



1310nm 1.25 GB/s FP LC TOSA

LDM3S502D-LC

Features

- *Data rate up to 1.25Gbit/s*
- *High performance FP LD*
- *Built-in InGaAs monitor photodiode*
- *High reliability*
- *Coaxial LC package (4pin)*
- *Industry-standard TO-56 packaged*

Application

- *SDH/SONET Transmission system up to 1.25Gb/s*
- *Gigabit Ethernet*
- *1Gbps fiber channel*
- *other applications*

Absolute Maximum Ratings

Parameter	Symbol	Unit	Min	Max
Storage Temperature Range	Ts	°C	-40	85
Relative Humidity	RH	%	-	85
Laser Diode Reverse Voltage	VRL	V	-	20
Laser Diode Forward Current	IFL	mA	-	150
Monitor Diode Reverse Voltage	VRD	V	-	20
Monitor Diode Forward Current	IFD	mA	-	10
Lead Solder Temperature	-	°C	-	350
Lead Soldering Time	-	s	-	3

Recommended Operating Conditions

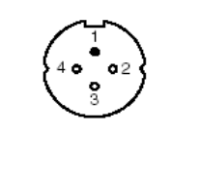
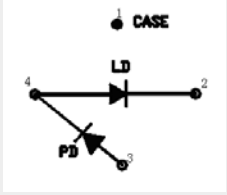
Parameter	Symbol	Unit	Min	Typ	Max
Case Operating Temperature Range	Tc	°C	-40	-	85
Operating Voltage	Vop	V	-	1.2	1.5

Specifications (Tc=25°C, unless otherwise noted)

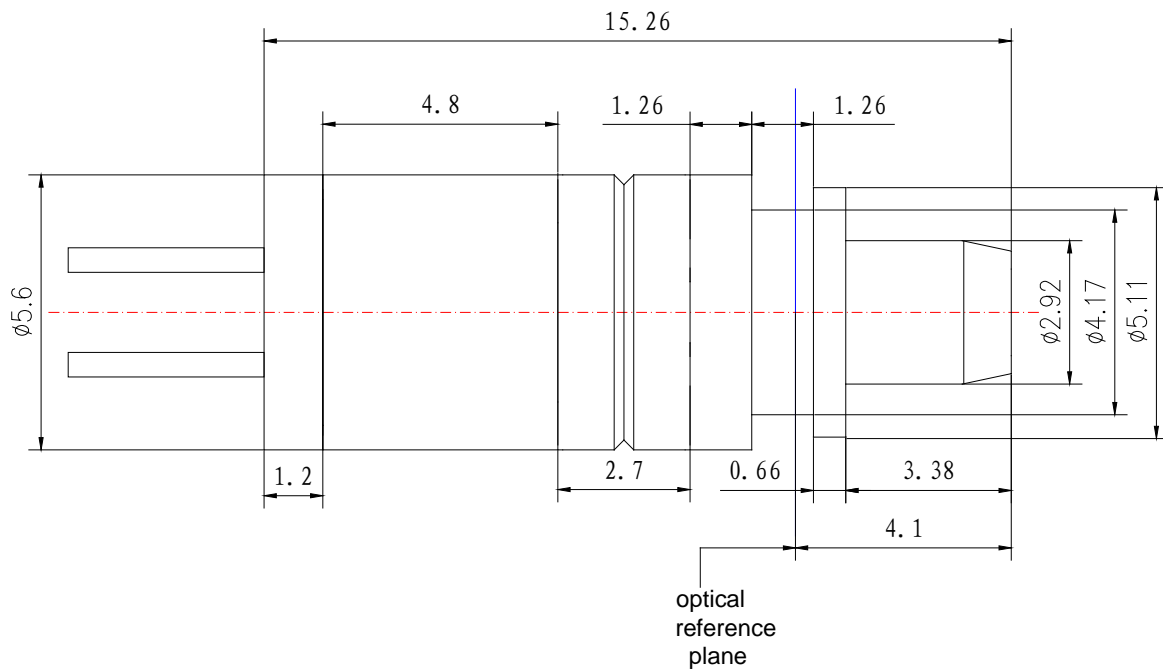
Parameter	Symbol	Unit	Min	Typ	Max	Test condition
Electrical Characteristics						
Forward Voltage	Vop	V	-	1.2	1.5	CW, If = Ith+20mA
Threshold Current	Ith	V	-	10	15	CW
			-	-	28	CW, Tc=-40 to 85°C
Rise/Fall Time	Tr/f	ns	-	0.15	0.3	Ib=Ith; 10%~90%
Monitor Current	Im	μA	40	-	400	CW, Pop=0.1mW
Monitor Dark Current	Id	nA	-	0.1	10	CW,VRD=5V
			-	-	500	CW,VRD=5V, Tc=-40 to 85 °C
Series resistor	Rs	Ohm	-	-	12	
Optical Characteristics						
Optical Output Power	Po	mW	0.15	-	0.5	CW,If = Ith+20mA
Slope Efficiency	ηd	mW/mA	0.007	-	0.03	CW
Temperature Dependence of Differential Efficiency	Δηd	dB	-3.0	-1.2	-	$\Delta\eta_d = 10\log\frac{\eta_d(@85^\circ C)}{\eta_d(@25^\circ C)}$ Tc=-40 to 85 oC
Central Wavelength	λc	nm	1290	1310	1330	CW
			1270	-	1345	CW, Tc=-40 to 85 °C
Spectral Width	Δλ	nm	-	-	2.5	CW, RMS
Tracking Error	ΔPf	dB	-1.5	-	+1.5	CW, Tc=-40 to 85 °C Im=const@Pf(If=30mA,Tc=25 °C)

Monitor PD Capacitance	C	pF	-	-	10	VRD=5V, f=1MHz
Connector Repeatability	-	dB	-	-	±1	Same plug orientation, same fiber, 10 times plug, CW

Pin Description

Pin	Description	Bottom View	PIN CONNECTIONS
1	CASE		
2	LD (N)		
3	Detector (P)		
4	LD (P) / Detector (N)		

Package Outline *(Unit: mm)*



Ordering Information

Part No.	Specification					
	Package	Datarate	Laser	Optical Power	Temp	Others
LDM3S502D-LC*	LC TOSA	1.25G	1310nm FP	0.15~0.5mW	-40~85°C	Common Anode

*: The product marked with * is not available at present.

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