

RIVO MULTITRADE OPTICAL SYSTEMS

Optical Cable Code



Overview

Sometimes cable techs dig out some old cable, look at the fiber colors – and it does not match any of the known codes.

Key Takeaways

The TIA-598-C standard defines a universal color-coding system for optical fibers, cable jackets, and connectors, ensuring accurate identification and safe installation. Overview of Optical Cable Color Coding

Optical cable color codes are standardized to help technicians quickly identify fiber types, individual strands, and connectors, reducing errors during installation and maintenance. The TIA-598-C standard is widely used in the United States and globally for this purpose, providing a consistent framework for fiber identification across different manufacturers and installations .

Outer Jacket Colors

The outer jacket color indicates the fiber type and mode:

- Yellow: Single-mode fiber (OS1/OS2), 9µm core, suitable for long-distance, high-speed transmission .
- Orange: Multimode fiber (OM1/OM2), 50/125 µm or 62.5/125 µm cores.
- Aqua: Laser-optimized multimode fiber (OM3/OM4).

- Other colors: Custom or hybrid cables may use printed legends or RAL colors for identification .

Inner Fiber Color Sequence

For multi-fiber cables, each fiber is color-coded in a 12-color repeating sequence:

- Blue
- Orange
- Green
- Brown
- Slate (Gray)
- White
- Red
- Black
- Yellow
- Violet
- Rose
- Aqua For cables with more than 12 fibers, the sequence repeats with black stripes to maintain unique identification within each 12-fiber group . In high-count cables, a tube-and-fiber system is used: the 12-color sequence applies to both the buffer tube and the fibers inside it. For example, fiber #45 in a 144-core cable is the Yellow fiber inside the Brown tube .

Connector and Boot Colors

Connector colors indicate polish type and fiber mode:

- Blue: UPC (Ultra Physical Contact) connectors, typically single-mode.
- Green: APC (Angled Physical Contact) connectors, single-mode with angled end-face.
- Beige or Aqua: Multimode connectors, depending on fiber type .

Benefits of Standardized Color Coding

- Error Reduction: Prevents mis-splices and cross-connections in high-density cables.
- Operational Safety: Clear visual cues reduce the risk of mistakes during installation.

- Global Consistency: Technicians worldwide can interpret fiber identification correctly, even in international projects .

Notes on Regional Standards

While TIA-598-C is widely adopted, other standards like IEC 60304 and IEC 60794 are used in Europe and parts of Asia. These may have different starting colors (e.g., Red for the first fiber), so awareness of the applicable standard is critical to avoid misidentification . By following the TIA-598-C color code, technicians can efficiently trace fibers, manage high-density networks, and ensure reliable, safe optical network deployment .

Article Content

Fiber Optic Color Code: The Ultimate TIA-598-C Guide (2026)

Master the TIA-598-C fiber optic color code standard. Read our complete guide and use our free interactive calculator to easily

Fiber Optic Cable Color Code: Complete Installation and Identification ...

Sometimes cable techs dig out some old cable, look at the fiber colors – and it does not match any of the known codes.

TIA-598-C

It defines identification schemes for fibers, buffered fibers, fiber units, and groups of fiber units within outside plant and premises

The NEC and Optical Fiber Cable and Raceway Rules

Nonconductive optical fiber cables are permitted to occupy the same tray or raceway with power conductors and Class

ANSI/TIA-598-C Color Code and Cable Markings for Fiber Optic Cabling

Open up a fiber optic cable containing 12, 24, or even 144 individual fibers, and you'll see a rainbow of colored buffer

HS Code Fiber Optic Cable Classification: A Comprehensive Guide

HS Code Classification for Fiber Optics Products: A Comprehensive Guide Fiber optics technology has revolutionized

A Beginner's Guide To Fiber Color Code: Simplifying Optical

Fiber optic cables play a vital role in optical networking, yet the complexity of fiber color codes often leaves technicians

Fiber-optic cable

Fiber-optic cable A TOSLINK optical fiber cable with a clear jacket. These cables are used mainly for digital audio connections

Fiber Optic Cable Color Codes

Fiber Optic Cable And Connector Color Codes Color codes are used in fiber optics to identify fibers, cables and connectors. In the

TIA-598-C

The Telecommunications Industry Association 's TIA-598-C Optical Fiber Cable Color Coding is an American National Standard that

Color_Codes_of_Optical_Fiber copy

Optical Fiber Colors and Color Codes Like electrical wires, optical fibers are color coded for field recognition during cable installation.

Decoding the Fiber Optic Color Codes

By Steve Harris – In the intricate web of modern optical telecommunication networks, clarity and consistency are paramount when

Complete Guide on Fiber Optic Color Code | Network Drops

Learn the fiber optic color code system, its importance, and how to correctly identify wires for easy and efficient

Understanding Fiber Optic Color Codes: A Simple Guide

Fiber optic cable color codes are an industry standard meant to identify each fiber within a fiber optic cable or specify

HS Code 90011090

Optical fibres, optical fibre bundles and cables (excl. made up of individually sheathed fibres of heading 8544 and image conductor

Fiber Optic Color Code Chart For 144 and 288 Count Cables

Fiber Optic Color Code Chart For 144 and 288 Count Cables This is an update on a post we made a few years ago for a 144 count

What Do All The Colors Mean? Fiber Optic Color Code Explained

Fiber optic cable color code is a system that helps us distinguish fiber types visually from the colored fiber jacket,

Fiber Color Code Guide | Fiber Optic Cable Color Coding Standards

Learn the complete fiber color code guide. Understand fiber optic cable color coding standards and charts to simplify

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