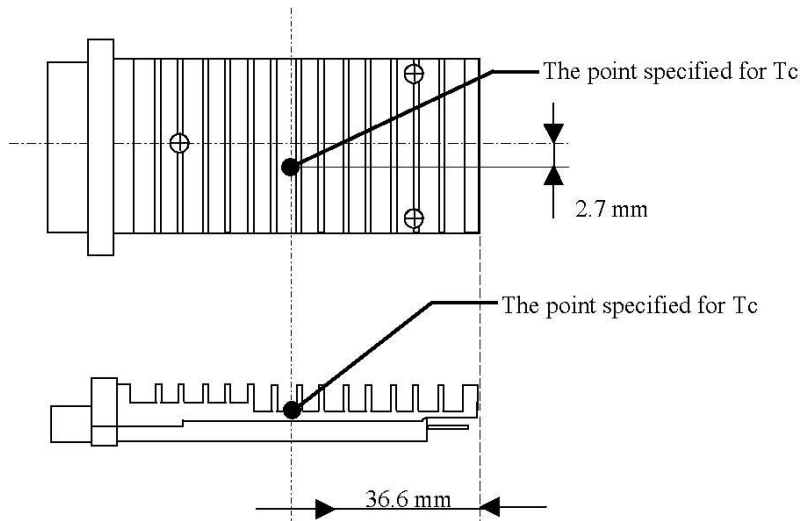


Figure 1 The Point Specified for Case Temperature (Tc)

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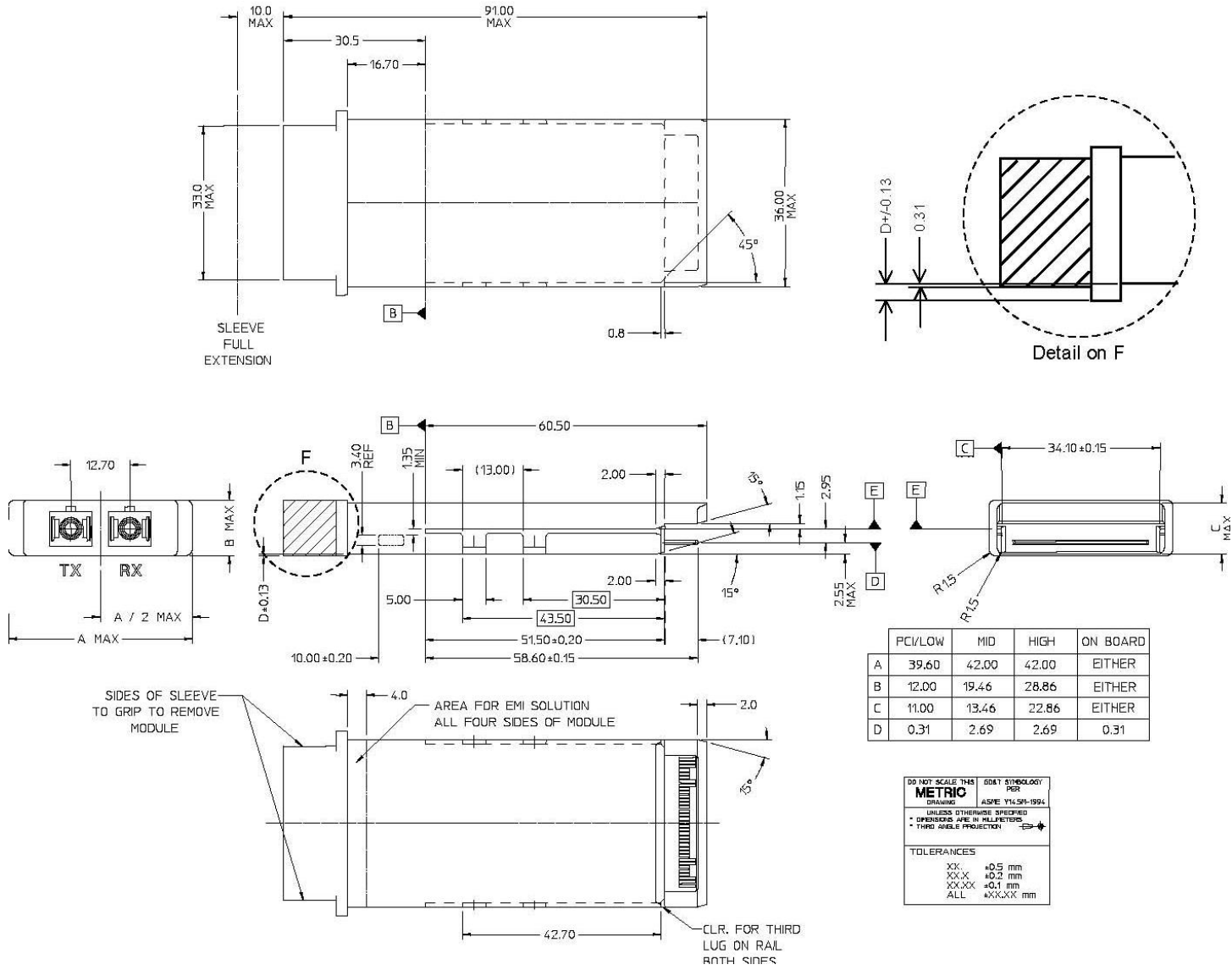
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## 10Gb/s DWDM X2 Ethernet Transceiver, 80km Hot Pluggable, Duplex SC, DWDM EML-LD, APD Receiver SM, PX2-0D71SF-XX

