

Fiber optic replacement cycle



Article Overview

Fiber optic cables typically last 15-50 years depending on type, installation, and environmental conditions, with replacement often driven by system upgrades or physical degradation rather than routine wear.

Typical Lifespan

Fiber optic cables are known for their long service life. Under optimal installation and handling:

- Outdoor long-haul or backbone cables can last 25-50 years
- Indoor building wiring systems generally last 15-30 years
- FTTH (fiber-to-the-home) drop cables near customer premises may last 10-20 years

These lifespans often exceed the replacement cycles of connected network equipment, meaning cables are frequently replaced due to upgrades or bandwidth requirements rather than failure .

Factors Affecting Replacement

Several factors influence when fiber optic cables need replacement:

- Installation quality: Improper handling, excessive bending, or connector contamination can shorten lifespan
- Environmental stress: UV exposure, moisture, temperature fluctuations, rodent activity, and mechanical stress can degrade cables over time
- Cable type and design: Armored, UV-resistant, or bend-insensitive fibers last long...

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In this guide, we explore the real fiber optic cable lifespan, the science behind why they fail (Hydrogen Darkening), and how to

Contact Us

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