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# ADNS-6130-001 Laser Mouse Trim Lens



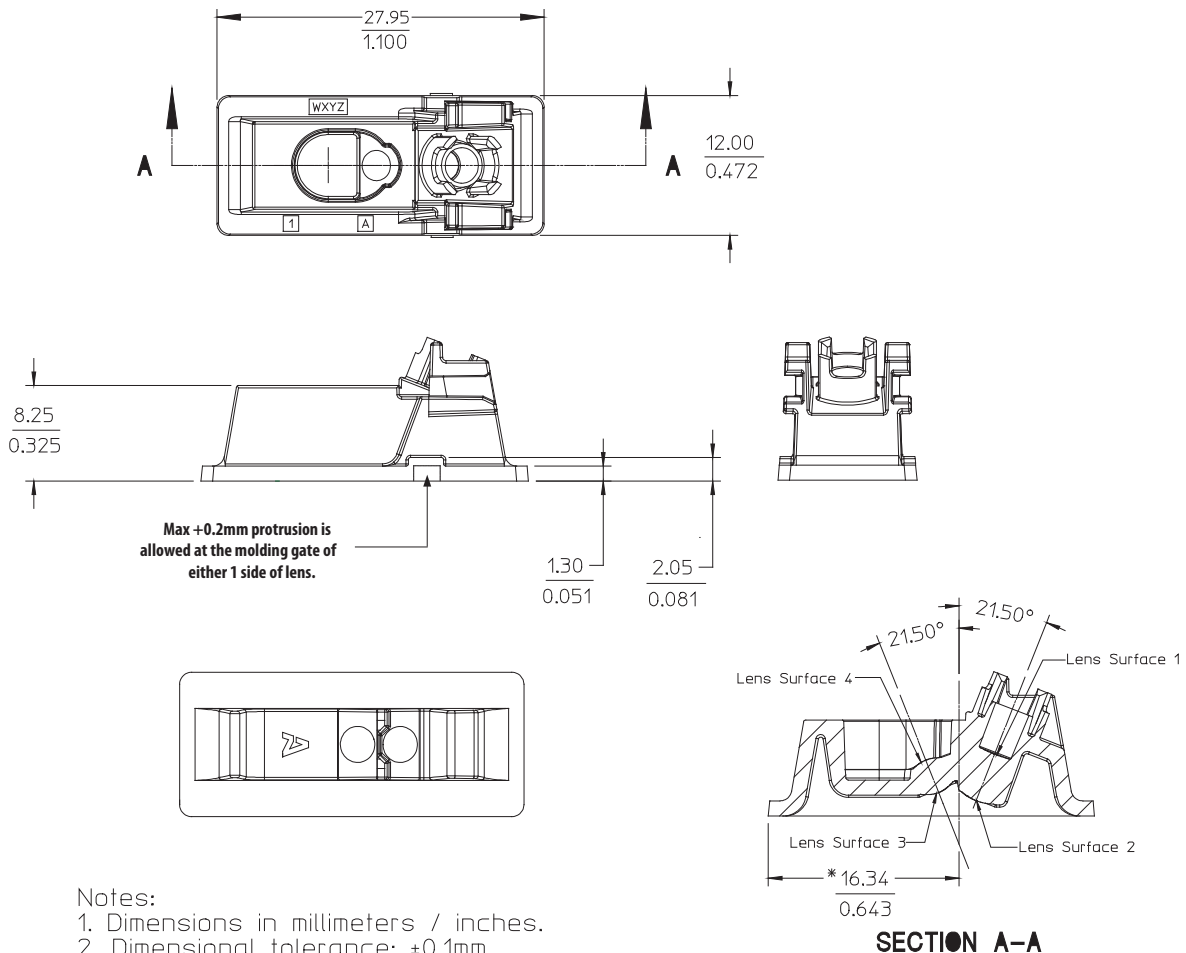
## Data Sheet



### Description

The ADNS-6130-001 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 ADNV-6330 or ADNV-6340 Single-Mode Vertical-Cavity Surface Emitting Lasers (VCSEL). Together with the VCSEL, the ADNS-6120 or

ADNS-6130-001 laser mouse lens provides the directed illumination and optical imaging necessary for proper operation of the laser mouse sensor. ADNS-6130-001 laser mouse lens is a precision molded optical component and should be handled with care to avoid scratching of the optical surfaces.



