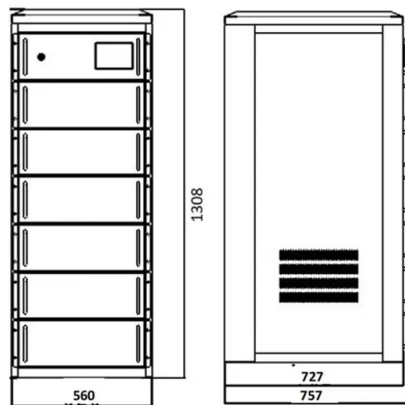


Explanation of the OTDR curve of optical fiber cable



Article Overview

An OTDR curve represents the backscattered and reflected light along a fiber, showing attenuation, splices, connectors, bends, and faults as a function of distance.

Understanding the OTDR Curve

An OTDR injects pulses of light into an optical fiber and measures the light that returns due to backscattering and Fresnel reflections. The resulting graph, called the OTDR trace, plots signal power versus distance along the fiber. The curve provides a visual map of the fiber's condition without physically accessing the entire cable length .

Key Features of the Curve

- **Slope of the curve:** Represents attenuation along the fiber. A gradual downward slope indicates normal fiber loss per kilometer, while steeper slopes may indicate excessive attenuation or fiber degradation .
- **Small dips:** Correspond to splices or connectors, showing slight losses at these points. The OTDR calculates the event loss in decibels (dB) for each splice or connector .
- **Peaks:** Result from Fresnel reflections at connectors, fiber ends, or breaks. Higher peaks (closer to 0 dB) indicate stronger reflections, which may suggest poor connections or contamination .
- **Sudden drops:** Indicate major faults or fiber breaks, where the signal is abruptly lo...

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VHO-OTDR

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