# Part Number: SFP-SDA-GE-S10K

## Quick Spec:

| | |
|---|---|
| Manufacturer Compatibility: | ZTE |
| Form Factor: | SFP-BIDI |
| TX Wavelength: | 1310nm |
| Reach: | 10km |
| Cable Type: | SMF |
| Rate Category: | 1000Base |
| Interface Type: | BX |
| Digital Optical Mon. (DOM): | True |
| Connector Type: | Single-LC |

## Features

- Up to 1.25Gb/s Data Links
- Hot-Pluggable Capability
- Single +3.3V Power Supply
- Isolation > 30dB, Cross Talk < -45dB
- Compliant with Specifications for IEEE802.3Z
- Compliant with Bellcore TA-NWT-000983
- Eye Safety Designed to Meet Laser Class1,
- Compliant with IEC60825-1
- RoHS compliance

## Applications

- Gigabit Ethernet
- Fiber Channel
- WDM Application

## Specification

### Electrical and Optical Characteristics: (Condition: $T_a$=$T_{OP}$)

| Parameter | Symbol | Min. | Typical | Max. | Unit |
|---|---|---|---|---|---|
| Transmitter Differential Input Volt | +/-TX_DAT | 200 | | 2400 | mV p-p |
| Supply Current | $I_{CC}$ | | 130 | 180 | mA |
| Tx_Disable Input Voltage – Low | $V_{IL}$ | 0 | | 0.8 | V |
| Tx_Disable Input Voltage – High | $V_{IH}$ | 2.0 | | Vcc | V |
| Tx_Fault Output Voltage – Low | $V_{OL}$ | 0 | | 0.8 | V |
| Tx_Fault Output Voltage – High | $V_{OH}$ | 2.0 | | Vcc | V |
| Receiver Differential Output Volt | +/-RX_DAT | 600 | | 1400 | mV p-p |
| Rx_LOS Output Voltage- Low | $V_{OL}$ | 0 | | 0.8 | V |
| Rx_LOS Output Voltage- High | $V_{OH}$ | 2.0 | | Vcc | V |

## Transmitter Section

| Parameter | Symbol | Min. | Typical | Max. | Unit |
|---|---|---|---|---|---|
| Data Rate | B | - | 1250 | - | Mb/s |
| Centre Wavelength-D<br>Centre Wavelength-U | λc | 1485<br>1260 | 1490<br>1310 | 1496<br>1360 | nm |
| Output Spectral Width | ∆λ(-20dB) | - | - | 1 | nm |
| Average Output Power | $P_o$ | D:-8<br>U:-8 | - | D:-3<br>U:-3 | dBm |
| Extinction Ratio | EXT | 9 | - | - | dB |
| Data Input Voltage-High | $V_{IHS}$ | $V_{cc}$-1.16 | - | $V_{cc}$-0.89 | V |
| Data Input Voltage -Low | $V_{ILS}$ | $V_{cc}$-1.82 | - | $V_{cc}$-1.48 | V |
| Supply Current | $I_{CC}$ | - | 90 | 150 | mA |
| Output Optical Eye | Compliant with IEEE802.3Z | | | | |

## Receiver Section

| Parameter | Symbol | Min. | Typical | Max. | Unit |
|---|---|---|---|---|---|
| Receive Sensitivity | $P_{min}$ | - | - | -22 | dBm |
| Maximum Input Power | $P_{MAX}$ | -3 | - | - | dBm |
| Signal Detect Threshold-Assertion: | $SD_{HIGH}$ | - | - | -22 | dBm |
| Signal Detect Threshold-Deassertion: | $SD_{LOW}$ | -32 | - | - | dBm |
| Hysteresis | - | - | 3.0 | - | dBm |
| Output High Voltage | $V_{OH}$ | $V_{cc}$-1.03 | - | $V_{cc}$-0.89 | V |
| Output Low Voltage | $V_{OL}$ | $V_{cc}$-1.82 | - | $V_{cc}$-1.63 | V |
| Operating Wavelength-D<br>Operating Wavelength-U | λc | 1260<br>1485 | 1310<br>1490 | 1360<br>1496 | nm |
| Supply Current | $I_{CC}$ | - | 80 | 110 | mA |
| | | | | | |

## Absolute Maximum Ratings:

| Parameter | Symbol | Min. | Max. | Unit |
|---|---|---|---|---|
| Storage Temperature | $T_{ST}$ | -40 | +85 | ℃ |
| Operating Temperature | $T_{IP}$ | 0 | +70 | ℃ |
| Input Voltage | $T_{CC}$ | 0 | +5 | V |

## Recommended Operating Environment:

| Parameter | Symbol | Min. | Typical | Max. | Unit |
|---|---|---|---|---|---|
| Supply Voltage | $V_{CC}$ | +3.1 | +3.3 | +3.5 | V |

| | | | | | |
|---|---|---|---|---|---|
| Operating Temperature | $T_{OP}$ | 0 | - | +70 | ℃ |