- Notes:
1. Dimensions in millimeters / inches.
  2. Dimensional tolerance:  $\pm 0.1\text{mm}$ .
  3. Angular tolerance:  $\pm 3.0^\circ$ .
  4. Maximum flash: 0.2mm.
  5. \*Not to be used for mechanically reference.

Figure 1. ADNS-6130-001 laser mouse trim lens outline drawings and details

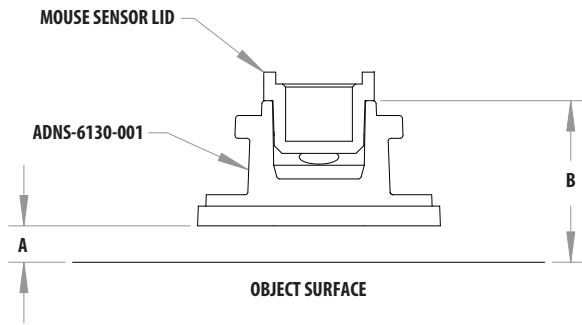


Figure 2. Optical system assembly cross-section diagram

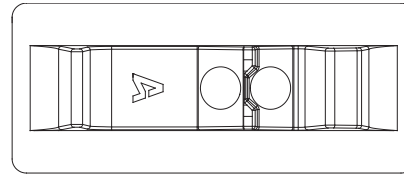


Figure 3. Logo location

### 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	ADNS-6130-001
Distance from Mouse Sensor Lid Surface to Object Surface	B		10.65		mm	Sensor lid must be in contact with lens housing surface

### 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-6130-001 Laser Mouse Lenses to the Base Plate

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 or ADNS-6130-001 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.

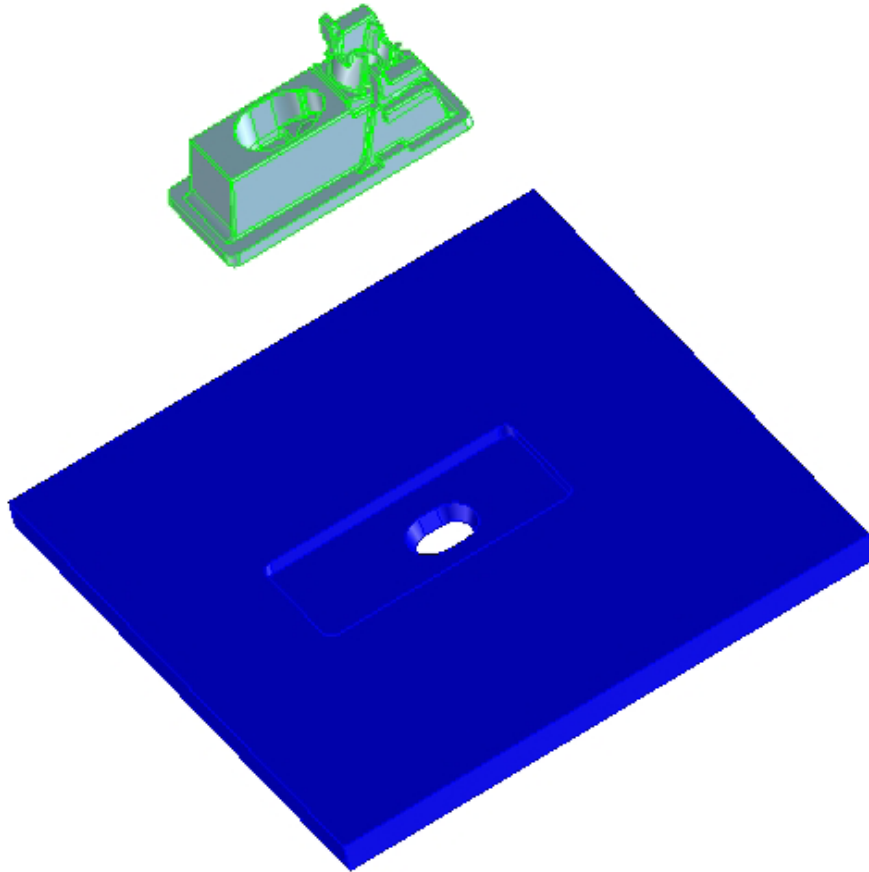


Figure 4. Illustration of base plate mounting features for ADNS-6130-001 laser mouse trim lens

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