





# 4L-SFP28ER

SFP28 25GBASE-ER, 1310nm, SM, DDM, LC Duplex, 40km



### **Applications**

- Compliant with 25GBASE-ER Ethernet
- Infiniband EDR
- Datacenter backbones
- High-speed servers
- SAN, Routers, Hubs, Load Balancer
- High-performance Computing Clusters
- Other optical links

#### **Features**

- SFP28 25G Duplex Optical Transceiver
- SFP28 MSA Compliant
- Up to 40km links on SMF
- DML laser transmitter
- Digital Diagnostic Monitoring
- RoHS and Lead Free
- Operating temperature: 0°C ~ +70°C

#### Description

The 4L-SFP28ER is a SFP28 transceiver for single mode fiber (SMF) 25GBASE-ER duplex optical data communications.

This modules are designed to operate with single mode (SMF) and Duplex LC connectors, using the wavelengths 1310nm for up to 40km depending on the fiber loss.



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## General Specifications – Absolute Maximum Ratings

| Parameter                  | Symbol | Min   | Recommended | Max   |
|----------------------------|--------|-------|-------------|-------|
| Max.LinkLength             | чтах   |       |             | 10km  |
| Optical Budget             | dB     | 11dB  |             |       |
| Storage Temperature        |        | -40°C |             | +85°C |
| Operating Case Temperature | Тс     | 0°C   |             | +70°C |
| Supply Voltage             | Vcc    | -0.5V | 3.3V        | 3.6V  |

## **Optical Specifications**

| Transmitter                |        |        |             |        |  |
|----------------------------|--------|--------|-------------|--------|--|
| Parameter                  | Symbol | Min    | Recommended | Max    |  |
| Average Output Power       | Pout   | -6dBm  |             | 4.5dBm |  |
| Central Wavelength         |        | 1260nm | 1310nm      | 1350nm |  |
| Receiver                   |        |        |             |        |  |
| Parameter                  | Symbol | Min    | Recommended | Max    |  |
| Receiver Sensitivity       | Rsen   | -17dBm |             |        |  |
| Receiver Overload (Damage) | Pmax   |        |             | -6dBm  |  |
| Central Wavelength         | Nm     | 1260   | 1310        | 1350   |  |



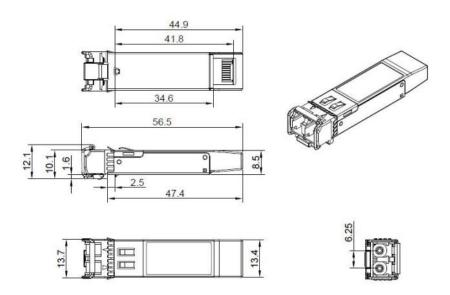
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# **Electrical Specifications**

| Parameter                      | Symbol             | Min. | Typical | Max                 | Unit | Ref. |
|--------------------------------|--------------------|------|---------|---------------------|------|------|
| Supply Voltage                 | V <sub>CC</sub>    | 3.00 |         | 3.60                | V    | 1    |
| Supply Current                 | l <sub>cc</sub>    |      | 200     | 300                 | mA   | 1    |
| Transmitter                    |                    |      |         |                     |      |      |
| Input differential impedance   | R <sub>in</sub>    |      | 100     |                     | Ω    | 2    |
| Single ended data input swing  | V <sub>in,pp</sub> | 150  |         | 1200                | mVpp |      |
| Transmit Disable Voltage       | $V_{D}$            | 2    |         | V <sub>CC</sub>     | V    |      |
| Transmit Enable Voltage        | V <sub>EN</sub>    | Vee  |         | Vee+0.8             | V    | 3    |
| Receiver                       |                    |      |         |                     |      |      |
| Output differential impedance  | R <sub>out</sub>   |      | 100     |                     | Ω    | 2    |
| Single ended data output swing | Vout,pp            | 300  |         | 700                 | mV   | 4    |
| LOS Fault                      | $V_{LOSfault}$     | 2    |         | VCC <sub>HOST</sub> | V    | 5    |
| LOS Normal                     | $V_{LOS\ norm}$    | Vee  |         | Vee+0.8             | V    | 5    |

# Mechanical Specifications





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## Ordering Information

| Part Number | Description   |
|-------------|---|
| 4L-SFP28SR  | SFP28 25GBASE-SR, 850nm, MM, DDM, LC Duplex,<br>100m  |
| 4L-SFP28LR  | SFP28 25GBASE-LR, 1310nm, SM, DDM, LC Duplex,<br>10Km |
| 4L-SFP28ER  | SFP28 25GBASE-ER, 1310nm, SM, DDM, LC Duplex,<br>40Km |

#### Note

This modules have been tested by 4LAN on equipments like Cisco, Juniper, Dell, HP, Mikrotik, Huawei, and other brands. The equipment brand must be informed before shipping the order, so the transceivers are reprogrammed to the corresponding brand.

## **Contact Information**

Website: www.4-lan.com

Email: <a href="mailto:com.br">contato@brazilmkt.com.br</a> Telephone: +55 11 5521-2522