



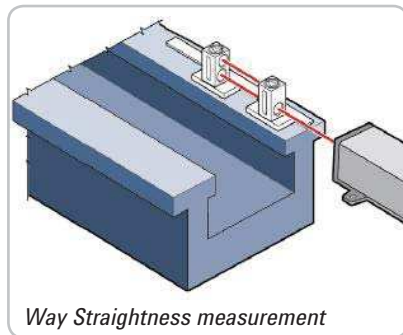
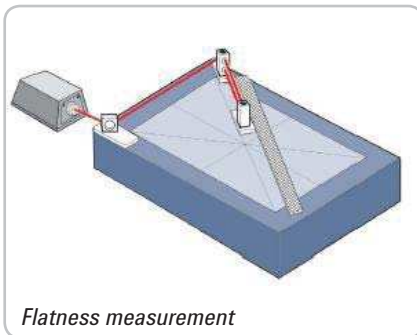
Agilent 55282A Flatness Accessory Kit

Data Sheet

Basic Equipment

Agilent 5530 Laser Calibration System
 Agilent 55281A Angular Optics Kit
 Agilent 55282A Flatness Accessory Kit

The 55282A flatness accessory kit together with the 55281A angular optics kit makes flatness and way straightness measurements. Flatness measurements are a series of angular measurements made along a pattern of lines. These measurements document and analyze in three dimensions any flat surface, such as a surface plate or machine bed. Way straightness measurements are a series of angular measurements made in a single line to document and analyze the straightness of solid objects, such as machine tool ways and master straight edges.



The following specifications assumes Agilent 5530 Laser Calibration System is in used, and the temperature of all optical components is stabilized in the range 15° C to 25° C. Values do not include effects of surface cleanliness or operator positioning repeatability.

Maximum range	
Up to 15 m (50 ft)	
Accuracy	
±0.2% of displayed value	
Foot spacing dimension	Resolution (per step)
50.8 mm (2 in)	0.002 μm (0.06 μin)
101.6 mm (4 in)	0.003 μm (0.12 μin)
152.4 mm (6 in)	0.005 μm (0.18 μin)
Reference plane accuracy	
The uncertainty of a surface plate flatness measurement is bounded by two parallel planes separated by the values below:	
Metric units mode	0.03 (M) ² μm where M = length of the surface diagonal in meters
English units mode	0.12 (F) ² μin where F = length of the surface diagonal in feet
Lateral offset and flatness range	
The combination of lateral offset and maximum flatness deviation must not displace the reflector more than ±1.0 mm from the beam path in any direction.	

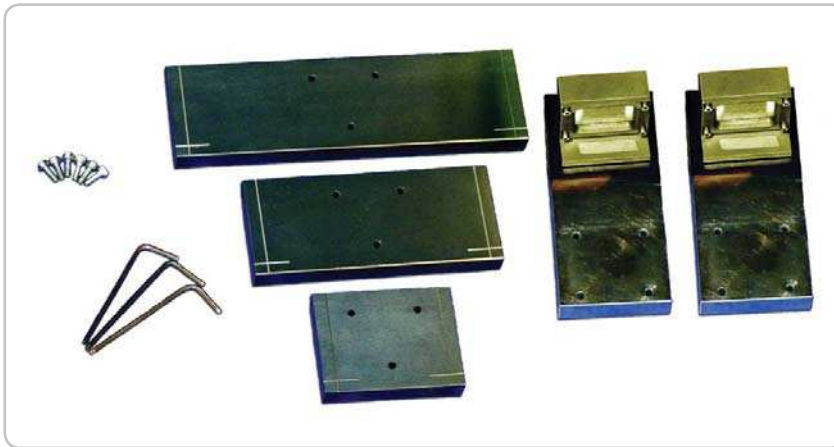


Components included in the 55282A flatness accessory kit

Description	Quantity
50.8 mm (2 in) base	1
101.6 mm (4 in) base	1
152.4 mm (6 in) base	1
Hardware kit with hex keys	1 set
Flatness mirrors	2

Related Literature

Publication title	Publication number
Agilent 5530 Laser Calibration System Brochure	5989-9354EN
Agilent 5530 Laser Calibration System Data Sheet	5989-9712EN
Agilent 5530 Laser Calibration System Flyer	5989-9707EN
Agilent 5530 Laser Calibration Measurement Reference Guide	10747-90077



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