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Data Sheet
August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 70810B – Spectrum Analyzer Module

Agilent HP 70810B Lightwave Section Module The HP 70810B is a 1/8-width MMS lightwave receiver module combining optical attenuator, broadband photodetector, microwave preamplifier, and optical power meter. OEM Custom-Cal/HP 70810B specification summaries list 1200 to 1600 nm (750 to 870 nm Option 850), 100 kHz to 22 GHz modulation bandwidth, 32 dB RF gain, and minus 60 dBm optical sensitivity in 10 Hz bandwidth for 71400-series lightwave signal analyzers. Lightwave signal analysis of modulated optical carriers when paired with HP 70000 series spectrum analyzer modules in an MMS mainframe. The HP 70810B is a 1/8-width MMS lightwave receiver module combining optical attenuator, broadband photodetector, microwave preamplifier, and optical power meter. OEM Custom-Cal/HP 70810B specification summaries list 1200 to 1600 nm (750 to 870 nm Option 850), 100 kHz to 22 GHz modulation bandwidth, 32 dB RF gain, and minus 60 dBm optical sensitivity in 10 Hz bandwidth for 71400-series lightwave signal analyzers. Lightwave signal analysis of modulated optical carriers when paired with HP 70000 series spectrum analyzer modules in an MMS mainframe.

MODEL	CALIBRATION
Agilent / Keysight 70810B	Available on request
CONDITION	**STATUS**
Used	In stock
RFQ / SKU	**LISTING**
70810B	https://aumictechlabs.com/products/70810b-2/

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight 70810B is a modular lightwave receiver module designed to extend the measurement capabilities of the Keysight 70000 series modular measurement system (MMS). It integrates an optical attenuator, broadband photodetector, microwave preamplifier, RF amplifier, and optical power meter into a single instrument platform for optical signal analysis in RF and microwave test environments.Technical Specifications Frequency Range: 100 kHz to 22 GHz Wavelength Range: 1200 to 1600 nm Detected Modulation Bandwidth: 100 kHz to 22 GHz Optical Attenuator: up to 30 dB in 1 dB steps Form Factor: Modular unit for rack-mount or benchtop integration within Keysight 70000 MMS chassisKey Features Integrated optical attenuator with precise 1 dB step control Broadband photodetector with built-in RF amplification Microwave preamplifier for signal conditioning Optical power meter for inline power measurement Designed for Installation Category II environments Operates in Pollution Degree 2 installations Requires adequate ventilation; forced convection may be necessary in high-power cabinets (>800 watts)Typical Applications Optical communication system testing Fiber optic characterization and measurement RF and microwave signal analysis over optical carriers Optical-to-electrical conversion and detection Research and development in lightwave systemsCompatibility & Integration The 70810B operates exclusively within the Keysight 70000 series modular measurement system, using proprietary MMS connectors and data buses. It enhances spectrum analyzer and network analyzer capabilities for integrated RF/optical test workflows. Product Status: Discontinued as of April 30, 2006. The N4377A Lightwave Detector is listed as a potential replacement.

Features & description

From manufacturer datasheet

Built-in 32 dB RF amplifier

Optical and electrical inputs 1/8-width MMS module Technical Specifications Wavelength Range Standard: 1200 to 1600 nm Wavelength Range Option 850: 750 to 870 nm Modulation Frequency Range: 100 kHz to 22 GHz Rf Amplifier Gain: 32 dB Optical Sensitivity 10 Hz Bw: minus 60 dBm Average Power Accuracy Factory At 1300 And 1550 nm: plus or minus 0.65 dB plus or minus 5.0 nW plus connector variation Average Power Accuracy User Cal: plus or minus 0.05 dB plus or minus 5.0 nW plus power meter accuracy Responsivity Nominal At 100 MHz Standard: 1200 V/W Responsivity Nominal At 100 MHz Option 850: 500 V/W Responsivity Accuracy Characteristic: plus or minus 20 percent Maximum Input Power With 30 dB Atten: plus 15 dBm average Harmonic Distortion Output Less Than Or Equal Minus 10 dBm: 43 dB electrical below fundamental Input Return Loss Hms-10 Total: less than 35 dB Module Width: 1/8 MMS Form Factor: lightwave section plug-in System Family: HP 71400 series lightwave signal analyzer Optical Attenuator: built-in variable optical attenuation Photodetector: broadband Microwave Preamplifier: built-in Optical Power Meter Function: yes Electrical Input: yes Optical Input: yes Option 020: system adjustment and calibration