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### Mechanical Dimensions:



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**Ordering information: PX2-0D71SF-XX**  
**XX: 100GHZ ITU Grid Wavelength**

Part No.	Central Wavelength(nm)	Frequency (THZ)
PX2-0D71SF-61	1528.77	196.1
PX2-0D71SF-60	1529.55	196.0
PX2-0D71SF-59	1530.33	195.9
PX2-0D71SF-58	1531.12	195.8
PX2-0D71SF-57	1531.90	195.7
PX2-0D71SF-56	1532.68	195.6
PX2-0D71SF-55	1533.47	195.5
PX2-0D71SF-54	1534.25	195.4
PX2-0D71SF-53	1535.04	195.3
PX2-0D71SF-52	1535.82	195.2
PX2-0D71SF-51	1536.61	195.1
PX2-0D71SF-50	1537.40	195.0
PX2-0D71SF-49	1538.19	194.9
PX2-0D71SF-48	1538.98	194.8
PX2-0D71SF-47	1539.77	194.7
PX2-0D71SF-46	1540.56	194.6
PX2-0D71SF-45	1541.35	194.5
PX2-0D71SF-44	1542.14	194.4
PX2-0D71SF-43	1542.94	194.3
PX2-0D71SF-42	1543.73	194.2
PX2-0D71SF-41	1544.53	194.1
PX2-0D71SF-40	1545.32	194.0
PX2-0D71SF-39	1546.12	193.9
PX2-0D71SF-38	1546.92	193.8
PX2-0D71SF-37	1547.72	193.7
PX2-0D71SF-36	1548.51	193.6
PX2-0D71SF-35	1549.32	193.5
PX2-0D71SF-34	1550.12	193.4
PX2-0D71SF-33	1550.92	193.3
PX2-0D71SF-32	1551.72	193.2
PX2-0D71SF-31	1552.52	193.1
PX2-0D71SF-30	1553.33	193.0
PX2-0D71SF-29	1554.13	192.9
PX2-0D71SF-28	1554.94	192.8
PX2-0D71SF-27	1555.75	192.7
PX2-0D71SF-26	1556.55	192.6
PX2-0D71SF-25	1557.36	192.5
PX2-0D71SF-24	1558.17	192.4
PX2-0D71SF-23	1558.98	192.3
PX2-0D71SF-22	1559.79	192.2
PX2-0D71SF-21	1560.61	192.1
PX2-0D71SF-20	1561.42	192.0
PX2-0D71SF-19	1562.23	191.9
PX2-0D71SF-18	1563.05	191.8
PX2-0D71SF-17	1563.86	191.7