

# What is 850nm optical module



---

## Overview

850nm: SFP modules operating at 850nm wavelength are typically used for shorter-distance transmissions over multimode fiber (MMF). When engineers search for “SFP wavelength,” they are typically trying to answer a practical deployment question: Which optical wavelength should I use—850 nm, 1310 nm, or 1550 nm—and why does it matter?

The answer directly affects fiber compatibility, transmission distance, link stability, and. The main difference between SFP modules operating at 1310nm and 850nm is the wavelength at which they transmit optical signals. Here's a breakdown of the key distinctions between SFP. The three most common wavelengths used in modern optical networks are 850 nanometers (nm), 1310nm, and 1550nm. Each wavelength window has distinct physical properties, advantages, limitations, and ideal use cases that make it suitable for particular applications.



## Article Content

May 26, 2026

### 850nm SFP Transceiver Guide: Uses, Specs & Fiber Types

An 850nm SFP (Small Form-factor Pluggable) transceiver is a hot-swappable optical module designed to support Ethernet data transmission over multimode fiber (MMF).

Jun 05, 2026

### Explained: Optical Module 850nm Standards, Composition, and ...

An 850nm optical module is a key component in fiber optic communication systems, responsible for converting electrical signals into optical signals (and vice versa) for high-speed data transmission ...

Oct 07, 2025

### Understanding Optical Modules: Working Principles, ...

Explore the working principles, structures, and performance metrics of optical modules, essential components of optical fiber communication systems. Learn ...

Dec 29, 2025

### 850nm vs 1310nm vs 1550nm: Choosing the Right Transceiver ...

Learn when to use wavelength 850nm 1310nm transceiver optics, compare real reach and power limits, and avoid common link failures with field tips.

Oct 09, 2025

### SFP Wavelength Guide: 850nm vs. 1310nm vs. 1550nm

The selected wavelength determines fiber compatibility. 850 nm SFP modules are designed for multimode fiber (MMF), where modal dispersion limits transmission distance but ...

Jan 05, 2026

### What is the difference between SFP 1310nm and 850nm?

The main difference between SFP modules operating at 1310nm and 850nm is the wavelength at which they transmit optical signals. The wavelength is a critical parameter in fiber optics and affects the ...

Apr 24, 2026

### Understanding Optical Modules: Working Principles, Structures, and ...

Explore the working principles, structures, and performance metrics of optical modules, essential components of optical fiber communication systems. Learn about key indicators such as average ...

Dec 14, 2025

### 850nm Fiber Optic Module | Optomarine

Optomarine's 850nm optical module for communication links is excellent for long-distance transmission and is the best solution to prevent malfunctions due to noise in industrial sites. This product transmits ...

Jan 11, 2026

### What Does “nm” in SFP Mean?

Each wavelength used in SFP optical modules has distinct characteristics and advantages, making them suitable for various applications. Understanding these differences helps network designers choose ...

Sep 24, 2025

The relationship between wavelength and transmission distance of ...

The commonly used wavelengths in optical fibers are 850nm, 1310nm, and 1550nm, which have longer waveforms and therefore have relatively less attenuation. Moreover, these three wavelengths have ...

Jul 28, 2025

### Common Optical Wavelengths: 850nm, 1310nm, 1550nm – ...

First Window (850nm): The earliest window used for fiber optic communications, centered around 850nm. This window has higher attenuation compared to longer wavelengths but was the first ...

## Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://ntmmgroup.co.za>

Email: [sales@ntmmgroup.co.za](mailto:sales@ntmmgroup.co.za)

Phone: +27 82 471 2596

Address: Unit 7, Optic Park, 24 High-Tech Lane, Century City, Cape Town,  
7441, South Africa

This document is for informational purposes only. Specifications subject to  
change without notice.