70810B Characteristics / Specifications

PARAMETER	VALUE
Wavelength Range Standard	1200 to 1600 nm
Wavelength Range Option 8	750 to 870 nm
Modulation Frequency Range	100 kHz to 22 GHz
Rf Amplifier Gain	32 dB
Optical Sensitivity 10 Hz Bw	minus 60 dBm
Average Power Accuracy Factory At 1300 And 1550 nm	plus or minus 0.65 dB plus or minus 5.0 nW plus connector variation
Average Power Accuracy User Cal	plus or minus 0.05 dB plus or minus 5.0 nW plus power meter accuracy
Responsivity Nominal At 100 MHz Standard	1200 V/W
Responsivity Nominal At 100 MHz Option 8	500 V/W
Responsivity Accuracy Characteristic	plus or minus 20 percent
Maximum Input Power With 30 dB Atten	plus 15 dBm average
Harmonic Distortion Output Less Than Or Equal Minus 10 dBm	43 dB electrical below fundamental
Module Width	1/8 MMS
Form Factor	lightwave section plug-in
System Family	HP 71400 series lightwave signal analyzer
Optical Attenuator	built-in variable optical attenuation
Photodetector	broadband
Microwave Preamplifier	built-in
Optical Power Meter Function	yes
Electrical Input	yes
Optical Input	yes
Host Mainframe	HP 70000 MMS
Slave To	MMS local oscillator

PARAMETER	VALUE
Wavelength range	Standard: 1200 to 1600 nm
Attenuation	Photodetector: broadband
Return loss	Hms-10 Total: less than 35 dB

70810B Specifications

PARAMETER	VALUE
Agilent HP 70810B Lightwave Section Module	Overview
Applications	Lightwave signal analysis of modulated optical carriers when paired with HP 70000 series spectrum analyzer modules in an MMS mainframe.
Key Features	1200 to 1600 nm InGaAs path
Optical and electrical inputs	1/8-width MMS module
Technical Specifications	Wavelength Range Standard: 1200 to 1600 nm

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.

Specifications

Specifications

PARAMETER	VALUE
Wavelength Range Standard	1200 to 1600 nm
Wavelength Range Option 850	750 to 870 nm
Modulation Frequency Range	100 kHz to 22 GHz
Rf Amplifier Gain	32 dB
Optical Sensitivity 10 Hz Bw	minus 60 dBm

Average Power Accuracy Factory At 1300 And 1550 nm: plus or minus 0.65 dB plus or minus 5.0 nW plus connector variation

Specifications

PARAMETER	VALUE
Average Power Accuracy User Cal	plus or minus 0.05 dB plus or minus 5.0 nW plus power meter accuracy
Responsivity Nominal At 100 MHz Standard	1200 V/W
Responsivity Nominal At 100 MHz Option 850	500 V/W
Responsivity Accuracy Characteristic	plus or minus 20 percent
Maximum Input Power With 30 dB Atten	plus 15 dBm average

Harmonic Distortion Output Less Than Or Equal Minus 10 dBm: 43 dB electrical below fundamental
Input Return Loss Hms-10 Total: less than 35 dB

Specifications

PARAMETER	VALUE
Module Width	1/8 MMS
Form Factor	lightwave section plug-in
System Family	HP 71400 series lightwave signal analyzer
Optical Attenuator	built-in variable optical attenuation
Photodetector	broadband
Microwave Preamplifier	built-in
Optical Power Meter Function	yes

PARAMETER	VALUE
Electrical Input	yes
Optical Input	yes

Option 020: system adjustment and calibration
Host Mainframe: HP 70000 MMS
Slave To: MMS local oscillator

Notes
From HP/Agilent 70810B lightwave section specification summaries published for Custom-Cal/Keysight MMS documentation. Option 850 changes the wavelength band and responsivity.

Ordering Information

OPTION	DESCRIPTION
Option 850	changes the wavelength band and responsivity.

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

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