



## 10G LC XMD TOSA

### ***LDM3S510-405***

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#### Features

- *Xect modulated and uncooled operation at 1.3  $\mu\text{m}$  wavelength*
- *High-stability MQW DFB-LD*
- *Built-in InGaAsP monitor photodiode*
- *Coaxial LC TOSA package (5pin)*
- *Built-in optical isolator*
- *Up to 10 km*
- *RoHS compliant*

#### Application

- *Supports performance up to 10.7 Gb/sec bit rate*
- *10 Gigabit Ethernet*
- *LR1 SONET/ SDH OC-192/ STM-64*

#### Standards

- *Telcordia GR-468-core*
- *Generic Reliability Assurance Requirements for Optoelectronic Devices Used in Telecommunication Equipments.*

## Absolute Maximum Ratings

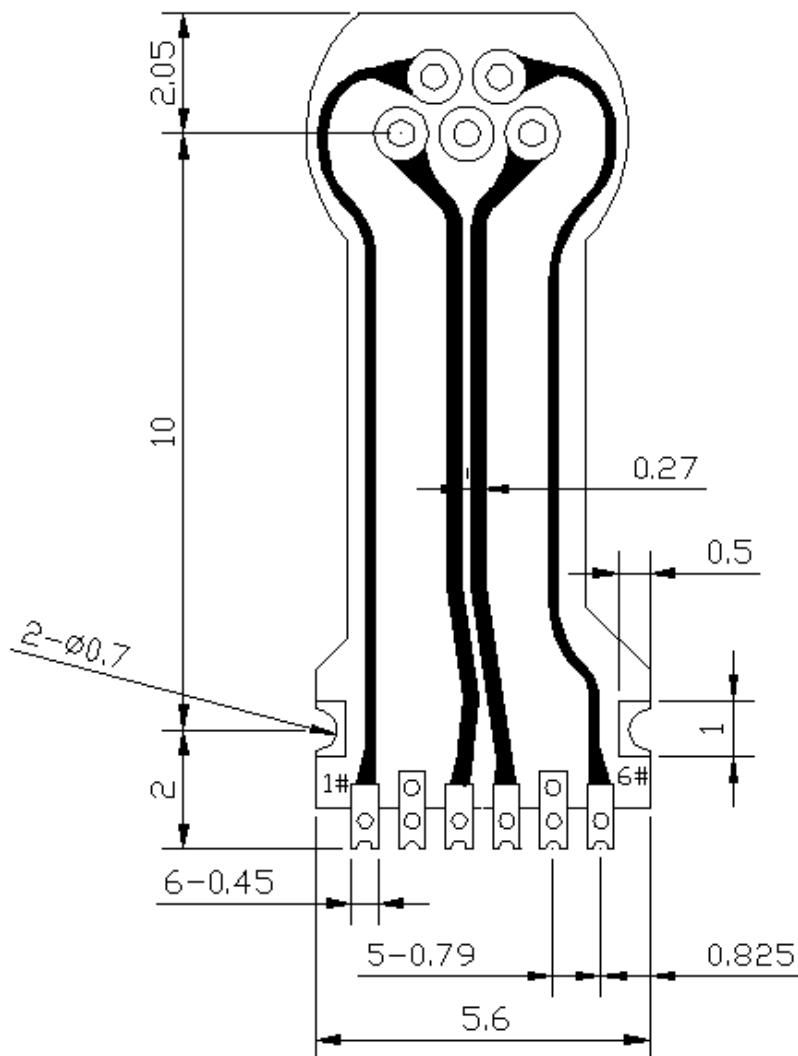
Parameter	Symbol	Unit	Min	Max
Optical output power	Pf	mW	-	4
Operating Temperature	Tc	°C	-25	85
Storage Temperature	Ts	°C	-40	85
Relative Humidity	RH	%	5	95
Laser Diode Reverse Voltage	VRL	V	-	2
Laser Diode Forward Current	IFL	mA	-	150
Monitor PD Reverse Voltage	VRPD	V	-	15
Monitor PD Current	IPD	mA	-	2
Lead Solder Temperature	-	°C	-	260
Lead Soldering Time	-	s	-	10

