

1310nm 1.25 Gb/s FP LC TOSA

LDM3S508-LC-1

Features

- *Data rate up to 1.25Gbit/s*
- *High reliability FP laser diode*
- *Built-in InGaAs monitor photodiode*
- *Coaxial 4pin LC package*
- *Operating temperature range -20~ +85 °C*

Applications

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

Standards

- *STM-1 optical interface ITU-T Recommendation G.957)*
- *STM-4 optical interface ITU-T Recommendation G.957)*

Absolute Maximum Ratings

Parameter	Symbol	Unit	Min	Max
Case Operating Temperature Range	T_c	$^{\circ}\text{C}$	-20	85
Storage Temperature Range	T_s	$^{\circ}\text{C}$	-40	85
Relative Humidity	RH	%	-	85
Laser Diode Reverse Voltage	V_{RL}	V	-	2
Laser Diode Forward Current	I_{FL}	mA	-	100
Monitor Diode Reverse Voltage	V_{RD}	V	-	15
Monitor Diode Forward Current	I_{FD}	mA	-	2
Lead Solder Temperature	-	$^{\circ}\text{C}$	-	260
Lead Soldering Time	-	s	-	10

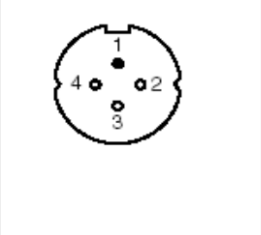
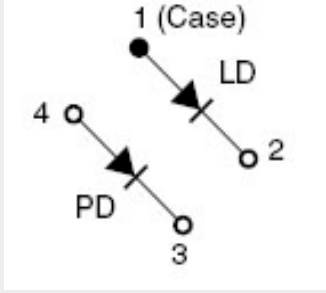
Recommended Operating Conditions

Parameter	Symbol	Unit	Min	Typ	Max
Case Operating Temperature Range	T_c	$^{\circ}\text{C}$	-40	-	85
Operating Voltage	V_{op}	V	-	1.2	1.5

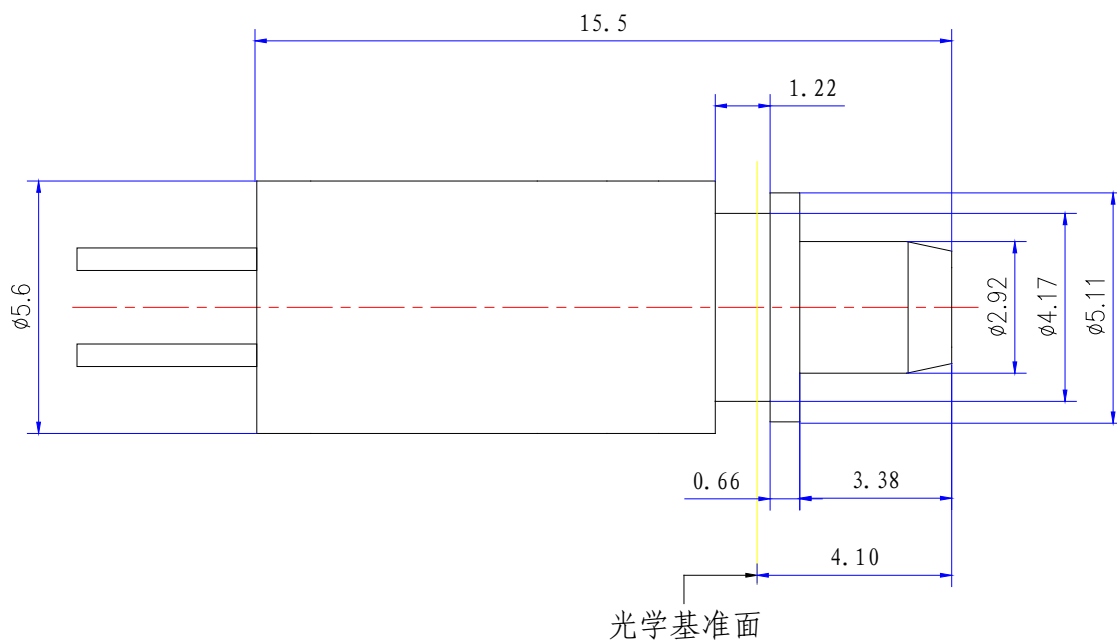
Specifications ($T_c=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbol	Unit	Min	Typ	Max	Test condition
Electrical Characteristics						
Operating Voltage	V_{op}	V	-	1.2	1.5	CW, $I_f = I_{th} + 20\text{mA}$
Threshold Current	I_{th}	mA	-	-	25	CW
			-	-	40	CW, $T_c = -40$ to 85°C
Rise/Fall Time	$T_{r/f}$	ns	-	-	0.5	$I_b = I_{th}$; 20%~80%
Monitor Current	I_m	μA	400	-	1000	CW, $I_f = I_{th} + 20\text{mA}$
Monitor Dark Current	I_d	nA	-	-	5	CW, $V_{RD} = 5\text{V}$
			-	-	10	CW, $V_{RD} = 5\text{V}$, $T_c = -40$ to 85°C
Series resistor	R_s	Ohm	-	-	12	
Optical Characteristics						
Optical Output Power	P_o	mW	0.15	-	0.7	CW, $I_f = I_{th} + 20\text{mA}$
Slope Efficiency	Se	mW/mA	0.007	-	0.035	CW
Central Wavelength	λ_c	nm	1285	1310	1325	CW
			1270	-	1345	CW, $T_c = -40$ to 85°C
Spectral Width	$\Delta\lambda$	nm	-	-	5	CW, RMS
Tracking Error	ΔP_f	dB	-1.5	-	+1.5	CW, $T_c = -40$ to 85°C $I_m = \text{const}@P_f(I_f = 30\text{mA}, T_c = 25^{\circ}\text{C})$
Monitor PD Capacitance	C	pF	-	-	10	$V_{RD} = 5\text{V}$, $f = 1\text{MHz}$
Connector Repeatability	-	dB	-	± 0.5	± 1	Same plug orientation, same fiber, 10 times plug, CW

Pin Descriptions

Pin	Description	Bottom View	Pin Connections
1	LD (P)		
2	LD (N)		
3	Detector (N)		
4	Detector (P)		

Package Outline *(Unit: mm)*



Ordering Information

Part No.	Specification					
	Package	Datarate	Laser	Optical Power	Temp	Others
LDM3S508-LC-1	LC TOSA	1.25G	1310nm FP	0.5mW	-20~+85 °C	

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

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Edition 2009-12-01

Published by Wuhan Telecommunication Devices Co.,Ltd.

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