



Davidson Optronics

A TRIOPTICS COMPANY

Putting Your Future in Focus

Penta Prisms | D-614



- Provides accurate 90° alignment
- Lapped pads for high precision positioning
- Three different models available
- Certification of accuracy traceable to NIST

As the name implies, a Penta Prism, also commonly known as Optical Square, has five sides so positioned as to accept, reflect, and transmit collimated light. Two sides of the prism are 90° to each other with the face of one side acting as the entrance face, and the face of the adjacent side acting as the exit face, or vice versa. Two of the remaining three sides are positioned to reflect light entering the prism 90°, the third side being incidental. The azimuth or horizontal plane is referred to as the insensitive plane. Light may enter the entrance face along this plane deviated as much as $\pm 5^\circ$ from normal and the exit beam will always be 90° to the entrance beam.

A 1 inch (25 mm) diameter steel arbor that can be firmly gripped in a lathe collet or milling machine chuck is available as an accessory. All penta prism models are provided with a reusable hardwood carrying case.

Optional Accessories

- 515-0093 1 inch (25 mm) diameter solid steel arbor
- 515-0072 2.25 inch (57 mm) diameter hardened stainless steel tube to fit standard NAS-90 spherical and other mounts

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Specifications (Applies to all Penta Prisms)	
Surface Quality:	80/50 per MIL O 13830
Material:	Prism: BSL7Y (or better) glass
	Housing: Super hard anodized aluminum
Rear Face Coating:	Aluminum with protective overcoat per MIL-M-13508
Finish:	Ivory enamel
Carrying Case:	Hardwood

Specifications				
		D-614-101	D-614-104	D-614-105
Accuracy:		≤ 2 arc sec	≤ 3 arc sec	≤ 5 arc sec
Aperture:	Height:	1 inch (25 mm)	1.75 inch (44 mm)	3 inch (76 mm)
	Width:	1.875 inch (48 mm)	1.875 inch (48 mm)	3 inch (76 mm)
Overall Dimensions:	Height:	2 inch (51 mm)	2.6 inch (66 mm)	4.5 inch (114 mm)
	Width:	4 inch (102 mm)	3.875 inch (79 mm)	6 inch (152 mm)
	Length:	4 inch (102 mm)	3.875 inch (79 mm)	6 inch (152 mm)
	Height to Aperture Center:	1.1 inch (28 mm)	1.47 inch (63 mm)	2.25 inch (57 mm)
Weight:		2.5 lbs (1.1 kg)	3 lbs (1.4 kg)	12 lbs (5.5kg)
Shipping Weight:		7 lbs (3.2 kg)	7.5 lbs (3.4kg)	18 lbs (8.2kg)



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