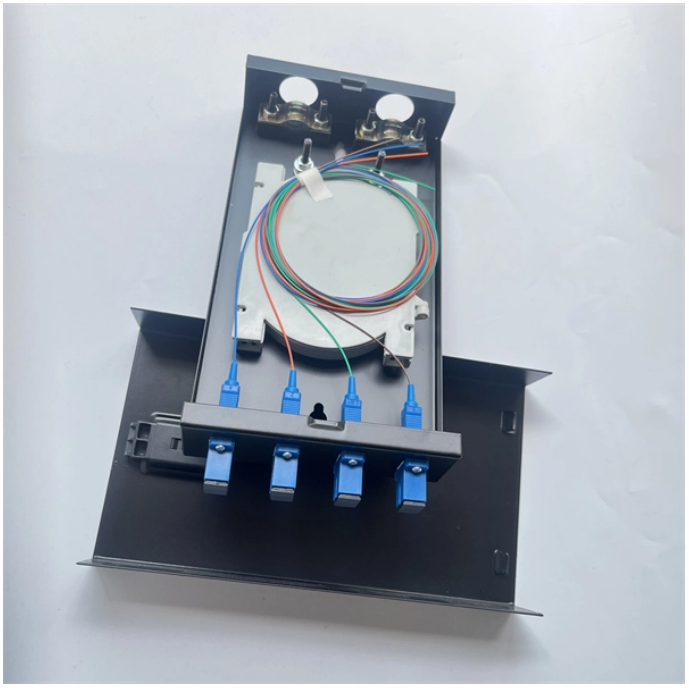
GDR Telecom Site Energy Systems

Passive Optical Network Uplink and Downlink Wavelengths



Overview

PON networks use different wavelengths for upstream and downstream transmission over the same fiber. The downstream wavelength is typically 1490 nm or 1577 nm, and the upstream wavelength is usually 1310 nm or 1270 nm. GPON (Gigabit Passive Optical Network) is an optical fiber access technology used to provide broadband access services in optical fiber networks. The following is. passive (non-powered) equipment known as outside fiber plant. Data transmission from the OLT to the ONU is defined as downstream, while transmission from the ONU to the OLT is upstream; full-duplex transmission is adopted. Passive Optical Networks (PON) have revolutionized broadband delivery by providing efficient, high-speed fiber-optic connectivity without the need for active components between the provider and the end user. There are no specific requirements for this document.

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XG-PON (10-Gigabit Passive Optical Network), defined by ITU-T G.987.x, is the next step in PON evolution. It provides a downstream bandwidth of 10 Gbps and an upstream bandwidth of 2.5 ...

GPON systems use a variety of wavelengths to achieve downlink and uplink communications. Typically, the 1490nm wavelength is used in the downlink and the 1310nm ...

This document describes the Gigabit Passive Optical Network (GPON) technology and how it functions.

Passive optical network (PON) technology is a passive broadband access technology that uplinks and downlinks data with different wavelengths, and uses time-division multiplexing technologies for data ...

Considering interoperability with existing EPON, the uplink 1Gbit/s central wavelength is configured at 1310nm, the 10Gbit/s central wavelength is configured at 1270nm, and the downlink is ...

h pair (one in upstream, one in downstream) to transmit data. The wavelengths are specifie by international standards and stretch from 1260 to 1600 nm. Upstream trafic mostly uses the lower ...

Abstract: This study reviews key technologies of next generation wavelength division multiplexing passive optical networks (WDM-PONs).

GPON technology is the latest generation broadband passive optical integrated access standard based on the ITU-TG.984.x standard. The maximum rate of downlink is 2.5Gbps, and the ...

Increased bandwidth, reduced latency and symmetric downlink and uplink capacity are among the key drivers for Next-Generation Passive Optical Network (NGPON) technology while ...

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