

# ADNS-6120

## Laser Mouse Round Lens



### Data Sheet

#### Description

The ADNS-6120 laser mouse lens are designed for use with Avago Technologies laser mouse sensors and the illumination subsystem provided by the ADNS-6230-001 VCSEL assembly clip and the Single-Mode Vertical-Cavity Surface Emitting Lasers (VCSEL). Together with the VCSEL, the ADNS-6120 laser mouse lens provides the directed

illumination and optical imaging necessary for proper operation of the laser mouse sensor. ADNS-6120 laser mouse lens is a precision molded optical component and should be handled with care to avoid scratching of the optical surfaces.

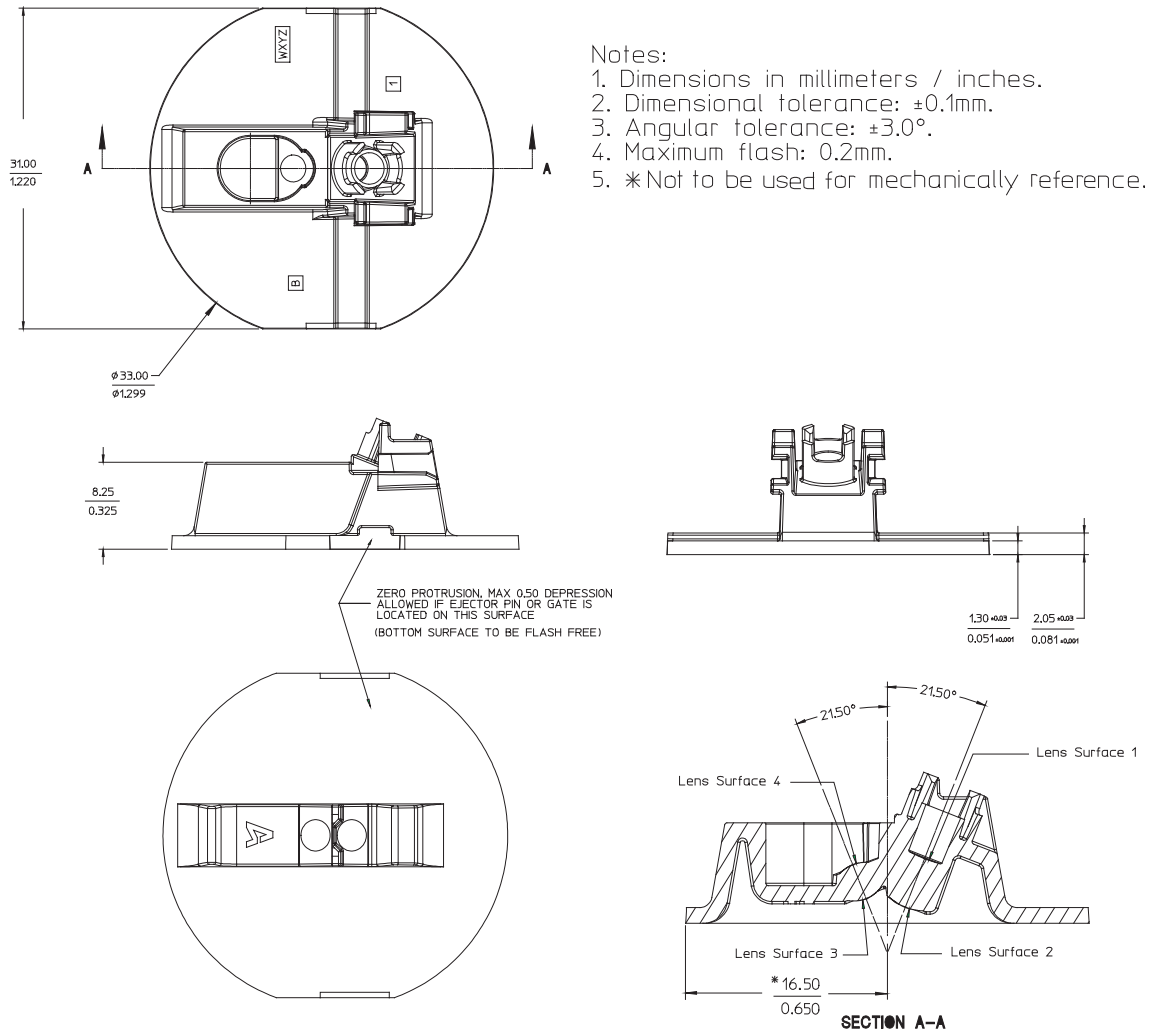


Figure 1. ADNS-6120 laser mouse round lens outline drawings and details

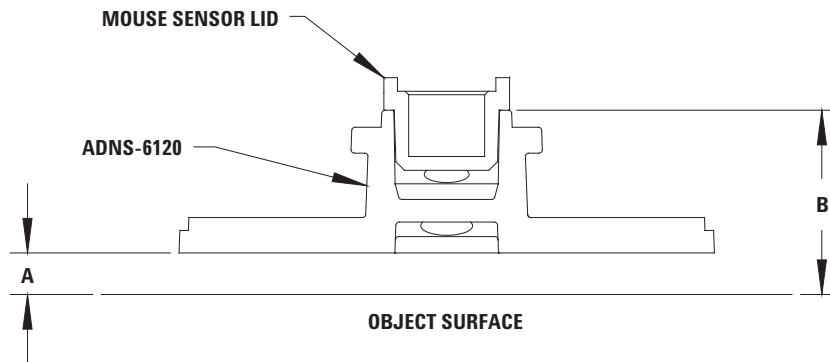


Figure 2. Optical system assembly cross-section diagram

### Mechanical Assembly Requirements

All specifications reference Figure 2, Optical System Assembly Diagram

Parameters	Symbol	Min.	Typical	Max.	Units	Conditions
Distance from Object Surface to Lens Reference Plane	A	2.18	2.40	2.62	mm	For ADNS-6120
Distance from Mouse Sensor Lid Surface to Object Surface	B		10.65		mm	Sensor lid must be in contact with lens housing surface

