

Please See Page 626 for AR Coating Curve

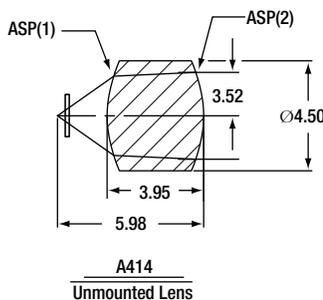
**OEM's**

Thorlabs stocks a large number of uncoated lenses. If your application requires a custom coating, please contact us directly for price and availability. Custom housings are also available.

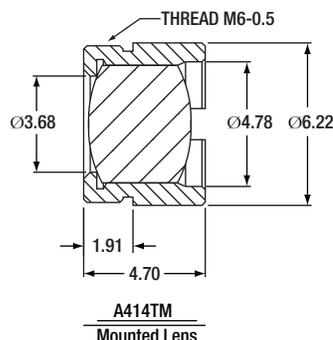
# A414 f = 3.30 mm and 0.47 NA



Since ASP(1) is identical to ASP(2), so lens orientation is not a concern when mounting



A414  
Unmounted Lens



A414TM  
Mounted Lens

All Dimensions are in Millimeters

## Rochester Precision Molded Glass Aspheric Lens

Optical Design Specifications

- Design Wavelength: 670 nm
- Numerical Aperture: 0.47
- Clear Aperture: Ø3.52 mm
- Effective Focal Length: 3.30 mm
- Working Distance: 1.94 mm
- Laser Window Thickness: 0.25 mm
- Laser Window Material/Index: N-BK7/1.517
- Magnification: Infinite
- RMS WFE (Typical):\* 0.128 Waves
- Surface Quality: 40-20 Scratch-Dig
- Glass (Hoya): N-SF57

\*Wavefront error is averaged over full aperture



### Aspheric Coefficients

	R	k	A <sub>4</sub>	A <sub>6</sub>	A <sub>8</sub>	A <sub>10</sub>
ASP (1)	-4.37	-0.7375985	2.9258960E-03	2.7938690E-04	2.4618570E-05	-8.2589900E-06
ASP (2)	4.37	-0.7375985	-2.9258960E-03	-2.7938690E-04	-2.4618570E-05	8.2589960E-06

### Unmounted, AR-Coated Aspheric Lenses

ITEM#	\$	£	€	RMB	DESCRIPTION
A414-A	\$ 81.55	£ 56.60	€ 72.50	¥ 688.70	Lens, AR-Coated: 350 - 700 nm
A414-B	\$ 81.55	£ 56.60	€ 72.50	¥ 688.70	Lens, AR-Coated: 650 - 1050 nm
A414-C	\$ 81.55	£ 56.60	€ 72.50	¥ 688.70	Lens, AR-Coated: 1050 - 1620 nm

### Mounted, AR-Coated Aspheric Lenses

ITEM#	\$	£	€	RMB	DESCRIPTION
A414TM-A	\$ 86.55	£ 60.00	€ 76.90	¥ 730.90	Mounted Lens, AR-Coated: 350 - 700 nm
A414TM-B	\$ 86.55	£ 60.00	€ 76.90	¥ 730.90	Mounted Lens, AR-Coated: 650 - 1050 nm
A414TM-C	\$ 86.55	£ 60.00	€ 76.90	¥ 730.90	Mounted Lens, AR-Coated: 1050 - 1620 nm

## Laser Diodes



World's best collection of laser diodes, all shipping from stock. Wavelengths from 405 nm to 1550 nm. Output powers up to 1 W.

**See Page 1032**

## Benchtop Laser Diode Drivers

In laser diode systems, difficulties with spherical aberration correction are compounded by the beam's high divergence angle. Since individual spherical lenses can refract light at only small angles before spherical aberration is introduced, three or four elements are often required to collimate laser diode light. In contrast, a single aspheric lens collimates without introducing spherical aberration.



Laser Diode and TEC drivers to meet every need. Drive currents from 20 mA to 4 A available. Compatible with all laser diode polarities. Constant current and constant power mode operation.

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