## Specifications (Tc=25 oC, unless otherwise noted)

Parameter	Symbol	Unit	Min	Type	Max	Condition
Electrical Characteristics						
Threshold Current	Ith	mA	-	10	15	CW
			-	-	40	CW, over temperature
Operating Current	Iop	mA	-	50	-	CW
Laser Forward Voltage	Vf	V	-	1.3	1.8	at Pf
Monitor Current	Im	uA	100	-	800	CW, IF=Ith+40mA, Vrd=5V
Monitor Dark Current	Id	uA	-	-	0.1	CW, Vrd=5V
Monitor Capacitance	Ct	pF	-	-	12	Vrd=5V, f=1MHz
Rise/Fall Time	Tr/Tf	ps	-	-	50	20-80%, IF=Ith+40mA
Optical Characteristics						
Optical Output Power	Po	dBm	-4	-2	-1	CW, IF=Ith+40mA, Note 1
Peak Wavelength	$\lambda_p$	nm	1295	1310	1325	CW
Side Mode Suppression Ratio	SMSR	dB	30	-	-	CW
Spectral Width	$\Delta\lambda$	nm	-	-	0.8	-20dB
Wavelength/Temperature Coefficient	$d\lambda/dT$	nm/C	-	0.09	-	over temperature
Optical Isolation	Iso	dB	30	-	-	
RIN	RIN	dB/Hz			-130	CW, at Pf
Bandwidth	BW	GHz	10			at -3dB
Tracking Error	TE	dB	-1	-	+1	Im=const(Pf=-2dBm)

**Note1:** Measured with SMF jumper fiber of 1m long

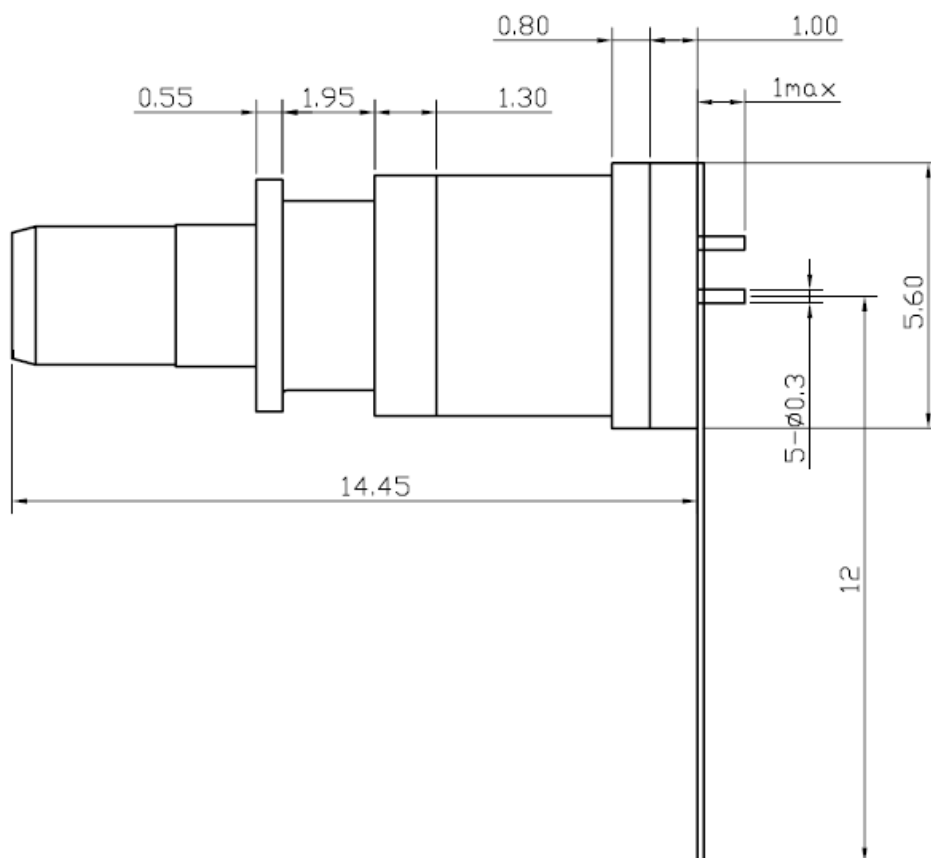
**Pin Description** (Unit: mm)



Bottom View

Pin#	Description
1	PD Cathode
2	Signal Ground
3	LD Cathode
4	LD Anode
5	Signal Ground
6	No User Connection

**Package Outline** (Unit:mm)



**Ordering Information**

Part No	Specification				
	Package	Datarate	Laser	Optical Power	Temp
LDM3S510-405	LC XMD TOSA	10Gb/s	1310nm DFB	-4~-1dBm	-25~85°C

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