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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 81626C, High Power Optical Head

HP Agilent Keysight 81626C High Power InGaAs Optical Power Head The Keysight 81626C is a 5 mm InGaAs high-power optical head for the N7749C two- or four-channel head interface. OEM 8162-C and N7749C data sheet lists 850 to 1650 nm, minus 70 to +27 dBm (1250 to 1650 nm) or minus 70 to +23 dBm, plus or minus 3.0 percent uncertainty at reference conditions (950 to 1630 nm), and 100 us minimum averaging. High-power EDFA, Raman, and pump measurements with a remote 5 mm detector; open-beam alignment using analog output on the head and N7749C; swept-wavelength IL work with N7700 software. The Keysight 81626C is a 5 mm InGaAs high-power optical head for the N7749C two- or four-channel head interface. OEM 8162-C and N7749C data sheet lists 850 to 1650 nm, minus 70 to +27 dBm (1250 to 1650 nm) or minus 70 to +23 dBm, plus or minus 3.0 percent uncertainty at reference conditions (950 to 1630 nm), and 100 us minimum averaging. High-power EDFA, Raman, and pump measurements with a remote 5 mm detector; open-beam alignment using analog output on the head and N7749C; swept-wavelength IL work with N7700 software.



MODEL

**Agilent / Keysight
81626C**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

81626C

LISTING

<https://aumictechlabs.com/products/81626c-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight 81626C is a high-power optical head designed for precision optical power measurements across the near-infrared spectrum. It features an InGaAs filtered large-area detector with a 5 mm active area, enabling accurate measurements from -70 dBm to $+27$ dBm across its operational range. The head accepts parallel beams up to 4 mm diameter, standard single-mode fiber, and multimode fiber with core diameters to $100\text{ }\mu\text{m}$ and numerical apertures ≤ 0.3 . Magnetic D-shaped adapters enable rapid fiber changeover without twisting loads. An analog output port delivers linear or logarithmic voltage feedback proportional to optical signal power, supporting automated alignment and closed-loop optimization. The 81626C interfaces with the N7749C Optical Power Meter Head Interface, which supports two or four measurement heads simultaneously. Network connectivity via LAN and USB, combined with a built-in web browser GUI and SCPI command compatibility, enables flexible remote and local control. Typical measurement uncertainty is $\pm 2.5\%$ at reference conditions for the 81626X01C variant. Optional enhanced metrology reference calibrations are available for applications requiring working standard quality assurance.

Technical Specifications

Detector Type:	InGaAs filtered large-area detector
Detector Area:	5 mm
Wavelength Range:	850 nm to 1650 nm
Power Range:	-70 dBm to $+23$ dBm (850–1650 nm); -70 dBm to $+27$ dBm (1250–1650 nm)
Input Acceptance:	Parallel beams to 4 mm diameter, standard SM fiber, MM fiber ($\leq 100\text{ }\mu\text{m}$ core, $\text{NA} \leq 0.3$), straight connector ($\text{NA} \leq 0.2$)
Analog Output:	BNC connector, 0–2 V (2 V = full-scale input)
Measurement Uncertainty:	$\pm 2.5\%$ typical (81626X01C at reference conditions)

Key Features

- Magnetic D-shaped quick-change adapters minimize fiber handling stress
- Analog feedback port for real-time signal monitoring and automated alignment
- Dual output modes: linear or logarithmic voltage scaling across power decades
- Optional enhanced metrology reference calibrations
- Compatible with current and legacy Keysight optical power meter interfaces

Typical Applications

- High-power fiber and free-space beam characterization
- Automated alignment and closed-loop power optimization
- Working standard metrology for telecom and industrial optical systems

Compatibility & Integration

- Controlled by N7749C Optical Power Meter Head Interface (supports 2 or 4 heads)
- Backward compatible with 81618A (single channel) and 81619A (dual channel) legacy modules
- LAN and USB readout with SCPI command interface
- Optional threaded adapters supported via removable 81624DD adapter

