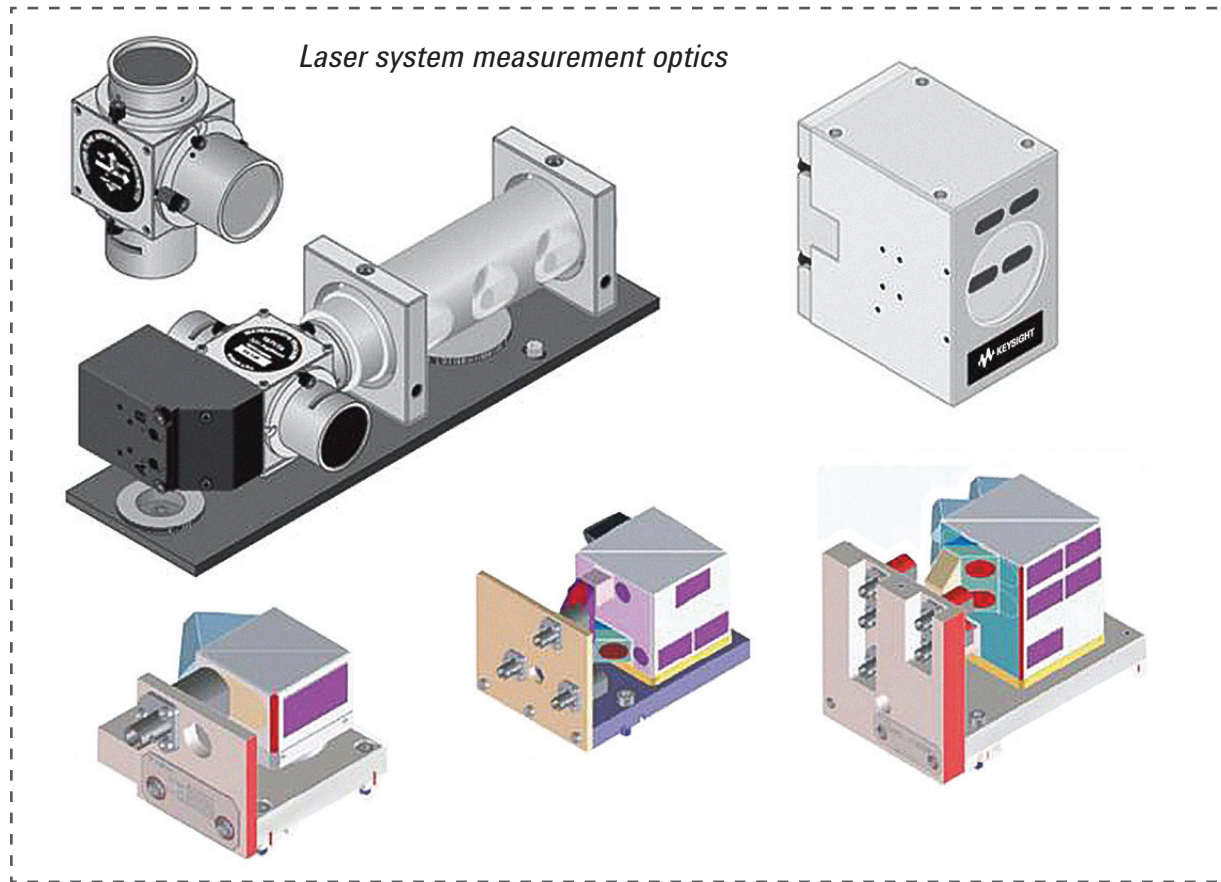


Keysight Laser Interferometer Measurement Optics

Keysight Technologies, Inc. offers a wide selection of measurement optics for use with Keysight Laser Interferometer systems. The optic type selected determines the type of reflector required, the optical resolution, the relative velocity possible, and the angular range of the measurement reflector.



Key features

- Multiple optics available for variety of measurement needs
- Integrated multi-axis optics for easier system alignment
- Advanced monolithic construction for improved performance

Keysight Laser Interferometer Measurement Optics

Model	Reflector	Axes	Referenced	Max beam size	Mass (Typical)	Size (L x W x H) in mm	Distinguishing feature	Meas direction	Beam pairing	OFF ³	Angular range ⁴ (@ 300 mm)											
10775A ¹	Included	1	No	6 mm	l: 160 g, R: 800 g	l: 32.0 x 21.0 x 32.0 R: 110.0 x 40.0 x 40.0	Long range straightness measurement	User config	Either	2/360	N/A											
10774A ¹							Short range straightness measurement			2/36												
10766A ¹	10767A		Yes							Minimal beam deviation		2	± 20 degree									
10770A ¹	10771A									Angular measurements												
10702A	10703A				No					Lower cost, Cube corner reflector		N/A										
10705A	10704A									l: 230 g, R: 41.5 g 38.1 x 38.1 x 62.0				Single beam, Non-contact								
10706A	User supplied plane mirror				No					310 g	Straight, Turned	Either	4	± 0.87 mrad								
10706B										320 g					76.0 x 62.0 x 38.1	High stability						
10715A										500 g					90.2 x 85.9 x 38.1	Differential	Diagonal		± 0.38 mrad			
10716A										500 g						High resolution				Both	8	± 0.87 mrad
10717A/C		Integrated								1.7 kg					260.35 x 79.25 x 67.0	Wavelength tracking	Straight	Diagonal		N/A		
10719A	User supplied plane mirror	2	Yes	3 mm	300 g	57.15 x 38.10 x 60.33	Differential (top to bottom)	Straight	Horizontal	4	± 0.44 mrad											
E1826E/F/G							9 mm					420 g	E: 53.0 x 61.5 x 40.0 F: 60.25 x 53.0 x 40.0 G: 60.25 x 53.0 x 40.0	CMI ² , Distance	E: Right F: Left G: Straight	± 1.5 mrad						
10721A							3 mm					300 g	57.15 x 38.10 x 60.33	2-axis differential (top to bottom)	Straight	± 0.44 mrad						
E1827A							9 mm					2.35 kg	139.3 x 84.0 x 50.0	CMI ² , Distance, Yaw	Right	± 1.5 mrad						
10735A																	5.5 kg	190.0 x 105.0 x 60.0	3-Axis, Distance, Pitch, Yaw	Pitch: ± 1.0 mrad Yaw: ± 1.5 mrad		
10736A							3					No	3 mm	490 g	125 x 64.1 x 38.1	Small, 3-axis, Distance, Pitch, Yaw	Left, Right	Vertical		± 0.44 mrad		
10737L/R																	Right					
Z4399A																					CMI ² , Distance, Pitch, Yaw	
Z4422B																	Left				Horizontal	± 1.5 mrad
Z4420B																	Right					
Z4421B	Left																					
Z4421B	Left																					

1. 5530 calibrator optics

2. CMI: Compact Monolithic Interferometer (high performance interferometers)

3. OFF: Optics Fold Factor

4. Typical for max beam diameter

Determining measurement resolution and maximum stage velocity

- Measurement Resolution = $\lambda / \text{OFF} / \text{Electronic Resolution Extension}$
- Maximum Velocity = Laser Head Linear Optics Velocity Spec x 2 / OFF

www.keysight.com/find/lasers