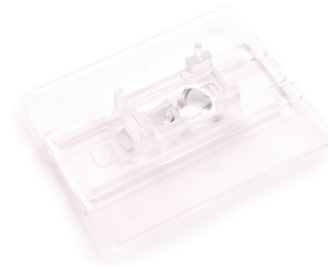


ADNS-6180-002

Laser Mouse wide trim Lens

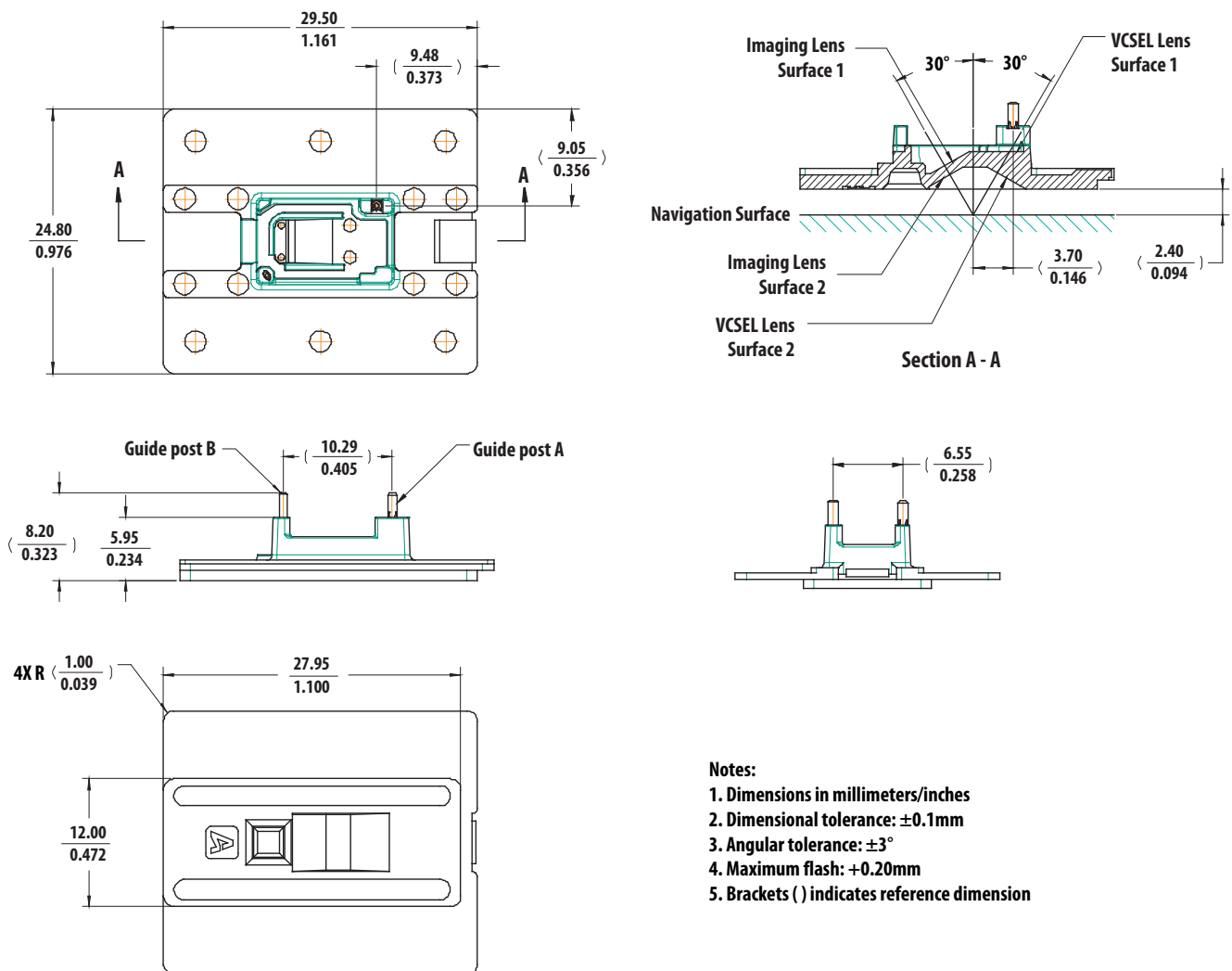


Data Sheet



Description

The ADNS-6180-002 laser mouse wide trim lens is designed for use with Avago Technologies ADNS-7700 one chip USB LaserStream™ sensors. Together with the integrated VCSEL in the same package, the ADNS-6180-002 wide trim lens provides the directed illumination and optical imaging necessary for proper operation of the sensor. ADNS-6180-002 wide trim lens is a precision molded optical component and should be handled with care to avoid scratching and contamination of the optical surfaces.



