

Shearing Interferometer

Features

- Visual Collimation Aid for Beams from Ø1 mm to Ø75 mm
- Interchangeable Shear Plates for Varying Beam Diameters
- SIVS Screen for Viewing Small Beams
- Portion of Beam Transmitted Through Assembly



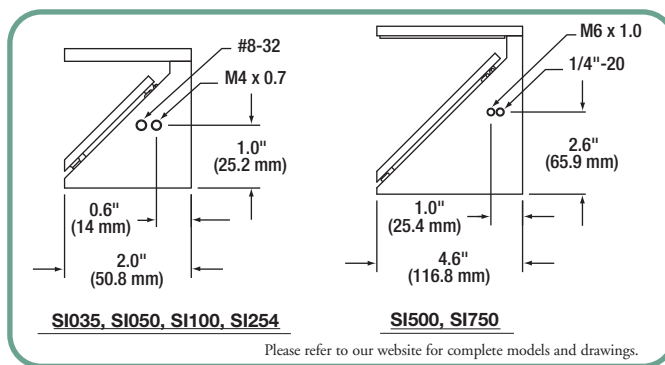
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product

The SI series of shearing interferometers can be used to qualitatively determine if a coherent beam of light is collimated. The design consists of a wedged optical flat mounted at 45° and a diffuser plate with a reference line drawn down the middle. The diffuser plate is used to view the interference fringes created by a coherent beam of light incident at a 45° angle with respect to the normal of the optical flat (see images below). In addition to the degree of collimation, the fringes will be sensitive to spherical aberration, coma, and astigmatism. In order to produce four to six fringes on the diffuser plate, the thickness and degree to which the optical flat is wedged must change as the beam diameter changes.

The base is made from anodized aluminum, and the plate with the wedged optical flat is held in place magnetically so that it can be easily swapped out for a plate with a different wedged optical flat. A hole is bored through the base behind the wedged optical flat to allow the transmitted portion of the incident beam to continue unimpeded. The table below summarizes the compatibility between bases and plates.

The shearing interferometers have imperial and metric threaded mounting holes on the bottom of the base and on two sides (6 holes total). See the table below for thread type.

For small beam diameters, the fringe pattern is small and can be difficult to see. For these situations, the SIVS accessory can be purchased to replace the standard diffuser plate viewing screen. The SIVS consists of a mounted diverging lens and diffuser plate and can be used with the SI035, SI050, SI100, or SI254, which are designed for 1-10 mm beam diameters. The diverging lens increases the size of the fringes on the diffuser plate. For custom applications, the SITST is available, which is an internally SM1- threaded mounting plate for use with the SI035, SI050, SI100, or SI254.



Please refer to our website for complete models and drawings.

ITEM#	INCLUDED PLATE	COMPATIBLE PLATES	COMPATIBLE ACCESSORIES	THREADED MOUNTING HOLES
SI035	SI035P	SI035P, SI050P, SI100P, and SI254P	SIVS, SITST	#8-32 and M4 x 0.7
SI050	SI050P	SI035P, SI050P, SI100P, and SI254P	SIVS, SITST	#8-32 and M4 x 0.7
SI100	SI100P	SI035P, SI050P, SI100P, and SI254P	SIVS, SITST	#8-32 and M4 x 0.7
SI254	SI254P	SI035P, SI050P, SI100P, and SI254P	SIVS, SITST	#8-32 and M4 x 0.7
SI500	SI500P	SI500P and SI750P	—	1/4"-20 and M6 x 1.0
SI750	SI750P	SI500P and SI750P	—	1/4"-20 and M6 x 1.0

Converging



Collimated



Diverging



ITEM#	\$	£	€	RMB	DESCRIPTION
SI035	\$ 351.90	£ 244.00	€ 312,50	¥ 2,971.50	Shear-Plate Assembly for Ø1 - Ø3 mm Beams
SI050	\$ 362.10	£ 251.10	€ 321,50	¥ 3,057.60	Shear-Plate Assembly for Ø2.5 - Ø5 mm Beams
SI100	\$ 377.40	£ 261.70	€ 335,10	¥ 3,186.80	Shear-Plate Assembly for Ø5 - Ø10 mm Beams
SI254	\$ 402.90	£ 279.30	€ 357,70	¥ 3,402.10	Shear-Plate Assembly for Ø10 - Ø25.4 mm Beams
SI500	\$ 688.50	£ 477.30	€ 611,30	¥ 5,813.80	Shear-Plate Assembly for Ø25.4 - Ø50 mm Beams
SI750	\$ 917.00	£ 635.70	€ 814,20	¥ 7,743.20	Shear-Plate Assembly for Ø50 - Ø75 mm Beams
SI035P	\$ 127.50	£ 88.40	€ 113,20	¥ 1,076.70	Shear Plate, Ø1 - 3 mm Beam
SI050P	\$ 137.70	£ 95.50	€ 122,30	¥ 1,162.80	Shear Plate, Ø2.5 - 5 mm Beam
SI100P	\$ 152.00	£ 105.40	€ 135,00	¥ 1,283.50	Shear Plate, Ø5 - 10 mm Beam
SI254P	\$ 178.50	£ 123.80	€ 158,50	¥ 1,507.30	Shear Plate, Ø10 - 25.4 mm Beam
SI500P	\$ 331.50	£ 229.90	€ 294,40	¥ 2,799.20	Shear Plate, Ø25.4 - 50 mm Beam
SI750P	\$ 555.90	£ 385.40	€ 493,60	¥ 4,694.10	Shear Plate, Ø50 - 75 mm Beam
SIVS	\$ 255.00	£ 176.80	€ 226,40	¥ 2,153.30	Magnified Viewing Screen for Ø1 - Ø10 mm Beams
SITST	\$ 51.00	£ 35.40	€ 45,30	¥ 430.70	SM1-Threaded Mounting Plate

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