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Data Sheet
August 6, 2026

KEITHLEY

Keithley 2502 Fiber Alignment Photodiode Meter

Keithley 2502 Fiber Alignment Photodiode Meter The Keithley 2502 FiberAlign isadual-channel high-speed picoammeter with independent voltage bias sources per channel for photodiode / fiber-alignment and laser diode LIV testing. Current ranges 2 nA to 20 mA; simultaneous measurements on both channels. Photodiode bias 0 to ±10 V (and higher bias range options to ±100 V class on related specs). IEEE-488 (SCPI) and RS-232; handler interface; 6000-reading buffer. Fiber alignment; photodiode current; LIV; optical switch crosstalk/IL; LED radiance; pump laser modules. The Keithley 2502 FiberAlign isadual-channel high-speed picoammeter with independent voltage bias sources per channel for photodiode / fiber-alignment and laser diode LIV testing. Current ranges 2 nA to 20 mA; simultaneous measurements on both channels. Photodiode bias 0 to ±10 V (and higher bias range options to ±100 V class on related specs). IEEE-488 (SCPI) and RS-232; handler interface; 6000-reading buffer. Fiber alignment; photodiode current; LIV; optical switch crosstalk/IL; LED radiance; pump laser modules.

MODEL Keithley 2502	CALIBRATION Available on request
CONDITION Used	STATUS In stock
RFQ / SKU 2502	LISTING https://aumictechlabs.com/products/2502-2/

NIST-traceable cal · SAM registered · 30-day returns · NAICS 423690 · 811210 · 541380

This unit

The Keithley 2502 Fiber Alignment Photodiode Meter is a dual-channel instrument engineered for precision optical power measurements and fiber-to-photodiode alignment optimization. It minimizes insertion loss and maximizes signal strength in fiber optic systems through accurate current and voltage characterization. The 2502 serves research, development, and manufacturing

environments requiring critical fiber alignment for product performance and quality control.Technical Specifications Measurement Ranges & Resolution Current measurement: 1 fA to 20 mA, 1 fA resolution Voltage bias source: ±10 V or ±100 V selectable Dark current measurement: 2 nA range optimized at 1 fA resolution with REL function for offset subtraction Maximum voltage source/measure: 100 V Analog output: 0–10 V for optical power feedback Electrical Performance Measurement speed: 900 readings per second per channel at 4½-digit resolution Input bias current: 50 fA max @ 23°C Input voltage burden: 4.0 mV max Voltage source slew rate: 3.0 ms/V typical Common mode voltage: 200 VDC Common mode isolation: 10^9 Ω typical in parallel with 150 nF Source capacitance: 10.0 nF typical Data & Control Buffer memory: 3000-point per channel (6000 total) with timestamp logging Digital I/O: 1 trigger input, 4 TTL/relay drive outputs (33 V @ 500 mA, diode clamped) Serial interfaces: IEEE-488 and RS-232 Trigger Link hardware handshaking Physical & Environmental Dimensions: 89 mm H × 213 mm W × 370 mm D Weight: 6.8 kg Power supply: 100/120/220/240 V ±10%, selectable; 50/60 Hz Power dissipation: 60 VA Vibration: MIL-T-28800F Warm-up time: 1 hour to rated accuracyKey Features Dual-channel simultaneous measurement with independent bias control Selectable ±10 V (large-area photodiodes) and ±100 V (avalanche photodiodes) bias ranges LIV testing capability for laser diode modules integrating alignment and characterization Optical power measurement when paired with Model 2500INT Integrating Sphere High-speed data acquisition up to 900 readings/second per channelTypical Applications Fiber-to-photodiode alignment and optimization Photodiode dark current and responsivity characterization Laser diode module LIV testing Optical power measurement in fiber optic component development Quality control and performance validation in manufacturingCompatibility & Integration The 2502 interfaces via IEEE-488 and RS-232 for system integration. TTL/relay outputs and trigger inputs enable synchronization with external test equipment and automation systems. Integration with the Model 2500INT Integrating Sphere extends measurement capability to direct optical power assessment.

Features & description

From manufacturer datasheet

Features

• Dual channel: independent picoammeter + voltage source each • Current ranges: 2 nA, 20 nA, 200 nA, 2 µA, 20 µA, 200 µA, 2 mA, 20 mA • Max input: ±20.0 mA; overrange 105% of range • Bias: 0 to ±10 V (<400 µV resolution; ±0.15% of setting class); load to 20 mA • Simultaneous dual-channel measure • Buffer: 6000 readings (2×3000) with timestamp • Speed: up to hundreds of rdg/s depending on digits/NPLC (GPIB SCPI vs 488.1) • Interfaces: IEEE-488 SCPI-1995, RS-232; handler SOT/EOT; digital I/O • Power: 100/120/220/240 V; ~60 VA

2502 Characteristics / Specifications

PARAMETER	VALUE
Model	2502
Manufacturer	Keithley Instruments
Instrument Type	Dual-Channel Picoammeter / Photodiode Meter
Alias	2502; FiberAlign 2502 Current / Bias 2 nA–20 mA; dual bias sources; simultaneous measure Operational Notes Prefer Keithley 2502 datasheet. Related single/dual family includes 2500.
Dual channel	independent picoammeter + voltage source each
Current ranges	2 nA, 20 nA, 200 nA, 2 µA, 20 µA, 200 µA, 2 mA, 20 mA
Max input	±20.0 mA; overrange 105% of range
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2502 Specifications

PARAMETER	VALUE
Keithley 2502 Fiber Alignment Photodiode Meter	Overview
Applications	Fiber alignment; photodiode current; LIV; optical switch crosstalk/IL; LED radiance; pump laser modules.
Technical Specifications	Model: 2502
Current / Bias	2 nA–20 mA; dual bias sources; simultaneous measure
Operational Notes	Prefer Keithley 2502 datasheet. Related single/dual family includes 2500.

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
Model	2502
Manufacturer	Keithley Instruments
Instrument Type	Dual-Channel Picoammeter / Photodiode Meter
Alias	2502; FiberAlign 2502

Current / Bias
2 nA–20 mA; dual bias sources; simultaneous measure

Operational Notes
Prefer Keithley 2502 datasheet. Related single/dual family includes 2500.

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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