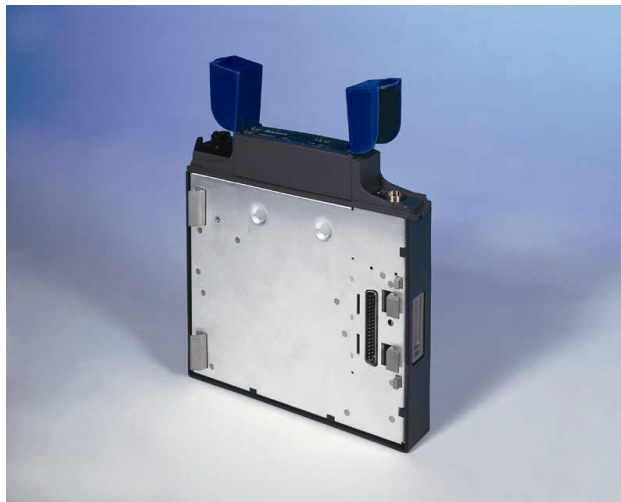
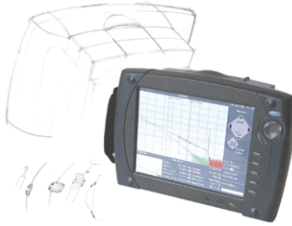




# Agilent N3940AA Optical Switch Module for Modular Network Tester

## *The Perfect Fit*

### Technical Specifications



Specifications describe the instrument's warranted performance, measured with typical PC-type connectors. Uncertainties due to the refractive index of the fiber are not considered. Characteristics and typical data provide information about the non-warranted instrument performance.

Agilent OTDRs are produced to the ISO 9001 international quality system standard as part of Agilent's commitment to continually increasing customer satisfaction through improved quality control.



**Agilent Technologies**

## Agilent N3940AA 1x12 Optical Switch Module

### Description

The Agilent 1x12 Optical Switch Module is designed to work in conjunction with N391x OTDR Test Engines on the Agilent Modular Network Tester. It is easily snapped onto the Modular Network Tester behind the OTDR module, for automated fast and accurate testing of cables with high fiber counts, such as ribbon fiber cables. For operation the OTDR port is connected to the input port of the switch.

The multifiber test, which is built into the Modular Network tester, switches the OTDR port to any of the 12 output ports on the switch, enabling up to 12 fibers to be tested and qualified in a row. The results are saved automatically. Each fiber can be programmed with 8 different settings, including wavelength, pulsewidth, range and averaging time. If you prefer not to use the automatic operation, you can also control the switch module manually through the Modular Network Tester.

### Features and Benefits

#### Universal Input Connector Interface

Agilent's universal connector interface lets you connect a large range of standard fiber optic connectors to the input port of the switch module. The connector interfaces are easy to attach, even when working on site, and once removed, the fiber ferrule is easily accessible for cleaning.

#### Ribbon Fiber Support

Bare ribbon fibers can be connected via the ribbon fiber pigtail N3989AA to the MPO port. The MPO output connector also has a moveable connector receptacle, to allow easy access to the MT ferrule, therefore making sure it's simple for you to maintain optimum cleanliness of the ribbon fiber connection. With tools that are used every single day it is inevitable that a connector will get scratched at some time. In the event of a scratched connector, the internal user-replaceable ribbon fiber patchcord can be used to replace the damaged connector interface on the spot, so you can continue working.



### Features:

- Fast automated fiber batch testing supported by Multi Fiber Test application
- User selection of 1 to 12 fibers to be tested
- Ribbon fiber testing support
- Snap-On switch module ready to go in seconds
- Innovative and first MPO connector for ribbon fiber with removable receptacle for perfect cleaning access
- User replaceable ribbon patchcord cartridge for quick and low cost MPO (MT) ferrule replacement
- Wide wavelength range from 1280nm to 1650nm
- Rugged module housing for outside plant operation

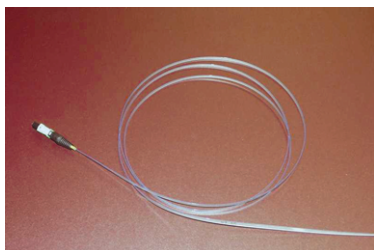
#### N3991A User replaceable Ribbon Fiber Patchcord cartridge



#### N3989AX MPO Ribbon Fiber Fan-Out cable with 12 connectors



## N3989AA MPO Ribbon Fiber Patchcord with pigtail



## Specifications

All typical values at 1310nm, 1550nm, 1625nm

<b>Configuration</b>	1x12
<b>Wavelength range</b>	1280-1650 nm
<b>Insertion loss<sup>1</sup></b>	2.7 dB
<b>Polarization depended loss</b>	±0.05dB
<b>Return Loss</b>	
• <b>Straight Physical Contact</b>	40dB
• <b>Angled Physical Contact</b>	50dB (max)
<b>Repeatability<sup>2</sup></b>	0.02dB
<b>Crosstalk</b>	50dB

## General

<b>Operating temperature</b>	0°C to 50°C
<b>Storage temperature</b>	-40°C to +60°C
<b>Dimensions</b>	217mm H, 212mm W, 33mm D
<b>Weight</b>	1.4kg (3.1lbs)
<b>Optical Input power</b>	200mW (+23dBm max)
<b>Power Consumption</b>	1W
<b>Port to port switching speed</b>	100ms

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<sup>1</sup> The insertion loss is specified without input and output connectors. The input connector adds typ 0.2dB. The MPO output connector adds typ. 0.5dB

