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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 10780C

HP Agilent Keysight 10780C Optical Receiver for Laser Interferometers The HP/Agilent/Keysight 10780C is a high-sensitivity optical receiver for laser interferometer positioning systems, one receiver per measurement axis including wavelength tracker. OEM 10780C product specifications list 1.5 uW sensitivity, plus 15 V at 136 mA (2.0 W dissipation), differential square-wave output from 100 kHz to 7.2 MHz, and 136 g mass. Compatibility with 5517D-class heads requires serial prefix 3546 or higher on 10780C/F. The HP/Agilent/Keysight 10780C is a high-sensitivity optical receiver for laser interferometer positioning systems, one receiver per measurement axis including wavelength tracker. OEM 10780C product specifications list 1.5 uW sensitivity, plus 15 V at 136 mA (2.0 W dissipation), differential square-wave output from 100 kHz to 7.2 MHz, and 136 g mass. Compatibility with 5517D-class heads requires serial prefix 3546 or higher on 10780C/F. Axis and wavelength-tracker detection in 5517-based laser transducer and 5529/5530 calibration systems.



MODEL

**Agilent / Keysight
10780C**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

10780C

LISTING

<https://aumictechlabs.com/products/10780c-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 10780C is an optical receiver that converts Doppler-shifted laser signals from interferometer and wavelength tracker systems into electrical signals for precision measurement electronics. The receiver focuses laser light onto a silicon PIN photodiode, where polarizing optics separate reference (f_1) and measurement ($f_2 \pm M$) signal components. These are

mixed to generate an AC current at the difference frequency, then converted to a differential square wave output. Technical Specifications Sensitivity: 1.5 μ W Output Signal: Differential square wave Output Frequency Range: 100 kHz to 7.2 MHz Power Input: +15 Vdc @ 136 mA Power Dissipation: 2.0 W typical, 2.7 W maximum Weight: 136 g (4.8 oz) Laser Safety: Class II Laser Product, compliant with 21 CFR 1040.10, 1040.11, and international laser safety regulations Key Features High sensitivity design optimized for individual measurement axes Silicon PIN photodiode with integrated signal conditioning Compact form factor suitable for OEM integration Plastic mounting hardware recommended for electrical isolation and thermal management Supplied with snap-on beam target for coarse alignment Typical Applications Laser interferometer positioning systems Multi-axis precision measurement platforms Wavelength tracker signal detection Doppler displacement measurement Compatibility & Integration The 10780C integrates with Agilent/Keysight laser heads, interferometers, and measurement electronics. Compatible with Agilent 10895A VME Axis Board, Agilent 10885A PC Axis Board, and Agilent N1231A PCI Three-Axis Board. Works with associated Agilent/Keysight cables and optical components to form complete positioning system configurations.

10780C Characteristics / Specifications

PARAMETER	VALUE
Model	10780c
Instrument Type	laser interferometer optical receiver
Sensitivity	1.5 uW
Supply Voltage	15 V
Supply Current	136 mA
Dissipation	2.0 W
Output Type	differential square wave
Output Frequency Range	100 kHz to 7.2 MHz
Mass	136 g (4.8 oz)
Axes Per Receiver	1 (including wavelength tracker)
Compatible Laser Heads	5517 series (5517D requires 10780C/F serial prefix 3546 or higher)
Compatible Electronics Class	Agilent laser transducer electronics
Optical Role	converts interferometer beam to electrical reference/measurement signal
Manufacturer	HP Agilent Keysight
Mechanical Package	compact receiver head
Mounting	interferometer axis receiver mount
Wavelength Family	633 nm HeNe interferometers
Output Levels	TTL-compatible class to transducer inputs
Power Connector	15 V receiver supply
Use Case	precision positioning interferometry
Documentation	Keysight 10780C optical receiver product specifications
Sibling Receivers	10780F higher-frequency class
System Partners	5517 laser heads, 10884B supply, 10897D/10898D/N1231 electronics

10780C Specifications

PARAMETER	VALUE
Applications	Axis and wavelength-tracker detection in 5517-based laser transducer and 5529/5530 calibration systems.
One receiver per axis including wavelength tracker	Differential square-wave output to 7.2 MHz
Works with 5517 heads and matching electronics	High optical sensitivity at 1.5 uW
Technical Specifications	Model: 10780c

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 list 1.5 uW sensitivity, plus 15 V at 136 mA (2.0 W dissipation), differential square-wave output from 100 kHz to 7.2 MHz, and 136 g mass. Compatibility with 5517D-class heads requires serial prefix 3546 or higher on 10780C/F.

Applications

Axis and wavelength-tracker detection in 5517-based laser transducer and 5529/5530 calibration systems.

Key Features

Lowest-cost Agilent interferometer receiver

One receiver per axis including wavelength tracker

Differential square-wave output to 7.2 MHz

Works with 5517 heads and matching electronics

High optical sensitivity at 1.5 uW

Technical Specifications

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Notes

From Keysight/Agilent 10780C Optical Receiver published specifications and 5517B/C/D operating manual compatibility note for serial prefix 3546.

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

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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.