

Optical Module Wavelength Reference Table



AI Overview

Optical modules operate at specific wavelengths, typically ranging from 850 nm to 1610 nm, with standardized color codes and types for easy identification.

Module Type	Wavelength (nm)	Typical Use	Pull Tab Color (if applicable)
SFP (1G)	850	Short-range multimode fiber	Often gray or blue
SFP (1G)	1310	Medium-range single-mode fiber	Green
SFP (1G)	1490	GPON downstream	Yellow
SFP+ (10G)	850	Short-range multimode fiber	Gray
SFP+ (10G)	1310	Medium-range single-mode fiber	Green
CWDM	1270–1610 (18 channels)	Coarse WDM networks	Unique color per wavelength
BiDi	1310/1490	Bidirectional single fiber	Color-coded per Tx/Rx wavelength

Notes: CWDM modules use 18 distinct wavelengths between 1270 nm and 1610 nm, each with a unique pull-tab color for easy identification and troubleshooting in dense networks. BiDi modules transmit and receive on a single fiber using different wavelengths for each direction, simplifying fiber deployment. Pull-tab colors are standardized by manufacturers like LINK-PP to ensure consistent identification across optical networks.

Standard Spectral Lines for Optical Reference

Element	Line	Wavelength (nm)	Use
Hydrogen	C	656.3	Refractive index specification
Hydrogen	F	486.1	Optical glass characterization
Helium	d	587.6	Standard reference for optics
Helium-Neon Laser	Red	632.8	Laser calibration
Helium-Neon Laser	Green	543.5	Laser calibration

These lines are commonly used in optical metrology, refractive index measurements, and laser calibration.

Practical Applications

Network deployment: Matching module wavelength to fiber type ensures optimal transmission distance and minimal signal loss.

Troubleshooting: Color-coded...

Article Content

Exploring the Correlation Between Optical Module Wavelength and ...

This article delves into the correlation between optical module wavelength and transmission distance, shedding light on the complexities that impact the efficiency of data transmission.

The Ultimate Reference Table for SFP & QSFP Optical Transceiver ...

The definitive guide to SFP, QSFP, and QSFP-DD standards for 2025. Compare 400G/800G optics, understand PAM4 complexity, and master QSFP-DD vs OSFP deployment

The Wavelength-Shifting Optical Module

The Wavelength-shifting Optical Module (WOM) is a novel photosensor concept for the instrumentation of large detector volumes with single-photon sensitivity. The key objective is to improve the signal-to

DWDM Wavelength Reference Table

This wavelength reference table covers C-band and L-band wavelength range CH#: C/L stands for channels on ITU grid and H/Q denotes channels at 50 GHz offset from ITU grid

Understanding Wavelengths In Fiber Optics

Plastic optical fiber (POF) is made from materials that have lower absorption at shorter wavelengths, so red light at 650 nm is commonly used with POF, but at 850 nm attenuation is still acceptable so short

How To Identify The Wavelength Of SFP CWDM Optical Module

This blog ETU-LINK will show you how to identify the wavelength of CWDM optical module through the color of the pull ring. We all know that CWDM has a total of 12 wavelengths,with

The Optical Radiation Wavelength Range Gigahertz-Optik

1.1 The optical radiation wavelength range According to DIN 5031, the term “optical radiation” refers to electromagnetic radiation in the wavelength range between 100 nm and 1 mm. The terms “light” and

SFP Optical Module Specifications: Standards & Performance

This guide dives into the key SFP Optical Module Specifications that engineers, network architects, and procurement professionals rely on when evaluating optical transceivers.

Specifications For Fiber Optic Networks

The Fiber Optic Association - Reference Guide Specifications For Fiber Optic Networks
Per current standards and specs, maximum supportable distances and attenuation
for optical fiber applications

Reference Guide to Fiber Optic Testing

Features found on more sophisticated power meters may include temperature stabilization, the ability to calibrate to different wavelengths, the ability to display the power relative to “reference” input, the

RefractiveIndex

It's also used in thin-film optics, often as antireflection coatings on optical devices. Beyond its optical applications, silicon dioxide finds use in ceramics, construction, and even as a food additive.

Introduction to Optical Fibers, dB, Attenuation and Measurements

This document is a quick reference to some of the formulas and important information related to optical technologies. This document focuses on decibels (dB), decibels per milliwatt (dBm),

Optical Module Wavelength Color Reference Table

This article provides a professional guide on transceiver pull tab color codes by wavelength—spanning SFP, SFP+, CWDM, and BiDi modules—and introduces how LINK-PP standardizes color matching

How to Identify Optical Transceiver Wavelengths by Pull-Tab Color

One key method of visual identification is the color of the transceiver's pull tab, which corresponds to its wavelength. This article provides a professional guide on transceiver pull tab color

C-Band and L-Band Frequency Charts | PDF | Wavelength Division

The document lists channel codes, frequencies, and wavelengths for C-band and L-band wavelengths used in telecommunications. It provides a table with over 200 entries specifying the channel code,

Optical fiber tables and chromatic dispersion specs

In this table, 802.3 has analyzed available information on connector loss, optical return loss and PMD in order to define optical channel characteristics for those parameters that are specific to these PMDs.

The Most Comprehensive Guide Of Optical Modules

Explore the ultimate guide to optical modules. Learn types, functions, performance metrics & how to choose the right module for your fiber network.

Optical Reference Material

Calculates angle of Lloyd mirror setup for specified FBG periods. Look up Tables
Complex Index of Refraction Look-up Utility Returns the effective index of a certain
material at a specified wavelength.

What Is an Optical Module and Its FAQs (V200)

What Is an Optical Module and Its FAQs (V200) Describes what an optical module is
and FAQs, including the fundamentals, appearance and structure, key performance
counters, common types,

ISO 7944:2024

Optics and photonics — Reference wavelengths This document specifies reference
wavelengths to be used for the characterization of optical materials, optical systems
and instruments, and ophthalmic

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ITU Standard Wavelength Reference Table

-Corresponding PM Fiber each wavelength, ie, PM1550 Fiber for 1550nm, PM1310
Fiber for 1310nm and PM980 Fiber for 980-1120nm, PM640 Fiber for 630nm, PM460
Fiber for 460nm

ISO 7944:2024 (en), Optics and photonics — Reference wavelengths

1 Scope This document specifies reference wavelengths to be used for the
characterization of optical materials, optical systems and instruments, and
ophthalmic lenses. It defines the associated principal

SFF-8024 SFF Module Management Reference Code Tables

The following tables provide codes for the various electrical interface and optical or
other media interface specifications that may apply to pluggable modules.

Contact Us

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