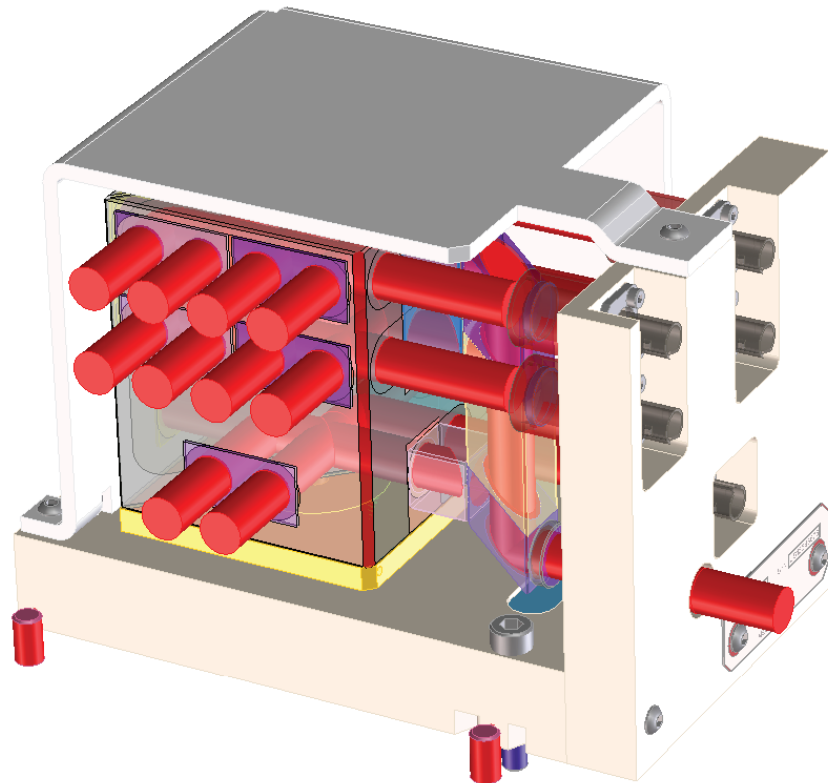
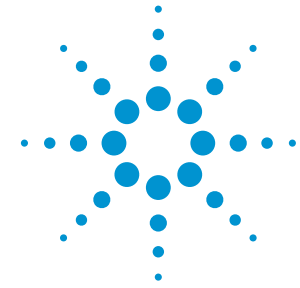


Agilent Z4421B Five-Axis Plane Mirror Interferometer

The Agilent Z4421B five-axis plane mirror interferometer features pre-aligned optical sensors, excellent beam parallelism, low non-linearity error and low thermal drift. Machined datums aid in positioning the unit and reduce alignment effort.



Z4421B Five-Axis Plane Mirror Interferometer with cover and positioned against 2 of 3 customer supplied datum pins.

Key features

- Non-linearity error ± 1 nm.
- Accommodates 9 mm and smaller input beam.
- High (~ 1 kHz) mechanical resonance frequency.
- $\lambda/4$ optical resolution.
- 10 nm/ $^{\circ}$ C or less thermal drift.

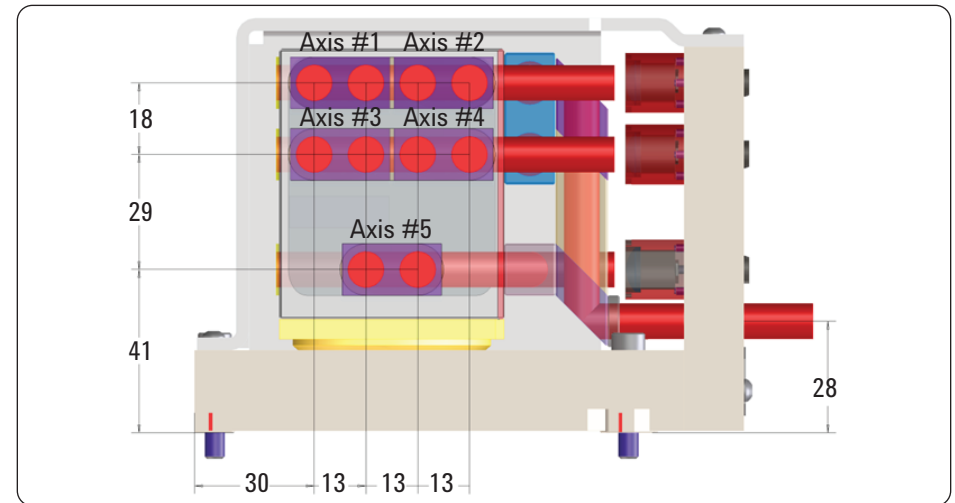


Quick Fact Sheet

Agilent Z4421B Five-Axis Plane Mirror Interferometer

Key specifications

Options	Description
Weight	3.13 kg (6.9 lbs)
Dimensions (L x W x H)	<ul style="list-style-type: none">139.3 mm x 84 mm x 97 mm (without cover)139.3 mm x 88 mm x 103.4 mm (with cover)
Materials	<ul style="list-style-type: none">Baseplate: Passivated 416 stainless steelOptics: BK-7
Natural frequency	~ 1 kHz
Mounting interface	<ul style="list-style-type: none">Fasteners: M5 x 0.8 Captive SHCSSurface profile: 0.02 mmSurface finish: 0.4 μm
Beam diameter	9 mm maximum visible
Resolution	<ul style="list-style-type: none">Optical: $\lambda/4$Linear: 0.15 nm using 1024x resolution extension
Thermal drift due to glass path length imbalance	10 nm/ $^{\circ}\text{C}$ or less
Non-linearity error	± 1 nm
Optical efficiency (input power divided by axis output power)	<ul style="list-style-type: none">Typical for all axes except Axis #5: 10%Typical for Axis #5: 7%Worst case for all axes except Axis #5: 7%Worst case for Axis #5: 5%
Measure point tolerance	<ul style="list-style-type: none">Mean: ± 0.15 mmDeviation: ± 0.05 mm
Input beam cone angle	< 1 mrad
Beam parallelism	<ul style="list-style-type: none">Axis #1 to Axis #2: < 25 μradAxis #1 to Axis #3: < 25 μradAxis #2 to Axis #4: < 25 μradAxis #3 to Axis #4: < 25 μradAxis #3 to Axis #5: < 100 μrad
Operating temperature	19 $^{\circ}\text{C}$ to 26 $^{\circ}\text{C}$
Measurement mirror recommendation	<ul style="list-style-type: none">Reflectivity: > 92%Flatness: $\lambda/20$



Z4421B beam position in mm and axis numbering.

For more details on Agilent interferometry systems, components and ordering information please visit www.agilent.com/find/lasers

