Data sheet

SFP Module single-mode 500SSM41
EDS500 series - Ethernet & DSL switches

- Long Range (LR) SFP for distances up to 40 km
- Suitable for all EDS500 devices with SFP slots
- Duplex LC connector / Single-mode fiber
- Monitors the optical signal quality / Alarm generation before link loss

Application
This long range (LR) SFP is a pluggable optical transceiver for fiber optical transmission lines of up to 40 km range.

ADVICE
The SFP requires a minimum attenuation of 5 dB.
Do not connect these SFPs directly via fiber optic patch cord.

This SFP type supports monitoring the receiver input power, as well as the transceiver temperature and voltage (via DOM, Digital Optical Monitoring). Mechanical form factor and electrical interface are compatible with the multi-source agreement (MSA). Additionally, with this SFP type, the optical signal quality and attenuation can be monitored (for instance via SNMP if supported by host). A signal quality threshold can be defined, to enable alarming even before the optical link is lost (due to material aging or similar).
## Technical data

### Power budget
- **Minimum output power**: -3.0 dBm
- **Maximum output power**: 2.0 dBm
- **Receiver sensitivity**: -23.0 dBm
- **Minimum power budget**: 20.0 dB

### Electrical/Optical characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optical Wavelength</td>
<td>1290 nm</td>
<td>1310 nm</td>
<td>1325 nm</td>
</tr>
<tr>
<td>Receiver Overload</td>
<td>-3.0 dBm</td>
<td></td>
<td></td>
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<tr>
<td>Fiber Type</td>
<td>9/125 μm single mode</td>
<td></td>
<td></td>
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<tr>
<td>Transmitter Type</td>
<td>Laser DFB</td>
<td></td>
<td></td>
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<tr>
<td>Laser Class</td>
<td>Class 1 DIN EN 60825-1 eye safety compliant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply Voltage</td>
<td>3.1 Volt</td>
<td>3.3 Volt</td>
<td>3.5 Volt</td>
</tr>
<tr>
<td>Power Dissipation</td>
<td>990 mW</td>
<td></td>
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</tbody>
</table>

### General characteristics
- **Data Rate**: 1 Gbps / 100 Mbps Ethernet
- **Range Classification**: Long Range (LR) / 40 km
- **Connector**: Duplex LC
- **Connector Contact Type**: Angled Physical Contact (APC)
- **Mean time between failure (MTBF)**: 1,163,198 hrs (132.8 years) at 40 °C
- **MTFB calculation according to**: Telcordia GR-468-CORE
- **RoHS Compliant**: Yes

### Environmental conditions - climatic
- **Operating temperature**: -40 °C ... 85 °C
- **Relative humidity**: 5 ... 95 % (non condensing)

### Ordering information
- **500SSM41 R0001**
- **1KGT038918R0001**

### Compatible devices
- EDS500 switches 500NMDxx (managed, with SFP-Slots) 560NUSDxx

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