


TP-LINK[®] User Guide

TL-SM221A / TL-SM221B

100Base-BX WDM Bi-Directional SFP Module



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FCC STATEMENT



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference.

- 2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CE Mark Warning



This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

SAFETY NOTICES

- Do not use this product near water, for example, in a wet basement or near a swimming pool.
- Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

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Package Contents

The following items should be found in your package:

- Ten 100Base-BX WDM Bi-Directional SFP Modules
- Ten Static Shielding Bags
- This User Guide

Note:

Make sure that the package contains the above items. If any of the listed items are damaged or missing, please contact with your distributor.

Chapter 1. Introduction

TL-SM221 Series 100Base-BX WDM Bi-Directional SFP Module is a hot pluggable 3.3V SFP (Small-Form-Factor) Bi-Directional transceiver module, which adopts WDM (Wavelength Division Multiplexing) technology that increases the information carrying capacity of fiber via multiplex transmit and receive signals at different wavelengths on single strand cable. It's designed expressly for high-speed communication applications that requires rates of up to 155Mbit/sec. It can effectively extend the diameter and bandwidth of the workgroup. TL-SM221 Series SFP Module can be installed inside the Switch which supplies power directly, it also can cooperate with TP-LINK products as the table below:

SFP Module	Cooperated TP-LINK products
TL-SM221A	TL-SG2216WEB Web Smart Gigabit Switch
TL-SM221B	TL-SG2224WEB Web Smart Gigabit Switch

 **Note:**

If any abnormal status occurs when the light modules of the device are hot-switched between 1000Mbps and 100Mbps, please try to power on the device again.

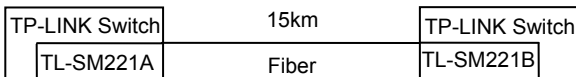
Chapter 2. Features of the product

- Single-mode WDM Bi-Directional SFP Module operate at 1550nm/1310nm
- Bi-Directional transmit with one fiber which can save cost
- Single LC receptacle optical interface compliant
- The maximal transmission distance of Single-mode WDM Bi-Directional SFP Module is 15km
- Hot-pluggable
- RoHS Compliant
- International Class 1 laser safety certified

Chapter 3. Installation Guide

The following will take the installation procedure in the switch for example.

- Push the SFP Module into Switch along the track smoothly
- Plug fiber into the module, without any configuration manually, the SFP Module can work.



Warning:

1. In order to avoid ESD (ElectroStatic Discharge), do not touch the output pins on the module with your hand.
2. Avoid directly looking towards the output port of the light modules and never locate the working fiber pointing to the eyes, otherwise may cause injury to your eyes.

Specifications

Normal	TL-SM221A	TL-SM221B
Wave Length	Tx:1550nm	Tx:1310nm
	Rx:1310nm	Rx:1550nm
Standards and Protocols	IEEE 802.3ah 100Base-BX, CSMA/CD, TCP/IP	
Cable	Single-mode Fiber	
Fiber Type	9/125 um Single-mode	
Max. Cable Length	15km	
Data Rate	155Mbps	
Port Type	LC	
Power Support	3.3V	
Safety & Emission	FCC, CE	

Environmental and Physical	
Operating Temp.	0°C~70°C (32°F~158°F)
Storage Temp.	-40°C~80°C (-40°F~176°F)
Operating Humidity	10%~90% RH, Non-condensing
Storage Humidity	5%~90% RH, Non-condensing