

1310nm 622Mb/s FP LC TOSA

LDM3S508-007

Features

- *Data rate up to 622Mbit/s*
- *High performance FP LD*
- *Built-in InGaAs monitor photodiode*
- *(4-PIN) Coaxial LC package*
- *Industry-standard TO-56 packaged*

Applications

- *SDH/SONET Transmission system up to 622Mbps*
- *Gigabit Ethernet*
- *622Mbps fiber channel*
- *Other applications*

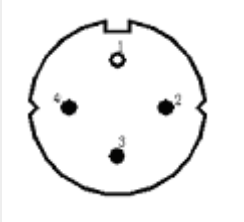
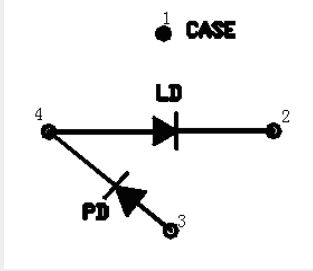
Absolute Maximum Ratings

| Parameter | Symbol | Unit | Min | Max |
|-------------------------------|-----------------|------|-----|-----|
| Storage Temperature Range | T _s | °C | -40 | 85 |
| Relative Humidity | RH | % | - | 85 |
| Laser Diode Reverse Voltage | V _{RL} | V | - | 2 |
| Laser Diode Forward Current | I _{FL} | mA | - | 150 |
| Monitor Diode Reverse Voltage | V _{RD} | V | - | 20 |
| Monitor Diode Forward Current | I _{FD} | mA | - | 10 |
| Lead Solder Temperature | - | °C | - | 350 |
| Lead Soldering Time | - | s | - | 3 |

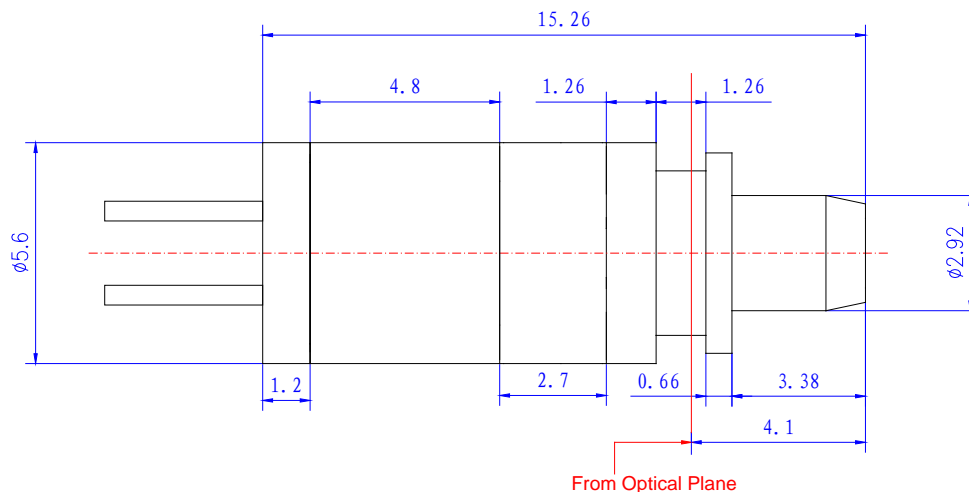
Specifications (T=25 °C, unless otherwise noted)

| Parameter | Symbol | Unit | Min | Typ | Max | Test condition |
|---------------------------------------------------|------------------|-------|------|------|-------|-----------------------------------------------------------------------------------------------------------------------|
| Electrical Characteristics | | | | | | |
| Threshold Current | I _{th} | V | - | 10 | 14 | CW |
| | | | - | - | 28 | CW, T _c =-40 to 85°C |
| Forward Voltage | V _{op} | V | - | 1.2 | 1.5 | CW, I _f =I _{th} +20mA |
| Rise/Fall Time | T _{r/f} | ns | - | 0.15 | 0.3 | I _b =I _{th} , 10%~90% |
| Monitor Current | I _m | μA | 200 | - | 1000 | CW, V _{RD} =5V |
| Monitor Dark Current | I _d | nA | - | 0.1 | 10 | CW, V _{RD} =5V |
| | | | - | - | 500 | CW, V _{RD} =5V, T _c =-40 to 85 °C |
| Series resistor | R _s | Ohm | - | - | 12 | |
| Optical Characteristics | | | | | | |
| Optical Output Power | P _o | mW | 0.8 | - | 1.5 | CW, I _f =I _{th} +20mA |
| Slope Efficiency | η _d | mW/mA | 0.04 | - | 0.075 | CW |
| Temperature Dependence of Differential Efficiency | Δη _d | dB | -3.0 | -1.2 | - | $\Delta\eta_d = 10 \log \frac{\eta_d(@ 85^\circ\text{C})}{\eta_d(@ 25^\circ\text{C})}$ T _c =-40 to 85 °C |
| Central Wavelength | λ _c | nm | 1295 | 1310 | 1330 | CW |
| | | | 1274 | - | 1356 | CW, over temperature |
| Spectral Width(RMS) | Δλ | nm | - | - | 2.5 | CW |
| Tracking Error | ΔPf/Pf | dB | -1.5 | - | +1.5 | I _m =const. (@P _f (I _f =30mA, T _c =25 °C) T _c =-40 to 85 °C |
| Monitor PD Capacitance | C | pF | - | 6 | 20 | V _{RD} =5V, f=1MHz |
| Connector Repeatability | - | dB | -0.5 | - | +0.5 | Same plug orientation, same fiber, 10 times plug, CW |

Pin Descriptions

| 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 | Detector | Sensitivity | Temp | Others |
| LDM3S508-007 | LC TOSA | 622Mbps | 1310nm FP | 0.8~1.5mW | - | - | --40~85°C | Common Anode ; Case Floating |

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

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