

cisco compatible small form factor pluggables

# TN-GLC-xxx & TN-SFP-GE-x

## SFP Modules: Small Form Factor Pluggables Cisco Compatible



Connectivity

### Applications

- ▶ Gigabit Ethernet Switches & Routers
- ▶ Fibre Channel Switch Infrastructure
- ▶ xDSL Applications
- ▶ Metro Edge Switching

### Features

- ▶ Hot-Pluggable SFP Footprint Duplex LC Optical Transceiver - both simplex and duplex
- ▶ Class 1 Laser International Safety Standard IEC-60825 Compliant
- ▶ Compatible with SFP Multi-Sourcing Agreement (MSA)

### Additional Features

#### TN-GLX-xxx (except those below)

- ▶ Compliant with IEEE 802.3z Gigabit Ethernet
- ▶ Compliant with Fiber Channel 1X SM-LC-L FC-PI

#### TN-GLC-FE-xxx & TN-GLC-GE-xxx modules

- ▶ Compliant with IEEE802.3100BASE-FX
- ▶ Compliant with IEEE802.3ah100BASE-FX
- ▶ Compliant with Intermediate-Reach SONET OC-3/SDH STM-1 (S-1.1)

Can be used on Optical Line Converter xFMFF4040-100

#### TN-SFP-GE-x modules

- ▶ Compliant with IEEE802.3z Gigabit Ethernet
- ▶ Digital Diagnostic Function
- ▶ Extended operating temperature

### Specifications

Standards	IEEE 802.3 2003; ANSI X3.297-1997
Dimensions (fiber)	<b>Width:</b> 0.52" [13 mm] <b>Depth:</b> 2.18" [55 mm] <b>Height:</b> 0.33" [8 mm]
Dimensions (copper)	<b>Width:</b> 0.95" [24 mm] <b>Depth:</b> 2.8" [71 mm] <b>Height:</b> 0.54" [14 mm]
Power	3.3V
Power Consumption	0.66 Watts (fiber) 1.0 Watts (copper)
Environment	
TN-GLC-xxx	0°C – 70°C operating 40°C – 85°C storage
TN-SFP-GE-x	-40°C – 85°C operating
TN-GLC-xxx-RGD	-40°C – 100°C storage
TN-SFP-GE-T	-10°C – 80°C operating
Compliance	IEC-60825; FDA 21; CFR 1040.10 and 1040.11
Warranty	Lifetime

### Ordering Information

Standard Operating Temperature  
-0°C to +70°C

#### TN-GLC-T

1000BASE-T (RJ-45)  
[100 m/328 ft.]

#### TN-GLC-T-MG

10/100/1000BASE-T (RJ-45)  
[100 m/328 ft.]

#### TN-GLC-SX-MM

1000BASE-SX 850nm multimode (LC)  
[62.5/125 µm: 220 m/722 ft.]  
Link Budget: 8.5 dB  
[50/125 µm: 550 m/1804 ft.]  
Link Budget: 8.5 dB

#### TN-GLC-SX-MM-2K

1000BASE-SX 1300nm Ext. MM (LC)  
[2 km/1.2 mi.] Link Budget: 10.0 dB

#### TN-GLC-LH-SM

1000BASE-LX 1310nm single mode (LC)  
[10 km/6.2 mi.] Link Budget: 10.5 dB

#### TN-GLC-LHX-SM

1000BASE-LX 1310nm single mode (LC)  
[40 km/24.9 mi.] Link Budget: 22.0 dB

#### TN-GLC-ZX-SM

1000BASE-LX 1550nm single mode (LC)  
[80 km/49.7 mi.] Link Budget: 24.0 dB

#### TN-GLC-ZX-SM-12

1000BASE-LX 1550nm single mode (LC)  
[120 km/74.6 mi.] Link Budget: 31.0 dB

#### TN-GLC-ZX-SM-15

1000BASE-LX 1550nm single mode (LC)  
[150 km/93.2 mi.] Link Budget: 37.0 dB

#### TN-GLC-BX-U

1000BASE-BX 1310nm TX/1490nm RX  
single fiber single mode (LC)  
[10 km/6.2 mi.] Link Budget: 12.0 dB

