

# TN-10GSFP-LRxM-Dxx Series

## DWDM MSA Compliant Multi-rate 1G/10GBase SFP+ Modules

### 10GBase-ER/ZR or 1000Base-LX/ZX, SFP+ With DMI Single Mode (LC)



TN-10GSFP-LR8M-D49

TN-10GSFP-LR4M-D47

### Features

- SFP+ Optical Transceiver with duplex LC connector
- 1G/10G Small Form-Factor Pluggable (SFP+) MSA compliant
- Compliant with IEEE 802.3ae 10GBase-LR/ZR
- Compliant with IEEE 802.3z 1000Base-LX/ZX
- SFF-8472 Digital Diagnostic Function (DDM)
- SFF-8431 and SFF-8432 Compliant
- Maximum Link Length of 80KM
- Single +3.3 V Power Supply
- Lower power dissipation < 1.5 Watts
- RoHS Compliant
- 0°C to 70°C Operating Temperature range
- -40°C to 85°C Storage Temperature range
- Class 1 Laser International Safety Standard IEC 60825 Compliant

### Specifications

|             |  |
|-------------|--|
| Standards   | IEEE 802.3<br>IEEE 802.3ae<br>IEEE 802.3z                            |
| Dimensions  | Width: 0.52" [13 mm]<br>Depth: 2.18" [55 mm]<br>Height: 0.33" [8 mm] |
| Power Input | 3.3V   |
| Environment | Operating: 0°C to 70°C<br>Operating: -40°C to 85°C                   |
| Compliance  | IEC 60825-1, FDA CDRH 21-CFR 1040.10 Class 1                         |
| Warranty    | Lifetime   |

### Ordering Information

#### Duplex

##### TN-10GSFP-LR8M-Dxx

10GBase-ZR/1000Base-ZX, SFP+ with DMI single mode (LC) [80 km/49.7 mi.]  
Link Budget: 22.0 dB

##### TN-10GSFP-LR4M-Dxx

10GBase-ER/1000Base-LX, SFP+ with DMI single mode (LC) [40 km/24.9 mi.]  
Link Budget: 15.0 dB

#### xx = Channel

| xx | Wavelength (nm) | Frequency (THz) | xx | Wavelength (nm) | Frequency (THz) |
|----|-----------------|-----------------|----|-----------------|-----------------|
| 21 | 1560.61         | 192.10          | 41 | 1544.53         | 194.10          |
| 22 | 1559.76         | 192.20          | 42 | 1543.73         | 194.20          |
| 23 | 1558.98         | 192.30          | 43 | 1542.94         | 194.30          |
| 24 | 1558.17         | 192.40          | 44 | 1542.14         | 194.40          |
| 25 | 1557.36         | 192.50          | 45 | 1541.35         | 194.50          |
| 26 | 1556.55         | 192.60          | 46 | 1540.56         | 194.60          |
| 27 | 1555.75         | 192.70          | 47 | 1539.77         | 194.70          |
| 28 | 1554.94         | 192.80          | 48 | 1538.98         | 194.80          |
| 29 | 1554.13         | 192.90          | 49 | 1538.19         | 194.90          |
| 30 | 1553.33         | 193.00          | 50 | 1537.40         | 195.00          |
| 31 | 1552.52         | 193.10          | 51 | 1536.61         | 195.10          |
| 32 | 1551.73         | 193.20          | 52 | 1535.82         | 195.20          |
| 33 | 1550.92         | 193.30          | 53 | 1535.04         | 195.30          |
| 34 | 1550.12         | 196.40          | 54 | 1534.25         | 195.40          |
| 35 | 1549.32         | 193.50          | 55 | 1533.47         | 195.50          |
| 36 | 1548.51         | 193.60          | 56 | 1532.68         | 195.60          |
| 37 | 1547.72         | 193.70          | 57 | 1531.90         | 195.70          |
| 38 | 1546.92         | 193.80          | 58 | 1531.12         | 195.80          |
| 39 | 1546.12         | 193.90          | 59 | 1530.33         | 195.90          |
| 40 | 1545.32         | 194.00          | 60 | 1529.55         | 196.00          |