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**Data Sheet**

August 15, 2026

AGILENT / KEYSIGHT

## Agilent/Keysight 11664D

HP Agilent 11664D 26.5 to 40 GHz Scalar Detector The HP 11664D is a waveguide scalar detector for 8755/8756/8757 analyzers. OEM 11664-family detector literature lists 26.5 to 40 GHz coverage, detection of the 27.8 kHz modulated envelope in AC mode only, WR-28 input, plus 16 dBm maximum input, and 12 dB return loss. Ka-band scalar transmission and reflection measurements with 8755C, 8756A, and 8757A/B/C/D/E analyzers. Compatible with 8755/8756/8757 scalar analyzers The HP 11664D is a waveguide scalar detector for 8755/8756/8757 analyzers. OEM 11664-family detector literature lists 26.5 to 40 GHz coverage, detection of the 27.8 kHz modulated envelope in AC mode only, WR-28 input, plus 16 dBm maximum input, and 12 dB return loss. Ka-band scalar transmission and reflection measurements with 8755C, 8756A, and 8757A/B/C/D/E analyzers. Compatible with 8755/8756/8757 scalar analyzers Instrument Type: scalar network analyzer detector



MODEL

**Agilent / Keysight  
11664D**

CALIBRATION

**Available on  
request**

CONDITION

**Used**

STATUS

**In stock**

RFQ / SKU

**11664D**

LISTING

<https://aumictechlabs.com/products/11664d-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

### This unit

The Agilent/Keysight 11664D is a precision detector head for scalar network analyzers, engineered to measure RF signal levels across the Ka-band. Operating from 26.5 GHz to 40 GHz with input power handling from -50 dBm to +10 dBm, this detector employs AC detection technology requiring 27.8 kHz squarewave amplitude modulation of the RF input signal. The 11664D integrates with HP swept amplitude and scalar network analyzer platforms to enable

simultaneous transmission and reflection measurements. Its waveguide RF input connector accommodates the frequency range while maintaining measurement precision across the dynamic range.

**Technical Specifications**

Frequency Range: 26.5 GHz to 40 GHz

Input Power Range: -50 dBm to +10 dBm

Detection Method: AC detection with 27.8 kHz squarewave amplitude modulation requirement

RF Input Connector: Waveguide

**Key Features**

- AC detection architecture requires precise modulation control to maintain signal integrity
- Dual-measurement capability supports both forward and reverse power characterization when deployed with directional couplers
- Straightforward integration with existing HP 8755C and HP 8756A instrument platforms

Supplied accessories include instrument case, 3/32 inch hex ball driver, flange cover, and cable markers.

**Typical Applications**

- Transmission and reflection coefficient measurement in Ka-band networks
- Swept amplitude response characterization using scalar analysis methods

**Component testing and validation in high-frequency RF systems**

**Compatibility & Integration**

Designed specifically for deployment with the HP 8755C Swept Amplitude Analyzer and HP 8756A Scalar Network Analyzer. Multiple detector heads enable simultaneous measurement of incident and reflected power when configured with appropriate directional coupling networks. Proper adherence to modulation specifications and signal conditioning procedures is essential to prevent analyzer input stage damage.

## 11664D Characteristics / Specifications

| PARAMETER               | VALUE                                   |
|-------------------------|-----------------------------------------|
| Model                   | 11664D                                  |
| Instrument Type         | scalar network analyzer detector        |
| Frequency Range         | 26.5 GHz to 40 GHz                      |
| Minimum Frequency       | 26.5 GHz                                |
| Maximum Frequency       | 40 GHz                                  |
| Waveguide Band          | WR-28                                   |
| Maximum Input Level     | plus 16 dBm                             |
| Return Loss             | 12 dB                                   |
| Modulation              | 27.8 kHz squarewave from the analyzer   |
| Operating Mode          | AC mode only with 8755/8756/8757        |
| Partner Analyzers       | 8755 8756 8757 scalar network analyzers |
| Family                  | 11664 series detectors                  |
| Manufacturer            | HP Agilent Keysight                     |
| Use Case                | Ka-band scalar amplitude detection      |
| Connector Class         | WR-28 waveguide                         |
| Dynamic Range Class     | set by 8757 detector inputs             |
| Related Detector 11664A | 10 MHz to 18 GHz coaxial sibling        |
| Related Detector 11664E | 26.5 to 40 GHz family sibling listings  |
| Related Bridge          | 11666A 0.015 to 18 GHz reflectometer    |
| Scalar Display          | via 8755/8756/8757 CRT                  |
| System Role             | millimeter-wave scalar detector         |
| Frequency Decade Low    | 26.5 GHz                                |
| Frequency Decade High   | 40 GHz                                  |
| Input Medium            | waveguide                               |

# 11664D Specifications

| PARAMETER                                        | VALUE                                                                                                   |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| HP Agilent 11664D 26.5 to 40 GHz Scalar Detector | Overview                                                                                                |
| Applications                                     | Ka-band scalar transmission and reflection measurements with 8755C, 8756A, and 8757A/B/C/D/E analyzers. |
| Key Features                                     | 26.5 to 40 GHz WR-28 waveguide detector                                                                 |
| Compatible with 8755/8756/8757 scalar analyzers  | Plus 16 dBm maximum input                                                                               |
| Technical Specifications                         | Model: 11664D                                                                                           |

# 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          |                                         |
|-------------------------|-----------------------------------------|
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| Input Medium            | waveguide                               |

#### Notes

From HP/Agilent 11664D detector listings (26.5 to 40 GHz, WR-28, plus 16 dBm, 12 dB return loss, 27.8 kHz AC mode with 8755/8756/8757). Finer flatness belongs on the matching 8757 calibration.

### Available from Aumictech

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

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

#### Aumictech

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NIST-traceable calibration · SAM registered ·  
30-day returns  
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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.