#### TN-GLC-BX-D

1000BASE-BX 1490nm TX/1310nm RX  
single fiber single mode (LC)  
[10 km/6.2 mi.] Link Budget: 12.0 dB

#### TN-GLC-BX-U-40

1000BASE-BX 1310nm TX/1490nm RX  
single fiber single mode (LC)  
[40 km/24.9 mi.] Link Budget: 20.0 dB

#### TN-GLC-BX-D-40

1000BASE-BX 1490nm TX/1310nm RX  
single fiber single mode (LC)  
[40 km/24.9 mi.] Link Budget: 20.0 dB

#### TN-GLC-BX-U-60

1000BASE-BX 1310nm TX/1490nm RX  
single fiber single mode (LC)  
[60 km/37.3 mi.] Link Budget: 23.0 dB

#### TN-GLC-BX-U-80

1000BASE-BX 1490nm TX/1550nm RX  
single fiber single mode (LC)  
[80 km/49.7 mi.] Link Budget: 26.0 dB

#### TN-GLC-BX-U-120

1000BASE-BX 1490nm TX/1550nm RX  
single fiber single mode (LC)  
[120 km/74.6 mi.] Link Budget: 31.0 dB

#### TN-GLC-BX-D-60

1000BASE-BX 1490nm TX/1310nm RX  
single fiber single mode (LC)  
[60 km/37.3 mi.] Link Budget: 23.0 dB

#### TN-GLC-BX-D-80

1000BASE-BX 1550nm TX/1490nm RX  
single fiber single mode (LC)  
[80 km/49.7 mi.] Link Budget: 26.0 dB

#### TN-GLC-BX-D-120

1000BASE-BX 1550nm TX/1490nm RX  
single fiber single mode (LC)  
[120 km/74.6 mi.] Link Budget: 31.0 dB

#### TN-GLC-FE-100BX-U

100BASE-BX 1310nm TX/1550nm RX  
single fiber single mode (LC)  
[10 km/6.2 mi.] Link Budget: 18.0 dB

#### TN-GLC-FE-100BX-U-20

100BASE-BX 1310nm TX/1550nm RX  
single fiber single mode (LC)  
[20 km/12.4 mi.] Link Budget: 20.0 dB

#### TN-GLC-FE-100BX-U-40

100BASE-BX 1310nm TX/1550nm RX  
single fiber single mode (LC)  
[40 km/24.9 mi.] Link Budget: 26.0 dB

#### TN-GLC-FE-100BX-U-80

100BASE-BX 1310nm TX/1550nm RX  
single fiber single mode (LC)  
[80 km/49.7 mi.] Link Budget: 32.0 dB

#### TN-GLC-FE-100BX-U-12

100BASE-BX 1490nm TX/1550nm RX  
single fiber single mode (LC)  
[120 km/74.6 mi.] Link Budget: 32.0 dB

#### TN-GLC-FE-100BX-D

100BASE-BX 1550nm TX/1310nm RX  
single fiber single mode (LC)  
[10 km/6.2 mi.] Link Budget: 18.0 dB

#### TN-GLC-FE-100BX-D-20

100BASE-BX 1550nm TX/1310nm RX  
single fiber single mode (LC)  
[20 km/12.4 mi.] Link Budget: 20.0 dB

#### TN-GLC-FE-100BX-D-40

100BASE-BX 1550nm TX/1310nm RX  
single fiber single mode (LC)  
[40 km/24.9 mi.] Link Budget: 26.0 dB

#### TN-GLC-FE-100BX-D-80

100BASE-BX 1310nm TX/1550nm RX  
single fiber single mode (LC)  
[80 km/49.7 mi.] Link Budget: 32.0 dB

