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Data Sheet

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AGILENT / KEYSIGHT

Agilent/Keysight 70951A – Optical Spectrum Analyzer Module

Agilent HP 70951A Optical Spectrum Analyzer Module The HP 70951A is the MMS optical spectrum analyzer plug-in used in the HP 71451A system. OEM 5963-7040E family tables for 71450B/71451B/71452B assign the calibrated 600 to 1700 nm diffraction-grating OSA performance and 8 kg 4/8-width module mechanics to this module class. Modular MMS spectral measurements of lasers amplifiers and components when installed in an MMS mainframe and display. Resolution bandwidths less than 0.08 nm to 10 nm The HP 70951A is the MMS optical spectrum analyzer plug-in used in the HP 71451A system. OEM 5963-7040E family tables for 71450B/71451B/71452B assign the calibrated 600 to 1700 nm diffraction-grating OSA performance and 8 kg 4/8-width module mechanics to this module class. Modular MMS spectral measurements of lasers amplifiers and components when installed in an MMS mainframe and display. Resolution bandwidths less than 0.08 nm to 10 nm Span Range: 0.2 nm to full range and zero span



MODEL

**Agilent / Keysight
70951A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

70951A

LISTING

<https://aumictechlabs.com/products/70951a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 70951A is a plug-in optical spectrum analyzer module for the 70000 series modular measurement systems. It delivers spectral analysis of optical power versus wavelength

across a wide spectral window, enabling precise characterization of optical components, amplifiers, LEDs, DFB lasers, and Fabry-Perot lasers. The half-width module format integrates into standard EIA rack mainframes with full MSIB and GPIB control.

Technical Specifications

Wavelength Range: 600 nm to 1700 nm Resolution Accuracy: $\pm 20\%$ for wavelengths greater than 0.5 nm between 1250 nm and 1600 nm Dynamic Range: -55 dBm at 0.5 nm from the peak Sensitivity: Better than -85 dBm Operating Temperature: 0° to +55° C Storage Temperature: -30° to +71° C Module Weight: 8 kg (17.6 lb) Environmental Compliance: MIL-T-28800D class 5 shock and vibration; CISPR Pub. 11 and MIL-STD 461B EMI standards

Key Features

Half-width module format fits directly into 70000 series mainframes Modular System Interface Bus (MSIB) and GPIB connectivity for automated control Integral bails and handles support both benchtop and rack-mount operation Optional ADC Sync and Pulsed Current capability (Option 001) Built-in White Light Source available (Option 002) Calibration service available

Typical Applications

Spectral power measurements versus wavelength Optical component characterization Optical amplifier analysis LED, DFB laser, and Fabry-Perot laser measurement

Compatibility & Integration

Designed for integration into Agilent/Keysight 70000 series mainframes including the 70004A display and 70001A mainframe. The module receives power, cooling, and digital communication through the host mainframe. MSIB provides high-speed inter-module communication; GPIB enables remote instrument control and data acquisition.

Features & description

From manufacturer datasheet

Polarization Dependence 1250 To 1600 nm: plus or minus 0.5 dB

Sensitivity 1200 To 1600 nm: minus 90 dBm Sensitivity 900 To 1200 nm: minus 75 dBm Sensitivity 750 To 900 nm First Order: minus 65 dBm Sensitivity 1600 To 1700 nm: minus 80 dBm Dynamic Range 0.1 nm 600 To 1700 nm: minus 50 dB at greater than or equal to plus or minus 1 nm Dynamic Range 0.1 nm 1250 To 1600 nm: minus 55 dB at greater than or equal to plus or minus 0.5 nm Compression Level 0.05 dB: greater than or equal to 10 dBm Maximum Displayed Level: greater than or equal to 15 dBm Maximum Safe Input: plus 20 dBm per 5 nm plus 30 dBm total Input Return Loss Pc Or Hms 10: greater than 35 dB Optical Input Fiber: multimode standard 9 um fiber Module Form Factor: standard 4/8 width MMS module Module Mass: 8 kg Operating Temperature: 0 to plus 55 C Storage Temperature: minus 40 to plus 71 C Humidity: less than 95 percent RH non condensing Model: 70951A Host System Example: HP 71451A Notes Optical and mechanical rows from HP 71450B/71451B/71452B Technical Specifications 5963-7040E OSA family tables used for the 70951A/71451A class.

