

What optical module should be used for a 15km range

Overview

SFP 155M 15km is a series of SFP with speed rate up to 155Mbps and transmission distance up to 15km. The Small Form Factor Pluggable (SFP) transceiver module is specifically designed for high performance integrated duplex data link over single mode optical fiber. Long-distance variants, typically referred to as LX, EX, ZX, or ER/LR SFPs, are engineered with higher optical power budgets and longer wavelength. 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. Choosing the right optical module requires evaluating multiple factors, including fiber type, wavelength (850nm vs. 1310nm), link budget, and real installation conditions, rather than relying solely on datasheet specifications. In this guide, we will break down what SFP distance really means, how. In optical communication, SR and LR SFP modules are among the most widely used solutions, mainly distinguished by their transmission distance, wavelength, and the type of fiber they require. In this article, we'll show you 10 simple yet extremely effective rules to help you get the maximum range from your SFP+ connections.



Article Content

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OC-3/STM-1 SFP 20km Transceiver

EDGEOPTIC OC-3/STM-1 SFP 20km transceiver: 20km single-mode fiber, 1310nm wavelength, 19dB link budget, 155Mbps. Carrier

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155Mbps 15km SFP Optical Transceiver | Cutting-Edge Optical ...

SFP 155M 15km is a series of SFP with speed rate up to 155Mbps and transmission distance up to 15km. The Small Form Factor

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10G Optical Modules: Short-Range vs. Long-Range

This article explores the differences between long-range and short-range 10G modules,

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10G Optical Modules: Short-Range vs. Long-Range

Understand short-range and long-range 10G optical modules in terms of distance, budget,

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Basic Knowledge Of Optical Module Transmission Distance

Generally, short-range modules can reach up to 2 km, medium-range modules range from 10 km to 20 km, and long-range modules

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SFP Optical Transceiver Modules for Long Distance: A Complete

Discover everything you need to know about SFP optical transceiver modules for long-distance fiber transmission.

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15km Optical Transceiver Buying Guide

The phrase "15km transceiver" refers to an optical module optimized for intermediate-to-long reach (Intermediate Reach / LR),

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

Engineering conclusion: 1310nm SFP singlemode modules provide a practical and reliable solution for 10–20 km

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Why the 15Km FPV Optical Fiber Image Data Module Is My

This blog details real-world experience deploying a 15KM FPV optical fiber image data module for reliable, ultra-low-latency aerial

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SFP Optical Module Selection Guide for 2025: Key Factors Explained

Explore our comprehensive SFP optical module selection guide for 2025. Learn about crucial factors like data rate,

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The Most Comprehensive Guide Of Optical Modules

Explore the ultimate guide to optical modules. Learn types, functions, performance metrics

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Multi-mode optical fiber

Multi-mode optical fiber is a type of optical fiber mostly used for communication over short distances, such as within a building or on a

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SFP Distance Explained: Real-World Range, Limits, and Optics

Understand SFP distance, fiber optic range, and real-world limits of SR/LR modules. Learn how wavelength, fiber

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Reach Further, Faster: Your Ultimate Guide to Long-Range 10G Optical ...

Long-range 10G optical modules enable high-speed data over distances up to 80km. Learn about types, specs,

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3~15KM LASER RANGEFINDER MODULE

Laser rangefinder module can be applied to ground vehicle-mounted, light portable, airborne, naval and space exploration and other

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What Are the Key Parameters of Optical Modules

Understand the key parameters of optical modules, including transmission rate, distance, wavelength, and fiber

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Exploring the Correlation Between Optical Module Wavelength and ...

The operating wavelength of an optical module is a range measured in nanometers (nm). Optical modules can be

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Explanation of Optical Module Parameters

In summary, we should select the appropriate optical module based on the actual usage scenario, including the

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What is the range of SFP in KM?

The range of an SFP (Small Form-Factor Pluggable) module can vary depending on the specific type and intended

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Exploring the Correlation Between Optical Module Wavelength and ...

This article delves into the correlation between optical module wavelength and transmission distance, shedding light

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LoRa Module: Transmit Signals upto 15Km | No Legal Issues

The LoRa module is an electronic device that uses wireless communication technology to transmit and receive data.

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Best Long Range Drones 2026 (15-200km): Expert Tested & Review

Our in-depth review compares 9 long range drones, considering factors like range, battery life, camera quality, and more.

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Understanding Transmission Distance: Short-Range vs Long-Range ...

Understanding Transmission Distance: Short-Range vs Long-Range Optical Modules!? Do you really need a 10km

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Eye-safe 1535nm 15km rangfinder

ELRF-O52 laser range finder module is developed based on the 1535nm erbium glass laser independently developed by Lumispot. It

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(Promotion)15km Optical Fiber Image Data Module Relay

The Optical Fiber Image Data Module Relay Extender Module is a game-changer for those who demand reliable and long-distance

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BlueOptics 10G SFP+ Transceiver | How to Achieve Maximum Distance!

In this article, we'll show you 10 simple, effective rules to help you get the maximum range from your SFP+

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SFP Optical Module Transmission Distance Range | Yingda

SFP+ Optical Module: Offers the widest range of transmission distances, from 300 meters to 120 kilometers. The

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NOVALYNX™ | Jam-Proof UAV Communication Systems – Fiber Optic

Product Overview: The FO-15KM Fiber Optic Reel Kit offers reliable long-distance communication up to 15 kilometers. It is designed

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AN021: RF Module Range Calculation And Test

Introduction Radiocrafts offers a series of RF Modules with integrated wireless communication protocols that are easy to use in a

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SFP Distance Explained: Real-World Range, Limits, and Optics

An 850nm SR module is optimized for multimode fiber and short-range transmission. A 1310nm LR module is

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Comprehensive Knowledge Of Long-distance Optical Modules-ETU

The common specifications of long-distance optical modules include 40km, 80km, 120km, etc. Attention for using long

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How Far Can a Fiber Optic Cable Be Run? Distance Guide

Fiber optic cables can run up to 80 km without a repeater. Learn exact limits by cable type, application, and how to

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What are the detailed parameters of the optical module

Transmission distance: Transmission distance refers to the distance that optical signals can be directly transmitted

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Guidelines On What Loss To Expect When Testing Fiber Optic Cables

Guidelines On What Loss To Expect When Testing Fiber Optic Cables To be able to judge whether a fiber optic cable plant is good,

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SFP Optical Transceiver Modules for Long Distance: A

Overview: Why Long-Range SFP Modules Matter in Modern Networks In an era where

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SFP Optical Module Selection Guide for 2025: Key

Explore our comprehensive SFP optical module selection guide for 2025. Learn about

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How to Estimate an Optical Module's Transmission Distance | FiberMall

Optical modules distinct from one another in their transmission distance, a feature that should be taken into account in

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