

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.

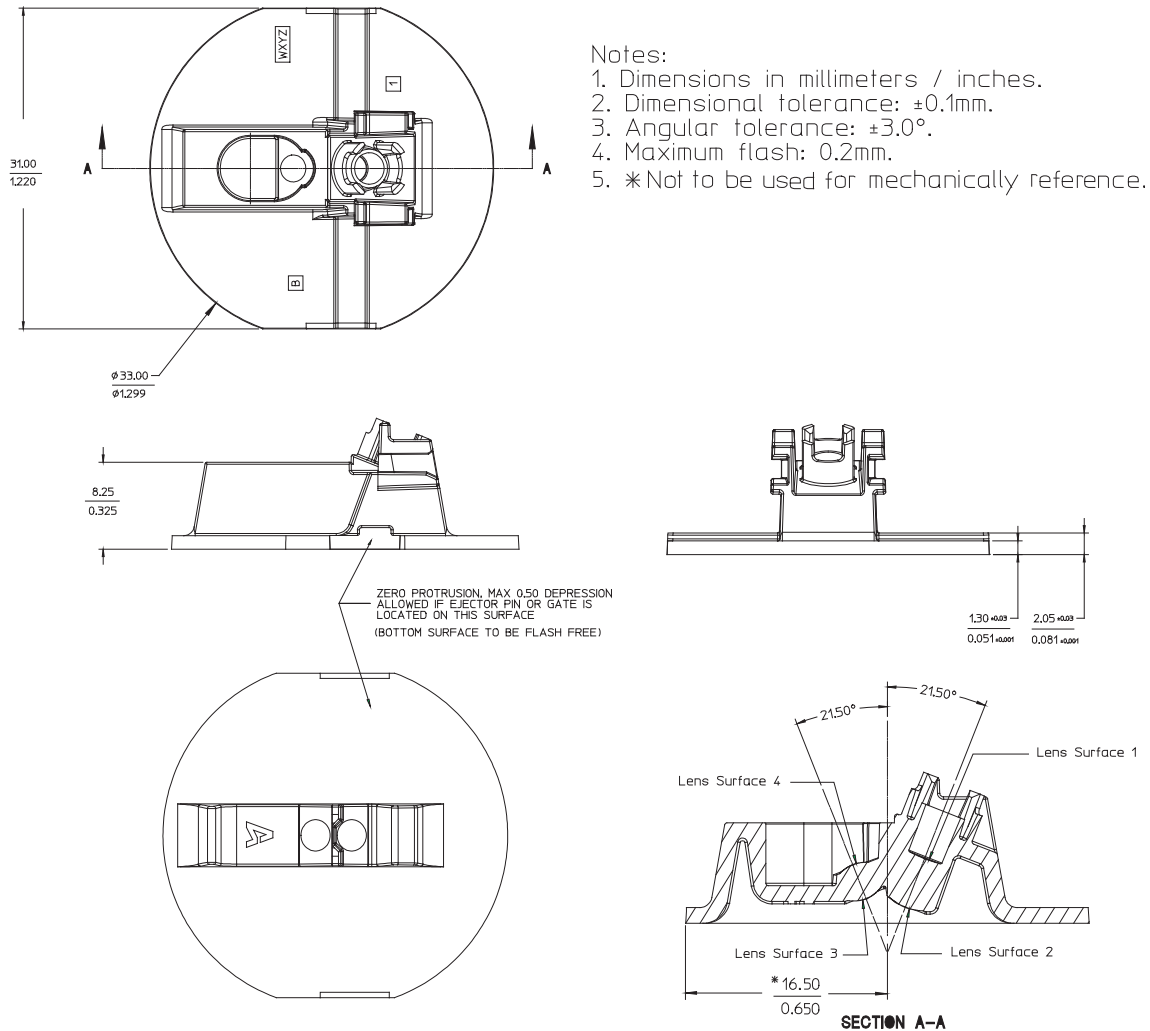


Figure 1. ADNS-6120 laser mouse round lens outline drawings and details

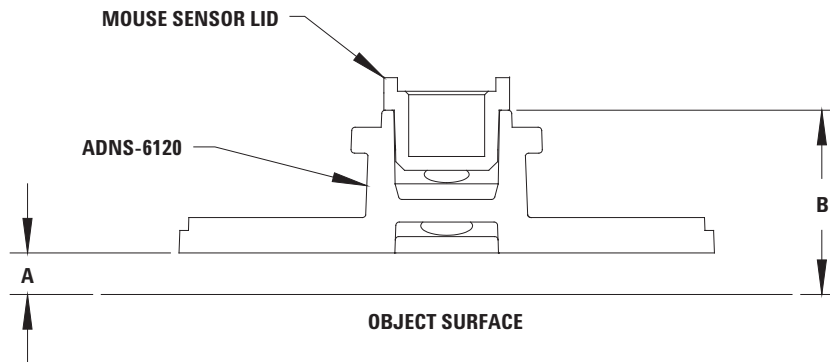


Figure 2. Optical system assembly cross-section diagram

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 |

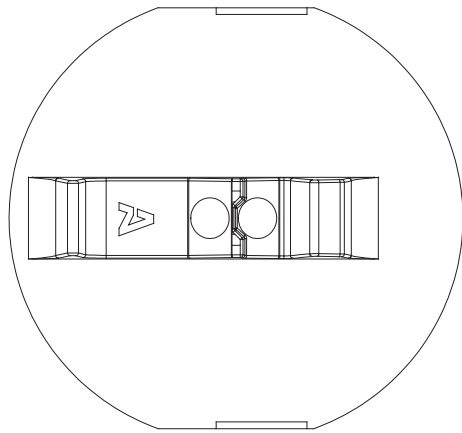


Figure 3. Avago Technologies's logo locations

Lens Design Optical Performance Specifications

All specifications are based on the Mechanical Assembly Requirements.