<sup>2</sup> With instrument in a static position at a constant temperature of 25°C

## Ordering Information

Agilent Product	Description
N3940AA Option 021	1 X 12 Optical Switch Module with straight physical input contact
N3940AA Option 022	1 X 12 Optical Switch Module with angled physical input contact

N3989AA	MPO Ribbon Fiber patchcord with pigtail
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N3989AB Option 021	MPO ribbon fiber Fan-Out cable to 12 SC/PC connectors with straight physical contact
N3989AB Option 022	MPO ribbon fiber Fan-Out cable to 12 SC/APC connectors with angled physical contact
N3989AC Option 021	MPO ribbon fiber Fan-Out cable to 12 FC/PC connectors with straight physical contact
N3989AC Option 022	MPO ribbon fiber Fan-Out cable to 12 FC/APC connectors with angled physical contact

N3991A	User replaceable Ribbon Fiber Patchcord cartridge
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### Accessories Supplied:

- Each 1 X 12 Optical Switch Module ordered with Option 021 is provided with 81000FI (FC/PC) and 81000 KI (SC) connector Interface
- Each 1 X 12 Optical Switch Module ordered with Option 022 is provided with 81000NI (FC/APC) and 81000 KI (SC) connector Interface
- User's Guide
- Support CD
- User replaceable Ribbon Fiber Patchcord cartridge

### Connector Interfaces

Agilent Model No.	Description
81000WI	Biconic
81000SI	DIN
81000HI	E2000
81000NI	FC/APC
81000FI	FC/PC
81000AI	HMS/10
81000GI	D4
81000KI	SC
81000VI	ST
81000LI	LC

### Localization:

Languages	Options
English localization	ABA
French localization	ABF
German localization	ABD
Simplified Chinese localization	AB2
Spanish localization *	ABE
Portuguese localization *	AB9
Traditional Chinese localization *	AB0
Japanese localization *	ABJ
Italian localization **	ABZ
Korean localization **	AB1
Russian localization **	ACB
Turkish localization **	AB8
Czech localization **	AKB
Polish localization **	AKD

\* Planned availability for August 2002

\*\* For availability please contact your Agilent representative

### Service and Support Options:

**R1280A** – Return to Agilent Warranty and Service Plan. Available for 36 months (3 years) or 60 months (5 years).

### Related Agilent Literature:

Title	Type of Literature	Part Number
N3900A Modular Network Tester	Brochure	5988-5065EN
N3900A Modular Network Tester	Datasheet	5988-5066EN
N391XX OTDR Test Engines for Modular Network Tester	Datasheet	5988-5067EN
N3988A Video Microscope for Modular Network Tester	Datasheet	5988-5069EN

### Training Material:

Title	Part Number
Agilent Cleaning Procedures for Lightwave Test and Measurement Equipment	N3900-90AJ1
Agilent OTDR 's Pocket Guide	E6000-91017

### Web Based Training

OTDR Solution User's Course

To take this training, go to:

<http://www.agilent.com/cm/service/education.shtml>

## **Agilent Technologies Test and Measurement Support, Services, and Assistance**

Agilent Technologies aims to maximize the value you receive, while minimizing your risk and problems. We strive to ensure that you get the test and measurement capabilities you paid for and obtain the support you need. Our extensive support resources and services can help you choose the right Agilent products for your applications and apply them successfully. Every instrument and system we sell has a global warranty. Support is available for at least five years beyond the production life of the product. Two concepts underlie Agilent's overall support policy: "Our Promise" and "Your Advantage."

### **Our Promise**

Our Promise means your Agilent test and measurement equipment will meet its advertised performance and functionality. When you are choosing new equipment, we will help you with product information, including realistic performance specifications and practical recommendations from experienced test engineers. When you use Agilent equipment, we can verify that it works properly, help with product operation, and provide basic measurement assistance for the use of specified capabilities, at no extra cost upon request. Many self-help tools are available.

### **Your Advantage**

Your Advantage means that Agilent offers a wide range of additional expert test and measurement services, which you can purchase according to your unique technical and business needs. Solve problems efficiently and gain a competitive edge by contracting with us for calibration, extra-cost upgrades, out-of-warranty repairs, and on-site education and training, as well as design, system integration, project management, and other professional engineering services. Experienced Agilent engineers and technicians worldwide can help you maximize your productivity, optimize the return on investment of your Agilent instruments and systems, and obtain dependable measurement accuracy for the life of those products.

**By internet, phone, or fax, get assistance with all your test & measurement needs**

**Online assistance:**  
**[www.agilent.com/comms/otdr](http://www.agilent.com/comms/otdr)**

### **Phone or Fax**

United States:  
(tel) 1 800 452 4844

Canada:  
(tel) 1 877 894 4414  
(fax) (905) 206 4120

Europe:  
(tel) (31 20) 547 2323  
(fax) (31 20) 547 2390

Japan:  
(tel) (81) 426 56 7832  
(fax) (81) 426 56 7840

Brasil  
(tel) (11) 4197 3600  
(fax) (11) 4197 3800

Latin America:  
(tel) (305) 269 7500  
(fax) (305) 269 7599

Australia:  
(tel) 1 800 629 485  
(fax) (61 3) 9210 5947

New Zealand:  
(tel) 0 800 738 378  
(fax) 64 4 495 8950

Asia Pacific:  
(tel) (852) 3197 7777  
(fax) (852) 2506 9284

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