

## SFP Transceivers GE-100, 1310nm

OPTOKON's **S125-GE-100FX** and **S125-GE-100LX** transceivers are compatible with the Small Form Factor Pluggable Multi-Sourcing Agreement (MSA) and are designed for SGMII MAC interface to 100BASE-FX and 100BASE-LX (The SGMII MAC Interface implements a modified 1000BASE-X Auto-Negotiation to indicate link, duplex and speed to the MAC).

The transceivers consist of four sections: the standard SFP part with DDM, the PHY part build with SGMII interface, the 1310nm FP laser and the PIN photo-detector.



### Features:

- Hot-Pluggable
- 100BASE-LX operation
- 1310nm FP laser transmitter
- 100BASE-FX and 100BASE-LX operation
- Duplex LC connector
- Electrically hot-pluggable
- Support Digital Diagnostic Monitoring interface
- Operating case temperature: 0°C to +70°C

### Applications:

- Switch to switch interface
- Switched backplane applications
- Fast Ethernet
- Others optical transmission systems



### Parameters:

| Name                  | Data Rate (Mbps) | Wavelength (nm) | Distance (km) | Media |
|-----------------------|------------------|-----------------|---------------|-------|
| M125-GE-100FX-F31-LRM | 125              | 1310            | 2             | MMF   |
| S125-GE-100LX-F31-LX  | 125              | 1310            | 20            | SMF   |

### Digital Diagnostics functions:

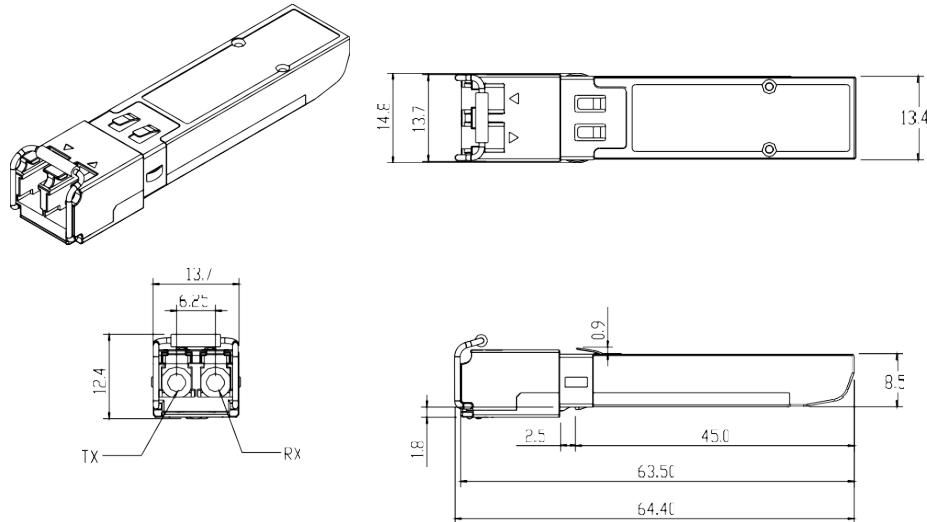
OPTOKON transceivers support the 2-wire serial communication protocol as defined in the QSFP+ MSA, which allows real-time access to the following operating parameters:

- Transceiver temperature
- Laser bias current
- Transmitted optical power
- Received optical power
- Transceiver supply voltage

## Optical characteristic:

|                                   | Unit | M125-GE-100FX                              | S125-GE-100LX |
|-----------------------------------|------|--------------------------------------------|---------------|
| Wavelength (Min/Center/Max)       | nm   | 1270 / 1310 / 1360                         |               |
| Average output power (Min/Max)    | dBm  | -20 / -14                                  | -15 / -7      |
| Transmitter OFF Uotput Power      | dBm  | -45                                        | -45           |
| Output Eye Mask                   |      | Compliant with G.957(class 1 laser safety) |               |
| Optical Extinction ratio          | dB   | 8.2                                        | 8.2           |
| Receiver sensitivity              | dBm  | -30                                        | -31           |
| Input Saturation Power (Overload) | dBm  | -3                                         | -3            |
| Transmission distance             | km   | 2                                          | 20            |
| Fiber type                        | -    | MMF                                        | SMF           |
| Data rate                         | Mbps | 125                                        | 125           |
| Optical link budget               | dBm  | 10                                         | 16            |

## Mechanical specifications (mm):



## Ordering code:

| Name                       | Description                                      |
|----------------------------|--------------------------------------------------|
| M125-GE-100FX-F31-LRM-D-XX | SFP 125 Mbps, MM, 1310 nm, 2 km, 0 °C to +70 °C  |
| S125-GE-100LX-F31-LX-D-XX  | SFP 125 Mbps, SM, 1310 nm, 20 km, 0 °C to +70 °C |