- Notes:**
1. Dimensions in millimeters/inches
 2. Dimensional tolerance: $\pm 0.1\text{mm}$
 3. Angular tolerance: $\pm 3^\circ$
 4. Maximum flash: $+0.20\text{mm}$
 5. Brackets () indicates reference dimension

Figure 1. ADNS-6180-002 wide trim lens outline drawings and details

Mechanical Assembly Requirements

All specifications reference Figure 2, Optical System Assembly Diagram

| Parameters | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|--|--------|------|------|------|------|--|
| Distance from Object Surface to Lens Reference Plane | A | 2.18 | 2.40 | 2.62 | mm | When use with ADNS-7700 |
| Distance from Object Surface to Sensor Reference Plane | B | | 7.40 | | mm | Sensor Aperture must be in contact with lens housing surface |

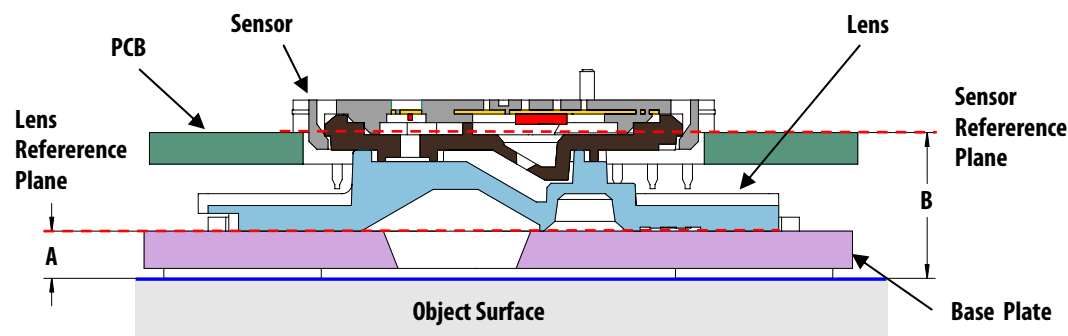


Figure 2. Optical system assembly cross-section diagram

Lens Design Optical Performance Specifications

All specifications are based on the Mechanical Assembly Requirements.

| Parameters | Symbol | Min. | Typ. | Max. | Unit | 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-6180-002 Laser Mouse Wide trim Lens to the Base Plate

The STEP or IGES format drawing file with design specifications for laser mouse base plate features and lens are available. These features are useful in maintaining proper positioning and alignment of the ADNS-6180-002 wide trim lens when used with the ADNS-7700 USB LaserStream sensors. These file can be obtained by downloading from Avago technologies website or by contacting your local Avago Technologies sales representative.

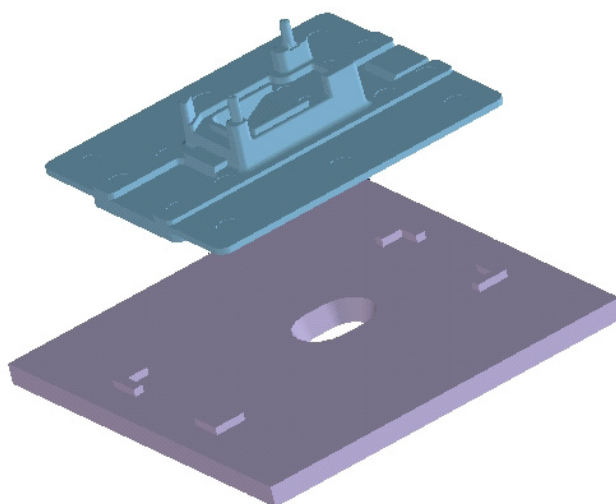


Figure 3. Illustration of base plate mounting features for ADNS-6180-002 laser mouse wide trim lens

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

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