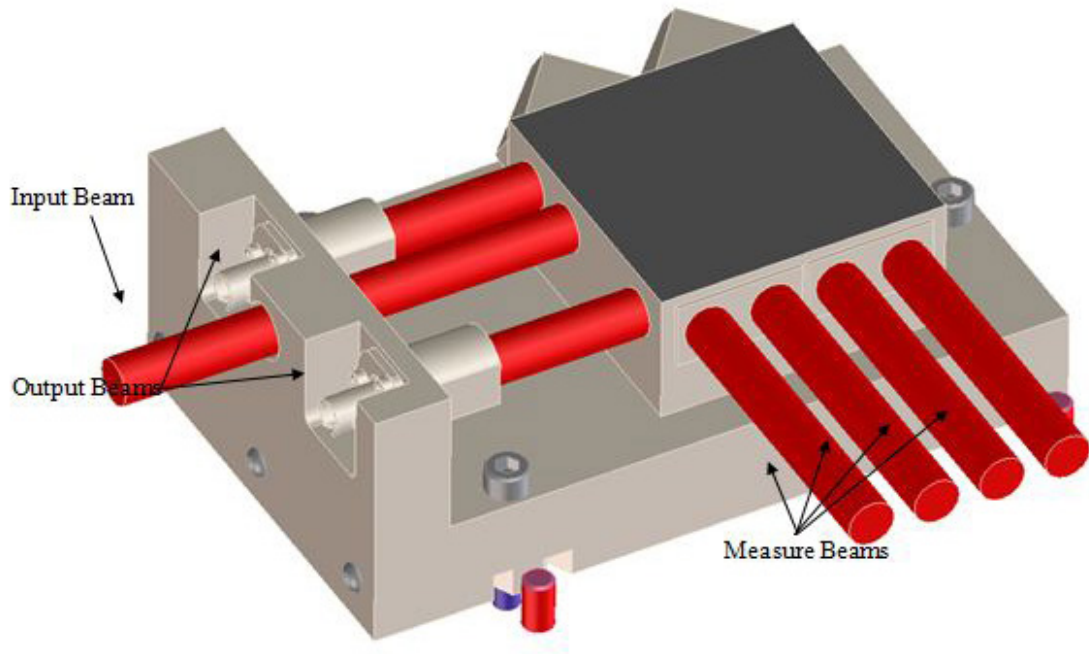


## Keysight E1827A 2-Axis Interferometer, Yaw

The Keysight Technologies, Inc. E1827A 2-axis 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. The Keysight E1827A 2-axis 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.



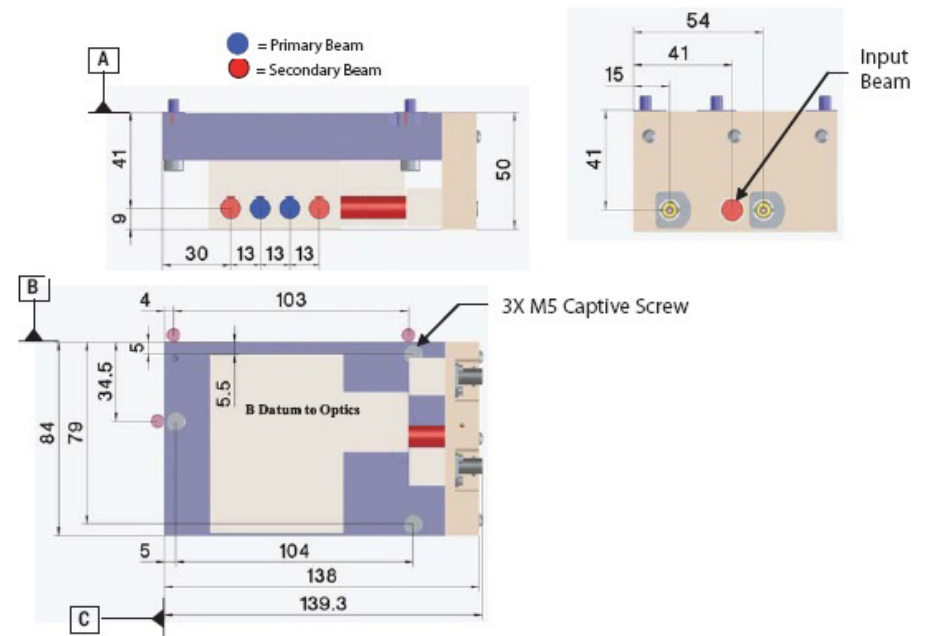
E1827A 2-axis Interferometer showing input and output beams

### Key features

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

## Key specifications

Parameters	Specifications
Weight	2.35 kg (5.18 lb)
Dimensions (L x W x H)	139.3 x 84.0 x 50.0 mm
Materials	Baseplate: Passivated 416 stainless steel Optics: BK-7
Natural frequency	~ 1 kHz
Mounting interface	Fasteners: M5 x 0.8 socket head captive screws Surface profile: 0.02 mm Surface finish: 0.4 $\mu$ m
Beam diameter	9 mm maximum visible
Resolution	Optical: $\lambda/4$ Linear: 0.15 nm using 1024x resolution extension
Thermal drift due to glass path length imbalance	< 10 nm/°C
Non-linearity error	$\pm 1$ nm
Output efficiency	Typical of all axes: 26% Worst case of all axes: 19%
Measure point tolerance	Mean: $\pm 0.15$ mm Deviation: $\pm 0.05$ mm
Input beam cone angle	< 1 mrad
Beam parallelism	Axis #1 to Axis #2 < 25 $\mu$ rad
Operating temperature	19 to 26 °C
Measurement mirror recommendation	Reflectivity: > 92% Flatness: $\lambda/20$



For more details on Keysight interferometry systems, components and ordering information please visit: [www.keysight.com/find/lasers](http://www.keysight.com/find/lasers)

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