70951A Characteristics / Specifications

PARAMETER	VALUE
Wavelength Range	600 to 1700 nm
Span Range	0.2 nm to full range and zero span
Absolute Wavelength Accuracy	plus or minus 1 nm
Absolute Accuracy After User Cal	plus or minus 0.3 nm
Span Linearity Spans Less Than 40 nm	plus or minus 0.05 nm
Wavelength Reproducibility 1 Minute	plus or minus 0.005 nm
Tuning Repeatability	plus or minus 0.005 nm
Resolution Bandwidth Fwhm	less than 0.08 nm and 0.1 to 10 nm in 1 2 5 sequence
Resolution Accuracy 0.5 nm Or Greater 1250 To 1600 nm	plus or minus 20 percent
Amplitude Calibration Accuracy At Minus 30 dBm 1300 nm	plus or minus 0.5 dB
Scale Fidelity Autorange Off	plus or minus 0.1 dB
Display Resolution Log	0.01 dB
Flatness 1290 To 1330 nm	plus or minus 0.25 dB
Flatness 1530 To 1570 nm	plus or minus 0.25 dB
Flatness 1250 To 1600 nm	plus or minus 1 dB
Polarization Dependence 1250 To 1600 nm	plus or minus 0.5 dB
Sensitivity 1200 To 1600 nm	minus 90 dBm
Sensitivity 900 To 1200 nm	minus 75 dBm
Sensitivity 750 To 900 nm First Order	minus 65 dBm
Sensitivity 1600 To 1700 nm	minus 80 dBm
Dynamic Range 0.1 nm 600 To 1700 nm	minus 50 dB at greater than or equal to plus or minus 1 nm
Dynamic Range 0.1 nm 1250 To 1600 nm	minus 55 dB at greater than or equal to plus or minus 0.5 nm
Compression Level 0.05 dB	greater than or equal to 10 dBm
Maximum Displayed Level	greater than or equal to 15 dBm

PARAMETER	VALUE
Maximum Safe Input	plus 20 dBm per 5 nm plus 30 dBm total
Input Return Loss Pc Or Hms	greater than 35 dB
Optical Input Fiber	multimode standard 9 um fiber
Module Form Factor	standard 4/8 width MMS module
Module Mass	8 kg
Operating Temperature	0 to plus 55 C
Storage Temperature	minus 40 to plus 71 C
Humidity	less than 95 percent RH non condensing
Model	70951A
Host System Example	HP 71451A
Bandwidth	Fwhm: less than 0.08 nm and 0.1 to 10 nm in 1 2 5 sequence
Return loss	Pc Or Hms 10: greater than 35 dB

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	minus 40 to plus 71 C
Operating temperature	0 to plus 55 C
Operating Temperature	0 to plus 55 C
Humidity	less than 95 percent RH non condensing
Model	70951A
Host System Example	HP 71451A Notes Optical and mechanical rows from HP 71450B/71451B/71452B Technical Specifications 5963-7040E OSA family tables used for the 70951A/71451A class.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

performance and 8 kg 4/8-width module mechanics to this module class.

Applications

Modular MMS spectral measurements of lasers amplifiers and components when installed in an MMS mainframe and display.

Key Features

Diffraction grating OSA module for MMS

600 to 1700 nm calibrated coverage

Resolution bandwidths less than 0.08 nm to 10 nm

User wavelength calibration path

Standard 4/8 width MMS module

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Wavelength Range	600 to 1700 nm
Span Range	0.2 nm to full range and zero span
Absolute Wavelength Accuracy	plus or minus 1 nm
Absolute Accuracy After User Cal	plus or minus 0.3 nm
Span Linearity Spans Less Than 40 nm	plus or minus 0.05 nm
Wavelength Reproducibility 1 Minute	plus or minus 0.005 nm
Tuning Repeatability	plus or minus 0.005 nm
Resolution Bandwidth Fwhm	less than 0.08 nm and 0.1 to 10 nm in 1 2 5 sequence

Resolution Accuracy 0.5 nm Or Greater 1250 To 1600 nm: plus or minus 20 percent

Amplitude Calibration Accuracy At Minus 30 dBm 1300 nm: plus or minus 0.5 dB

Specifications

PARAMETER	VALUE
Scale Fidelity Autorange Off	plus or minus 0.1 dB
Display Resolution Log	0.01 dB
Flatness 1290 To 1330 nm	plus or minus 0.25 dB
Flatness 1530 To 1570 nm	plus or minus 0.25 dB
Flatness 1250 To 1600 nm	plus or minus 1 dB
Polarization Dependence 1250 To 1600 nm	plus or minus 0.5 dB
Sensitivity 1200 To 1600 nm	minus 90 dBm
Sensitivity 900 To 1200 nm	minus 75 dBm

PARAMETER	VALUE
Sensitivity 750 To 900 nm First Order	minus 65 dBm
Sensitivity 1600 To 1700 nm	minus 80 dBm

Dynamic Range 0.1 nm 600 To 1700 nm: minus 50 dB at greater than or equal to plus or minus 1 nm
Dynamic Range 0.1 nm 1250 To 1600 nm: minus 55 dB at greater than or equal to plus or minus 0.5 nm

Specifications

PARAMETER	VALUE
Compression Level 0.05 dB	greater than or equal to 10 dBm
Maximum Displayed Level	greater than or equal to 15 dBm
Maximum Safe Input	plus 20 dBm per 5 nm plus 30 dBm total
Input Return Loss Pc Or Hms 10	greater than 35 dB
Optical Input Fiber	multimode standard 9 um fiber
Module Form Factor	standard 4/8 width MMS module
Module Mass	8 kg
Operating Temperature	0 to plus 55 C
Storage Temperature	minus 40 to plus 71 C
Humidity	less than 95 percent RH non condensing
Model	70951A
Host System Example	HP 71451A

Notes
Optical and mechanical rows from HP 71450B/71451B/71452B Technical Specifications 5963-7040E OSA family tables used for the 70951A/71451A class.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.