# 32G FC BiDi 40km SFP+ Transceiver
# CLSFP32GBD40-29

## Product Features:

- Up to 28.05 Gb/s bi-directional data links
- 32G FC MSA SFF-8432/8472
- Hot-pluggable SFP+ footprint
- Built-in digital diagnostic functions
- 1290nm DFB laser transmitter + 1310nm APD receiver
- Simplex LC connector
- RoHS compliant
- Up to 40km on 9/125μm SMF
- Single 3.3V power supply
- Operating temperature range:0°C to 70°C

## Functional Characteristics (Optical)

The following tables list the performance specifications for the various functional blocks of the integrated optical transceiver module.

**Table 1 – Transmitter Optical Specifications**

| Parameter | Symbol | Min | Typ | Max | Unit | Ref. |
|---|---|---|---|---|---|---|
| Average Output Power | POUT | +1 | | +7 | dBm | 1, 2 |
| Optical Wavelength | Wave | 1282 | 1290 | 1298 | nm | |
| Spectral Width (-20dB) | σ | | | 1 | nm | |
| Side Mode Suppression Ratio | SMSR | 30 | | | dB | |
| Optical Modulation Amplitude | OMA | +1 | | +7 | dBm | |
| Transmitter Dispersion Penalty @<br>8.5 Gb/s 14.025Gb/s 28.05Gb/s | TDP | | | 4<br>3.5<br>2.5 | dB | |
| Extinction Ratio | ER | 4 | | | dB | |
| Relative Intensity Noise | RIN | | | -130 | dB/Hz | |

**Table 2 – Receiver Optical Specifications**

| Parameter | Symbol | Min | Typ | Max | Unit | Ref. |
|---|---|---|---|---|---|---|
| Optical Wavelength | Wave | 1292 | 1310 | 1318 | nm | |
| Unstressed Receiver OMA Sensitivity<br>8.5 Gb/s<br>14.025Gb/s<br>28.05Gb/s | Rx SENS | | | -14.1<br>-13.1<br>-12.9 | dBm | 3 |
| Receiver Optical Modulation Amplitude | RxMAX | | | 2 | dBm | 4 |
| Stress Receiver Sensitivity | | | | -9.5 | dBm | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Optical Return Loss 8.5Gb/s & 14.025Gb/s 28.05Gb/s | | 12<br>26 | | | dB | |
| LOS De-Assert | LOSD | | | -17 | dBm | |
| LOS Assert | LOSA | -30 | | | dBm | |
| LOS Hysteresis | | 0.5 | | | dB | |
| Link Parameters | | | | | | |
| Channel IL | | 5 | | 13.2 | dB | |
| Allocation of Penalties | | | | 2.7 | dB | |
| Total Power Budget (Maximum TDP) | | | | 15.9 | dB | |

## Ordering Information

**Table 3 - Ordering Information**

| Part No. | Application | Data Rate | Laser | Fiber Type |
|---|---|---|---|---|
| CLSFP32GBD40-29 | FC 8/16/32G 40km | 28Gbps Max | T 1290nm/<br>R 1310nm | Single Mode Fiber |

## CONTACT:

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