#### TN-GLC-FE-100BX-D-12

100BASE-BX 1550nm TX/1490nm RX  
single fiber single mode (LC)  
[120 km/74.6 mi.] Link Budget: 32.0 dB

#### \*TN-GLC-FE-100FX

100BASE-FX 1300nm multimode (LC)  
[2 km/1.2 mi.] Link Budget: 8.5 dB

#### TN-GLC-FE-100LX

100BASE-FX 1310nm single mode (LC)  
[10 km/6.2 mi.] Link Budget: 19.0 dB

#### \*TN-GLC-GE-100FX

100BASE-FX 1300nm multimode (LC)  
[2 km/1.2 mi.] Link Budget: 8.5 dB

Extended Operating Temperature  
-40°C to +85°C

#### \*TN-GLC-FE-100FX-RGD

100BASE-FX 1300nm multimode (LC)  
[2 km/1.2 mi.] Link Budget: 8.5 dB

#### TN-GLC-FE-100LX-RGD

100BASE-FX 1310nm single mode (LC)  
[10 km/6.2 mi.] Link Budget: 19.0 dB

#### TN-GLC-FE-100BX-URGD

100BASE-BX 1310nm TX/1550nm RX  
single fiber single mode (LC)  
[20 km/12.4 mi.] Link Budget: 20.0 dB

#### TN-GLC-FE-100BX-DRGD

100BASE-BX 1550nm TX/1310nm RX  
single fiber single mode (LC)  
[20 km/12.4 mi.] Link Budget: 20.0 dB

#### TN-GLC-SX-MM-RGD

1000BASE-SX 850nm multimode (LC)  
[62.5/125 µm: 220 m/722 ft.]  
Link Budget: 8.5 dB  
[50/125 µm: 550 m/1804 ft.]  
Link Budget: 8.5 dB

#### TN-GLC-SX-MM-2K-RGD

1000BASE-SX 1300nm Ext. MM (LC)  
[2 km/1.2 mi.] Link Budget: 10.0 dB

#### TN-SFP-GE-S

1000BASE-SX 850nm multimode (LC)  
[62.5/125 µm: 220 m/722 ft.]  
Link Budget: 8.5 dB  
[50/125 µm: 550 m/1804 ft.]  
Link Budget: 8.5 dB

#### TN-GLC-LX-SM-RGD

1000BASE-LX 1310nm single mode (LC)  
[10 km/6.2 mi.] Link Budget: 10.5 dB

#### TN-GLC-ZX-SM-RGD

1000BASE-LX 1550nm single mode (LC)  
[80 km/49.7 mi.] Link Budget: 24.0 dB

#### TN-SFP-GE-L

1000BASE-LX 1310nm single mode (LC)  
[10 km/6.2 mi.] Link Budget: 10.5 dB

#### TN-SFP-GE-Z

1000BASE-LX 1550nm single mode (LC)  
[80 km/49.7 mi.] Link Budget: 24.0 dB

#### TN-SFP-GE-T

1000BASE-T (RJ-45) [100 m/328 ft.]

\*Provides 100BASE-FX interface when plugged into a Gigabit SFP slot on Cisco Catalyst 2970, 3560 & 3750 series switches.

\* Note: The Transition Networks TN-GLC-xxx series small form factor pluggable (SFP) transceiver modules are designed to install in any SFP port allowing for 1000Base-T, 1000Base-SX or 1000Base-LX interfaces to the network through the SFP connector. The TN-GLC-xxx transceivers are Cisco compatible\* and are designed for bi-directional serial-optical data communication such as Gigabit Ethernet or fiber channel at speeds up to 1.25 Gbps.

\*Transition Networks' SFP modules fully comply with the Multi-Sourcing Agreement (MSA). This compliance allows our SFP modules to be used in all other MSA compliant SFP platforms. In addition, TN SFP modules are also compatible with all Cisco SFP-based routers and switches, as well as Cisco's IOS software. TN SFP modules ARE NOT Cisco OEM brand modules.



Small Form Factor Pluggables Cisco Compatible