

Datasheet SFP module 100-32MM

100-32MM - 1G SFP Optical module MM LC 850nm, 550m, DDM

The 100-32MM is the high performance and cost-effective module for optical data communication applications specified for multi modes of 1Gb/s. It operates with +3.3V power supply. The module is intended for multi-mode fiber, operates at a nominal wavelength of 850nm and complies with Multi-Source Agreement (MSA) Small Form Factor Pluggable (SFP). Each module consists of a transmitter optical subassembly, a receiver optical subassembly and an electrical subassembly. All of them are housed in a metal package and the combination produces a reliable component.

The module is a duplex LC connector transceiver designed for use in Gigabit Ethernet applications.

Product Features

- ◆ Up to 1.25Gb/s Data Links
- ◆ Hot-pluggable SFP footprint
- ◆ 850nm Vcsel laser transmitter
- ◆ Duplex LC connector
- ◆ Low power dissipation
- ◆ Metal enclosure, for lower EMI
- ◆ Up to 550m on 50/125 μ m MMF
- ◆ Single 3.3V power supply
- ◆ Operating temperature range: 0°C to 70°C
- ◆ Digital Diagnostic Monitoring Optional

Applications

- ◆ 1.25Gb/s Gigabit Ethernet
- ◆ 1.0625Gb/s Fiber Channel

Absolute Maximum Ratings

| Parameter | Symbol | Min | Typ | Max | Unit | Ref. |
|----------------------------|--------|------|-----|-----|------|------|
| Maximum Supply Voltage | Vcc | -0.5 | | 4.7 | V | |
| Storage Temperature | TS | -40 | | 85 | °C | |
| Case Operating Temperature | TOP | 0 | | 70 | °C | |

Electrical Characteristics

| Parameter | Symbol | Min | Typ | Max | Unit | Ref. |
|-------------------------------|--------|---------|-----|----------|----------|------|
| Supply Voltage | Vcc | 3.15 | 3.3 | 3.6 | V | |
| Supply Current | Icc | | 160 | 200 | mA | |
| Transmitter | | | | | | |
| Input differential impedance | Rin | | 100 | | Ω | 1 |
| Single ended data input swing | Vin,pp | 250 | | 1200 | mV | |
| Transmit Disable Voltage | VD | Vcc-1.3 | | Vcc | V | |
| Transmit Enable Voltage | VEN | Vee | | Vee+ 0.8 | V | 2 |
| Transmit Disable Assert Time | | | | 10 | us | |

Datasheet SFP module 100-32MM

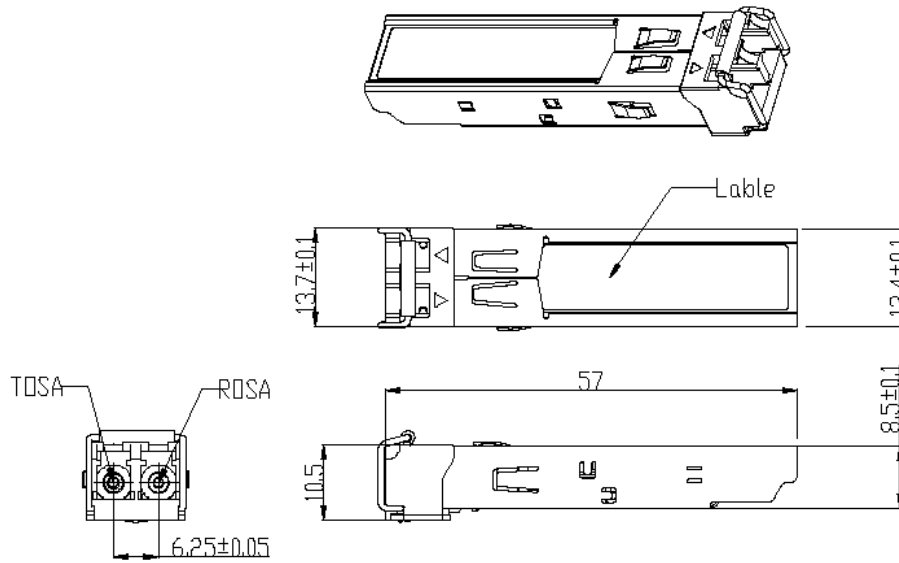
| Receiver | | | | | | |
|--------------------------------|------------|---------|-----|---------|------|---|
| Single ended data output swing | Vout,pp | 250 | | 800 | mV | 3 |
| Data output rise time | tr | | 100 | 175 | ps | 4 |
| Data output fall time | tf | | 100 | 175 | ps | 4 |
| LOS Fault | VLOS fault | Vcc-0.5 | | VccHOST | V | 5 |
| LOS Normal | VLOS norm | Vee | | Vee+0.5 | V | 5 |
| Power Supply Rejection | PSR | 100 | | | mVpp | 6 |

Optical Characteristics

| Parameter | Symbol | Min | Typ | Max | Unit | Ref. |
|---|-------------|------|------|-------|-------|------|
| Transmitter | | | | | | |
| Output Opt. Pwr (End of Life) | POUT | -9.0 | | -3.0 | dBm | 1 |
| Optical Wavelength | λ | 830 | 850 | 860 | nm | |
| Wavelength Temperature Dependence | | | 0.08 | 0.12 | nm/°C | |
| Spectral Width (-20dB) | σ | | | 3.0 | nm | |
| Optical Extinction Ratio | ER | 8 | | | dB | |
| Sidemode Supression ratio | SSRmin | 30 | | | dB | |
| Optical Rise/Fall Time | tr/ tf | | 100 | 160 | ps | |
| RIN | RIN | | | -120 | dB/Hz | |
| Transmitter Jitter (peak to peak) | | | | 100 | ps | |
| Receiver | | | | | | |
| Average Rx Sensitivity @ Gigabit Ethernet | RSENS3 | | | -18.0 | dBm | 2 |
| Maximum Input Power | PMAX | -3.0 | | | dBm | |
| Optical Center Wavelength | λ_C | 770 | | 860 | nm | |
| LOS De -Assert | LOSD | | | -22 | dBm | |
| LOS Assert | LOSA | -25 | | | dBm | |
| LOS Hysteresis | | | 1.0 | | dB | |
| Receiver Jitter Generation @1.25Gbps | | | | 160 | ps | 3 |

Datasheet SFP module 100-32MM

Mechanical Specification



Regulatory Compliance

| Feature | Reference | Performance |
|------------------------------------|---|---------------------------|
| Electrostatic discharge (ESD) | IEC/EN 61000-4-2 | Compatible with standards |
| Electromagnetic Interference (EMI) | FCC Part 15 Class B EN 55022 Class B (CISPR 22A) | Compatible with standards |
| Laser Eye Safety | FDA 21CFR 1040.10, 1040.11 IEC/EN 60825-1, 2 | Class 1 laser product |
| Component Recognition | IEC/EN 60950, UL | Compatible with standards |
| ROHS | 2002/95/EC | Compatible with standards |
| EMC | EN61000-3 | Compatible with standards |