

How many dB is a 20km optical module



Overview

Supporting 20km transmission over single-mode fiber at 1310nm wavelength, this 100/155M SFP module delivers 19 dB link budget with speeds from 100-155Mbps. Telcordia compliant with LC/UPC connectors, optimized for carrier-grade OC-3 and STM-1 deployments. Fiber Optic Measurement Units: "dB" and "dBm" Whenever tests are performed on fiber optic networks, the results are displayed on a power meter, OLTS or OTDR readout in units of "dB. " Optical loss is measured in "dB" which is a relative measurement, while absolute optical power is measured in "dBm,". At present, our products meet the industry standards and mainstream quality certification, such as ISO 9001, CE, RoHS, FCC, etc. As a kind of transmission technology with huge capacity and long-distance coverage is now widely used in the backbone, convergence and access layer of metropolitan area. Our OC-3/STM-1 SFP 20km transceiver enables reliable SONET/SDH connectivity for telecom networks. The transmitter input and receiver output impedance is 100 Ohms differential. Data lines are internally AC coupled. The module provides differential. Maximum distance (km) = Available budget (dB) ÷ Cable attenuation (dB/km) – [Fixed losses / Cable attenuation] For an OS2 cable with an attenuation of 0,35 dB/km at 1310 nm, 4 connectors (4 × 0,5 dB = 2 dB) and 2 splices (2 × 0,1 dB = 0,2 dB): max distance ≈ (14 – 2 – 0,2) / 0,35 ≈ 33 km. Four. The new Intellinet Network Solutions Small Form Factor Pluggable (SFP) Transceiver provides the best combination of performance and affordability.

Article Content

May 18, 2026

Maximum Fiber Optic Range: Optical Budget, Distances 10G/40G

Its advantages: ultra-low attenuation (0,35 dB/km at 1310 nm, 0,20 dB/km at 1550 nm), no modal dispersion, compatibility with all advanced modulation technologies.

Jun 22, 2026

Syrotech GPON OLT C+++ Optical Module 2.5G/1.25G 7dBm 20KM ...

Syrotech Optical Transceiver GPON SFP C+++ 2.5G Bidi 20 Kms is a high-performance optical transceiver module that is used to provide high-speed data connectivity over long distances in GPON ...

Nov 16, 2025

20km DCF-based Passive Dispersion Compensation Module | FiberMall

FiberMall passive dispersion compensation module utilizes a 20km DCF-based design with an impressively low loss of only 3.5 dB, a choice optical networking application.

Oct 17, 2025

Introduction to GPON Optical Modules and Their Classification ...

GPON modules are categorized into different power classes based on their optical budget, which determines the maximum distance and number of users supported: Class B+: Optical ...

Apr 12, 2026

The FOA Reference For Fiber Optics

The OLTS or the power meter on the dB scale measures relative power or loss with respect to the reference level set by the user. The range they measure will be determined by the output power of ...

Dec 04, 2025

GPON OLT SFP Class C+ 20km DDM SC SMF Optical ...

The GPON OLT SFP transceiver provides an asymmetric 1.244Gbps upstream and 2.488Gbps downstream, reaching a link up to 20km over SMF via SC/UPC connector. It can operate at ...

Oct 26, 2025

EPON OLT PX20+++ 20km 9dB Transceiver Datasheet | 6COM

Description This 1490nm DFB EPON OLT SFP transceiver is designed to transmit and receive optical data over single mode optical fiber for link length 20km. The transmitter input and receiver output ...

Feb 04, 2026

Gigabit Fiber SFP Optical Transceiver Module

Gigabit Fiber SFP Optical Transceiver Module 1000Base-LX (LC) Single-Mode Port, 20 km (12.4 mi.) SKU: 506724 ISFP-1G-LCSM-20KM In stock Request access to B2B pricing here.

Jul 28, 2025

OC-3/STM-1 SFP 20km Transceiver

Our OC-3/STM-1 SFP 20km transceiver enables reliable SONET/SDH connectivity for telecom networks. Supporting 20km transmission over single-mode fiber at 1310nm wavelength, this ...

Nov 21, 2025

Fiber Optic Attenuation Calculator | Fiberopticx

Total Attenuation (dB) = (Attenuation Coefficient * Cable Length) + (Number of Connectors * Connector Loss) + (Number of Splices * Splice Loss) By entering the relevant values, you can estimate the total ...

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.chromadecksigns-eastrand.co.za>

Email: sales@chromadecksigns-eastrand.co.za

Phone: +32 2 318 5792

Address: Avenue Louise 500, 1050 Brussels, Belgium

This document is for informational purposes only. Specifications subject to change without notice.