81626C Characteristics / Specifications

PARAMETER	VALUE
Model	81626C
Instrument Type	High power optical power head
Series Family	Keysight 8162-C optical heads
Sensor Element	InGaAs, 5 mm diameter
Wavelength Range	850 nm to 1650 nm
Specification Wavelength Range	850 nm to 1650 nm unless stated differently
Power Range 1250 To 16	minus 70 dBm to +27 dBm, 1250 nm to 1650 nm
Power Range Lower Band	minus 70 dBm to +23 dBm (850 nm class high-power band in the 81626C table)
Maximum Safe Input Power	+27.5 dBm, 1250 nm to 1650 nm; +23.5 dBm in the lower-wavelength high-power band
Minimum Averaging Time	100 us
Applicable Fiber	standard SM and MM max 100 um core, 0.1 less than or equal to NA less than or equal to 0.3
Open Beam	parallel beam min 1 mm, max 4 mm diameter
Uncertainty At Reference Conditions	plus or minus 3.0 percent, 950 nm to 1630 nm
Uncertainty Option X01C	plus or minus 2.5 percent, 950 nm to 1630 nm
Total Uncertainty 950 To 12	plus or minus 5.0 percent plus or minus 500 pW, 950 nm to 1250 nm
Total Uncertainty 1250 To 16	plus or minus 5.0 percent plus or minus 500 pW, 1250 nm to 1630 nm
Polarization Dependent Uncertainty	less than plus or minus 0.005 dB, typical less than plus or minus 0.002 dB
Spectral Ripple	less than plus or minus 0.005 dB, typical less than plus or minus 0.002 dB
Linearity At 23 C	less than plus or minus 0.04 dB, CW minus 50 dBm to +27 dBm, 950 nm to 1630 nm, 23 C plus or minus 5 C
Linearity Over Operating Temperature	less than plus or minus 0.15 dB, same CW band
Linearity At Fixed Power Range Typical	typical less than plus or minus 0.02 dB, within 10 dB of range maximum
Return Loss	greater than 45 dB; option X01C greater than 47 dB

PARAMETER	VALUE
Noise Peak To Peak	less than 500 pW
Analog Bandwidth At Plus 10 Dbm Typical	5.0 kHz typical analog bandwidth at +10 dBm (shared 81624C/81626C column)
Analog Bandwidth At Minus 30 Dbm Typical	1.8 kHz typical analog bandwidth at minus 30 dBm
Analog Bandwidth At Minus 50 Dbm Typical	0.12 kHz typical analog bandwidth at minus 50 dBm
Host Interface	N7749C two or four channel optical head interface
Logging Memory Per Port Family	1 M samples plus 1 M sample buffer
Operating Temperature	0 C to +35 C; max 30 C if optical power greater than or equal to +20 dBm
Warm Up Time Family	40 minutes
Dimensions Family	57 mm x 66 mm x 156 mm
Weight Family	0.5 kg
Recalibration Period Family	2 years
Storage Temperature Family	minus 40 C to +70 C
Bandwidth	At Plus 10 Dbm Typical: 5.0 kHz typical analog bandwidth at +10 dBm (shared 81624C/81626C column)
Storage temperature	Family: minus 40 C to +70 C

