

KEYSIGHT TECHNOLOGIES (AGILENT HP)

83433A

The Keysight Agilent 83433A is a high-performance 10 Gb/s lightwave transmitter designed for SONET/SDH STM-64/OC-192 and 10 Gb/s Ethernet testing. It integrates a distributed feedback (DFB) laser source and a lithium niobate (LiNbO3) Mach-Zehnder modulator to convert high-speed electrical data signals into high-quality optical signals across data rates ranging from 155 Mb/s up to 10.7 Gb/s.

SPECIFICATIONS

General

Interfaces	GPIO (IEEE-488)
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Physical

Dimensions (W×H×D)	213 mm × 88 mm × 348 mm mm
Weight	5.5 kg

Optical Output Characteristics

Operating Wavelength (Option 015)	1550 nm nominal
Operating Wavelength (Option 013)	1310 nm nominal
Laser Source Type	Distributed Feedback (DFB) Laser
Modulator Type	Lithium Niobate (LiNbO3) Mach-Zehnder Modulator
Average Optical Output Power	≥ 0 dBm (typically +3 dBm)
Extinction Ratio	≥ 10 dB (typically 12 dB at 10 Gb/s)
Optical Fiber Type	Single-mode (SMF-28 compatible)
Optical Connector Type	Keysight/Agilent universal interface (supports FC, SC, ST adapters)

Modulation & Signal Generation

Supported Bit Rates	155 Mb/s to 10.7 Gb/s
Data Input Impedance	50 Ω (nominal)
Data Input Amplitude Range	250 mV to 1.0 V p-p

Connectivity & Reference Signals

Data Input Connector	SMA female
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Control, Software & Integration

Remote Programming Language	SCPI (Standard Commands for Programmable Instruments)
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TECHNOLOGY

Fiber-optic Transmission

APPLICATIONS

High-speed optical network and transmitter testing

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