| Parameters | Symbol | Min. | Typical | Max. | Units | Conditions |
|------------------------------------|-----------|--------|---------|--------|-------|----------------------------|
| Design Wavelength | λ | | 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.

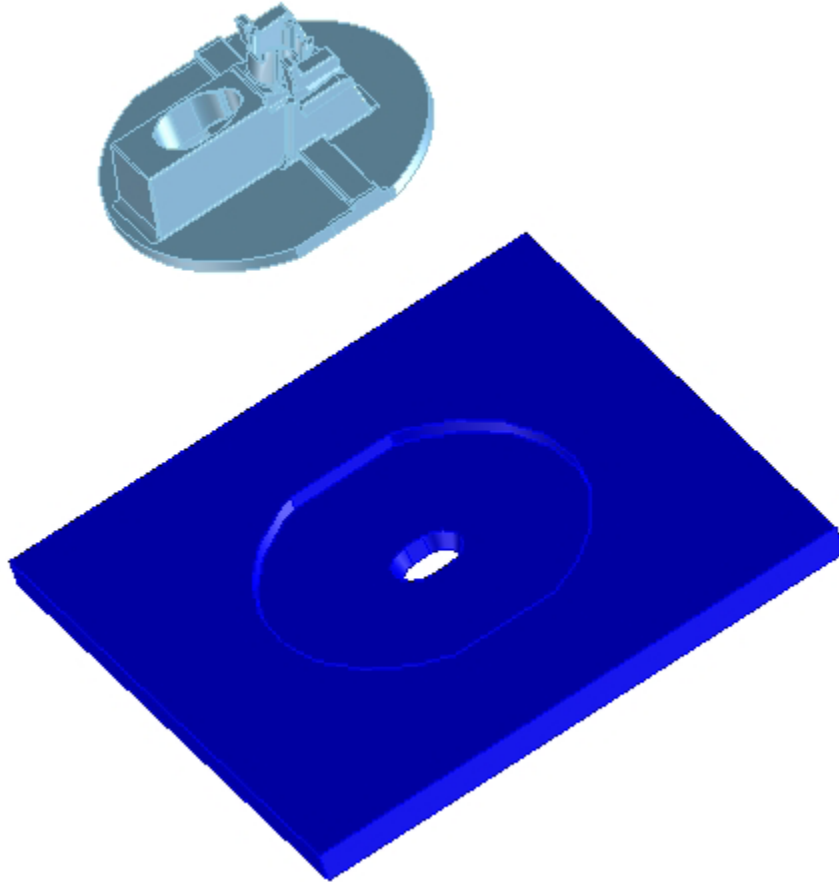


Figure 4. Illustration of base plate mounting features for ADNS-6120 laser mouse round lens

For product information and a complete list of distributors, please go to our web site: www.avagotech.com

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