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	Family: minus 40 C to +70 C
Operating temperature	less than plus or minus 0.15 dB, same CW band
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Linearity At Fixed Power Range Typical	typical less than plus or minus 0.02 dB, within 10 dB of range maximum
Return Loss	greater than 45 dB; option X01C greater than 47 dB
Noise Peak To Peak	less than 500 pW
Analog Bandwidth At Plus 10 Dbm Typical	5.0 kHz typical analog bandwidth at +10 dBm (shared 81624C/81626C column)
Analog Bandwidth At Minus 30 Dbm Typical	1.8 kHz typical analog bandwidth at minus 30 dBm
Analog Bandwidth At Minus 50 Dbm Typical	0.12 kHz typical analog bandwidth at minus 50 dBm
Host Interface	N7749C two or four channel optical head interface
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Dimensions Family	57 mm x 66 mm x 156 mm
Weight Family	0.5 kg
Recalibration Period Family	2 years
Storage Temperature Family	minus 40 C to +70 C Notes Numeric rows from Keysight 8162-C and N7749C Optical Power Meter Heads data sheet (3121-1226.EN), 81626C / 81626X01C table, analog-bandwidth table, and general specifications. 8162-C heads are not compatible with 81618A/81619A or 8153A.

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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PARAMETER	VALUE
Model	81626C
Instrument Type	High power optical power head
Series Family	Keysight 8162-C optical heads
Sensor Element	InGaAs, 5 mm diameter
Wavelength Range	850 nm to 1650 nm
Specification Wavelength Range	850 nm to 1650 nm unless stated differently
Power Range 1250 To 1650	minus 70 dBm to +27 dBm, 1250 nm to 1650 nm
Power Range Lower Band	minus 70 dBm to +23 dBm (850 nm class high-power band in the 81626C table)
Maximum Safe Input Power	+27.5 dBm, 1250 nm to 1650 nm; +23.5 dBm in the lower-wavelength high-power band
Minimum Averaging Time	100 us
Applicable Fiber	standard SM and MM max 100 um core, 0.1 less than or equal to NA less than or equal to 0.3
Open Beam	parallel beam min 1 mm, max 4 mm diameter
Uncertainty At Reference Conditions	plus or minus 3.0 percent, 950 nm to 1630 nm
Uncertainty Option X01C	plus or minus 2.5 percent, 950 nm to 1630 nm
Total Uncertainty 950 To 1250	plus or minus 5.0 percent plus or minus 500 pW, 950 nm to 1250 nm
Total Uncertainty 1250 To 1630	plus or minus 5.0 percent plus or minus 500 pW, 1250 nm to 1630 nm
Polarization Dependent Uncertainty	less than plus or minus 0.005 dB, typical less than plus or minus 0.002 dB
Spectral Ripple	less than plus or minus 0.005 dB, typical less than plus or minus 0.002 dB
Linearity At 23 C	less than plus or minus 0.04 dB, CW minus 50 dBm to +27 dBm, 950 nm to 1630 nm, 23 C plus or minus 5 C
Linearity Over Operating Temperature	less than plus or minus 0.15 dB, same CW band
Linearity At Fixed Power Range Typical	typical less than plus or minus 0.02 dB, within 10 dB of range maximum
Return Loss	greater than 45 dB; option X01C greater than 47 dB
Noise Peak To Peak	less than 500 pW

PARAMETER	VALUE
Analog Bandwidth At Plus 10 Dbm Typical	5.0 kHz typical analog bandwidth at +10 dBm (shared 81624C/81626C column)
Analog Bandwidth At Minus 30 Dbm Typical	1.8 kHz typical analog bandwidth at minus 30 dBm
Analog Bandwidth At Minus 50 Dbm Typical	0.12 kHz typical analog bandwidth at minus 50 dBm
Host Interface	N7749C two or four channel optical head interface
Logging Memory Per Port Family	1 M samples plus 1 M sample buffer
Operating Temperature	0 C to +35 C; max 30 C if optical power greater than or equal to +20 dBm
Warm Up Time Family	40 minutes
Dimensions Family	57 mm x 66 mm x 156 mm
Weight Family	0.5 kg
Recalibration Period Family	2 years
Storage Temperature Family	minus 40 C to +70 C

Notes

Numeric rows from Keysight 8162-C and N7749C Optical Power Meter Heads data sheet (3121-1226.EN), 81626C / 81626X01C table, analog-bandwidth table, and general specifications. 8162-C heads are not compatible with 81618A/81619A or 8153A.

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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