

## Data Sheet

# 10Gb CWDM X2 Ethernet Transceiver, 40km Hot Pluggable, Duplex SC, CWDM EML-LD, SM, PX2-1C71SF-XX

Issue: November 2010



### Features:

- XAUI Electrical Interface: 4 Lanes @ 3.125Gbit/s
- Hot Z-Pluggable
- SC-Duplex Optical Receptacle
- MDIO, DOM Support
- Uncooled CWDM EML-LD
- PIN Photo-detector
- Operating Case Temperature: 0 to 70 °C
- Compliant to IEEE 802.3ae 10GBASE-ER 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
- 40KM 10G Fiber Channel
- CWDM Networks

### Description

PeakOptical's PX2-1C71SF-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 PX2-1C71SF-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) CWDM EML Laser Diode to achieve 40km over standard single mode fiber as 10GBASE-ER of the IEEE 802.3ae.

### Specification:

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

Parameters	Symbols	Min.	Typ.	Max.	Unit
Optical Wavelength	$\lambda$	$\lambda-5.5$		$\lambda+7.5$	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	-	-	-16	dBm
Receiver Overload	Rro	+0.5	-	-	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

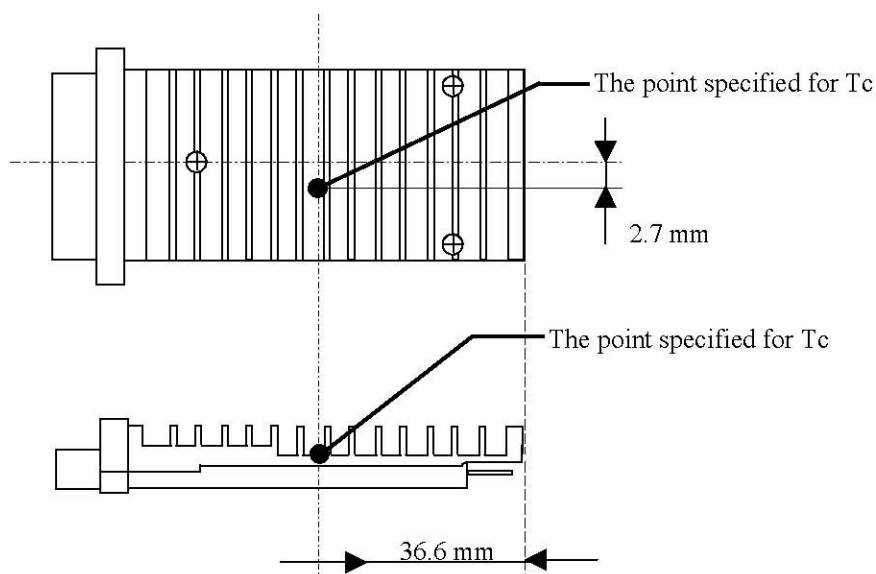


Figure 1 The Point Specified for Case Temperature (Tc)

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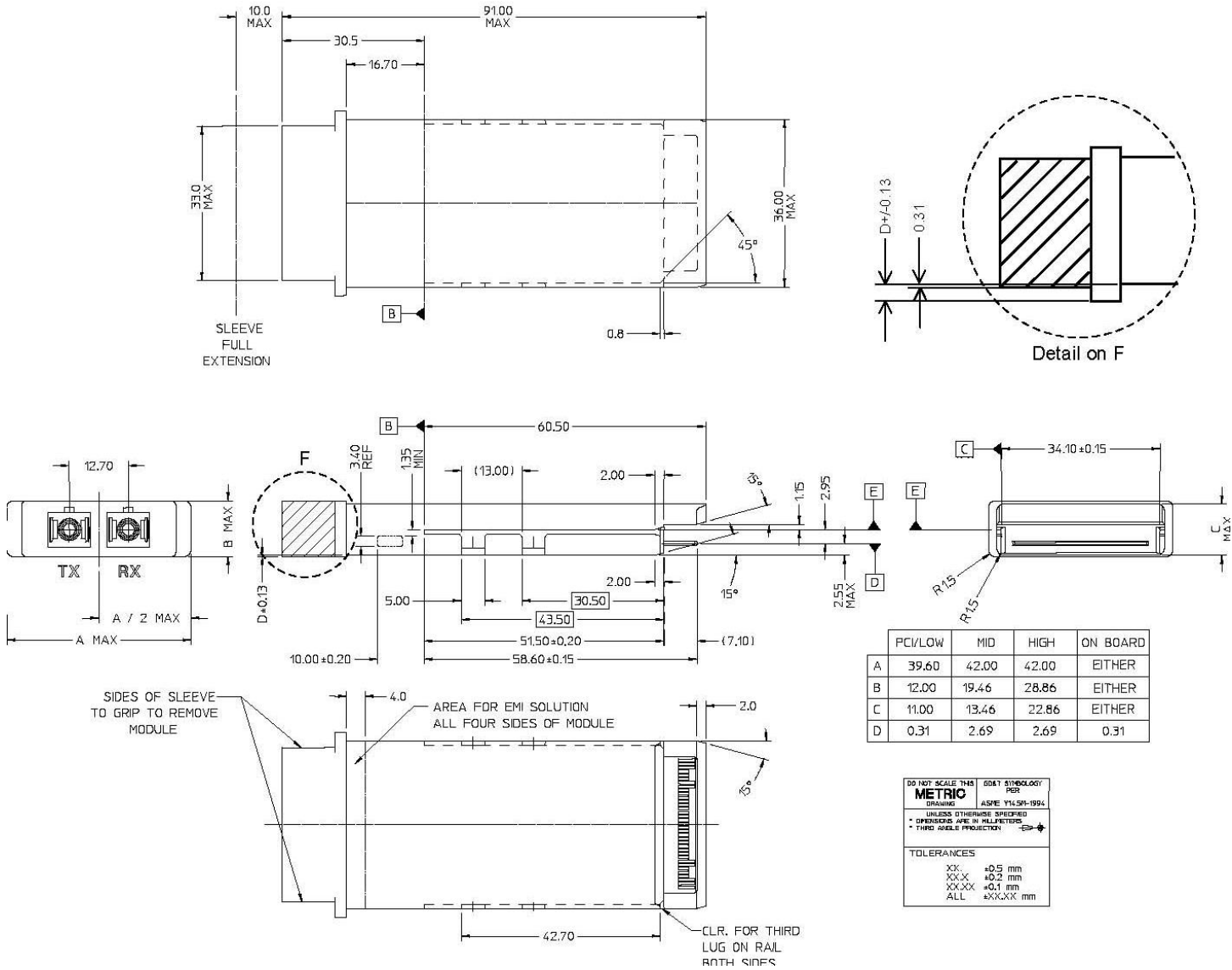
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### Mechanical Dimensions:



### Ordering information:

In the Part No. of **PX2-1C71SF-XX**, XX stands for wavelength, such as:

- 27: for 1270nm, 29: for 1290nm, 31: for 1310nm, 33: for 1330nm, 35: for 1350nm,
- 37: for 1370nm, 39: for 1390nm, 41: for 1410nm, 43: for 1430nm, 45: for 1450nm,
- 47: for 1470nm, 49: for 1490nm, 51: for 1510nm, 53: for 1530nm, 55: for 1550nm,
- 57: for 1570nm, 59: for 1590nm, 61: for 1610nm.

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