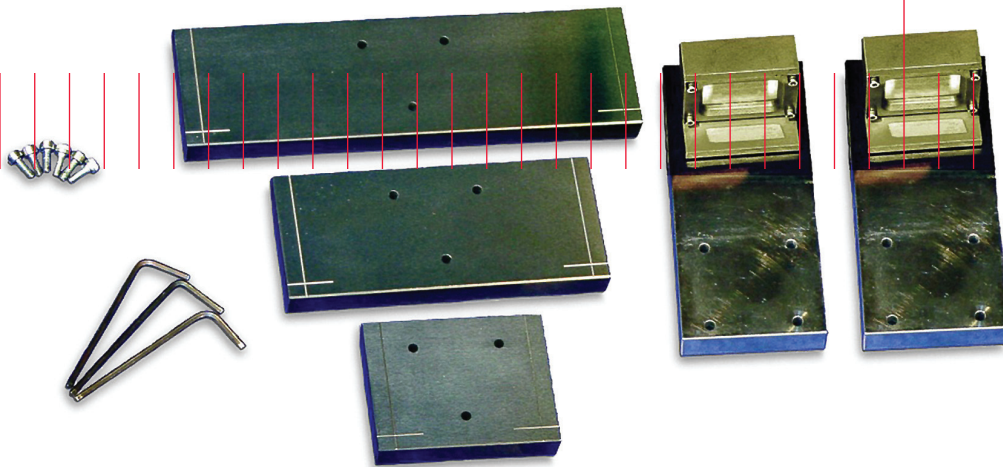


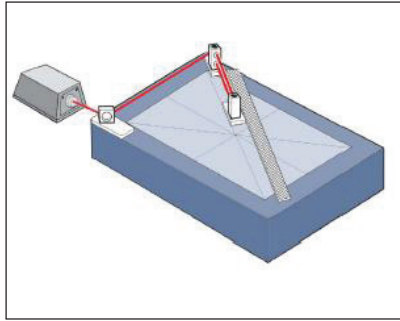
Keysight Technologies

55282A Flatness Accessory Kit

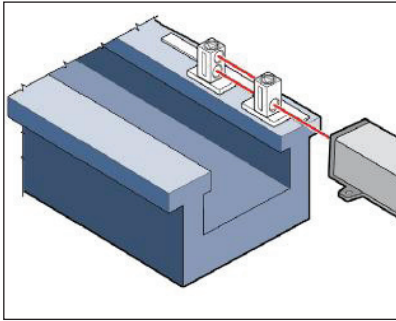
[Data Sheet](#)



The following specifications assume the Keysight Technologies, Inc. 5530 Laser Calibration System is in use, 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.



Flatness measurement



Way Straightness measurement

Maximum range

Up to 15 m (50 ft)

Accuracy

±0.2% of displayed value

Foot spacing dimension

50.8 mm (2 in)

101.6 mm (4 in)

152.4 mm (6 in)

Resolution (per step)

0.002 μm (0.06 μin)

0.003 μm (0.12 μin)

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 No.
Keysight 5530 Laser Calibration System Brochure	5989-9354EN
Keysight 5530 Laser Calibration System Data Sheet	5989-9712EN
Keysight 5530 Laser Calibration System Flyer	5989-9707EN
Keysight 5530 Laser Calibration Measurement Reference Guide	10747-90077

Basic Equipment

Keysight 5530 Laser Calibration System
 Keysight 55281A Angular Optics Kit
 Keysight 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.

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