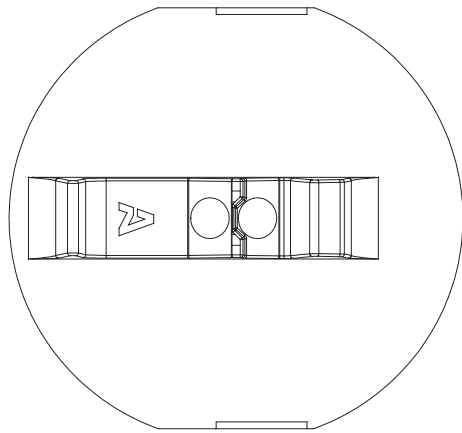


Figure 3. Avago Technologies's logo locations

### Lens Design Optical Performance Specifications

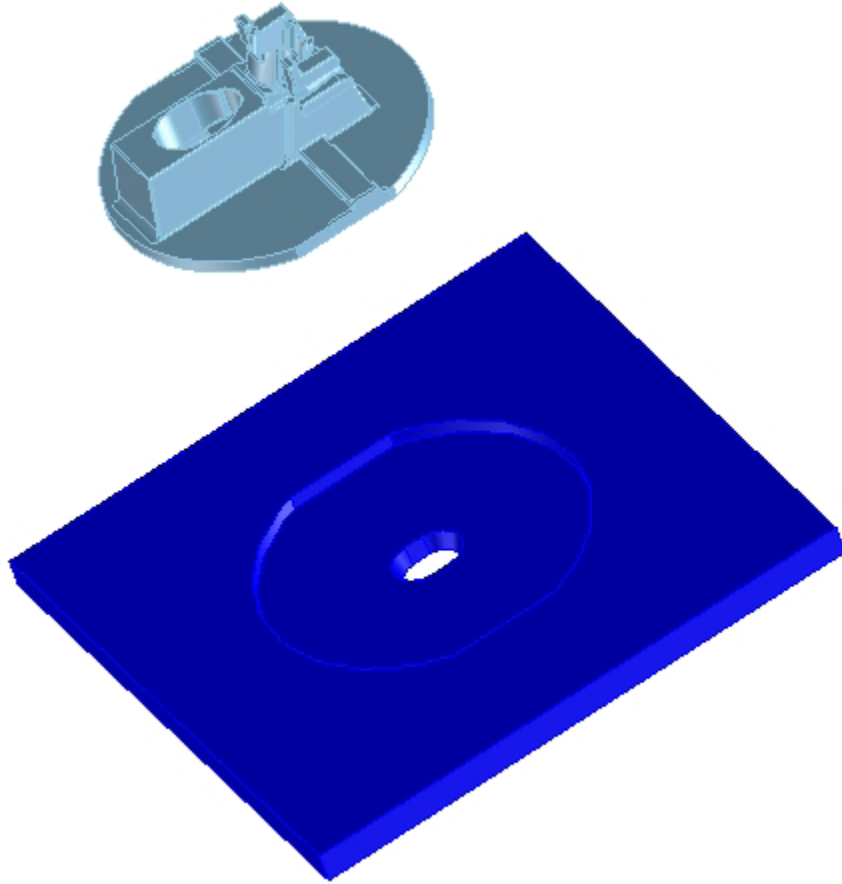
All specifications are based on the Mechanical Assembly Requirements.

Parameters	Symbol	Min.	Typical	Max.	Units	Conditions
Design Wavelength	$\lambda$		842		nm	
Lens Material* Index of Refraction	N	1.5693	1.5713	1.5735		$\lambda = 842 \text{ nm}$

\*Lens material is polycarbonate. Cyanoacrylate based adhesives should not be used as they will cause lens material deformation.

## Mounting Instructions for the ADNS-6120

An IGES format drawing file with design specifications for laser mouse base plate features is available. These features are useful in maintaining proper positioning and alignment of the ADNS-6120 laser mouse lens when used with the Avago Technologies Laser Mouse Sensor. This file can be obtained by contacting your local Avago Technologies sales representative.



**Figure 4. Illustration of base plate mounting features for ADNS-6120 laser mouse round lens**

For product information and a complete list of distributors, please go to our web site: [www.avagotech.com](http://www.avagotech.com)

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