

# ADNS-6180-001

## Laser Mouse Trim Lens



### Data Sheet



### Description

The ADNS-6180-001 laser mouse trim lens is designed for use with Avago Technologies ADNS-7700 one chip Laser-Stream™ USB sensors. Together with the integrated VCSEL in the same package, the ADNS-6180-001 trim lens provides the directed illumination and optical imaging necessary for proper operation of the sensor. ADNS-6180-001 trim lens is a precision molded optical component and should be handled with care to avoid scratching and contamination of the optical surfaces.

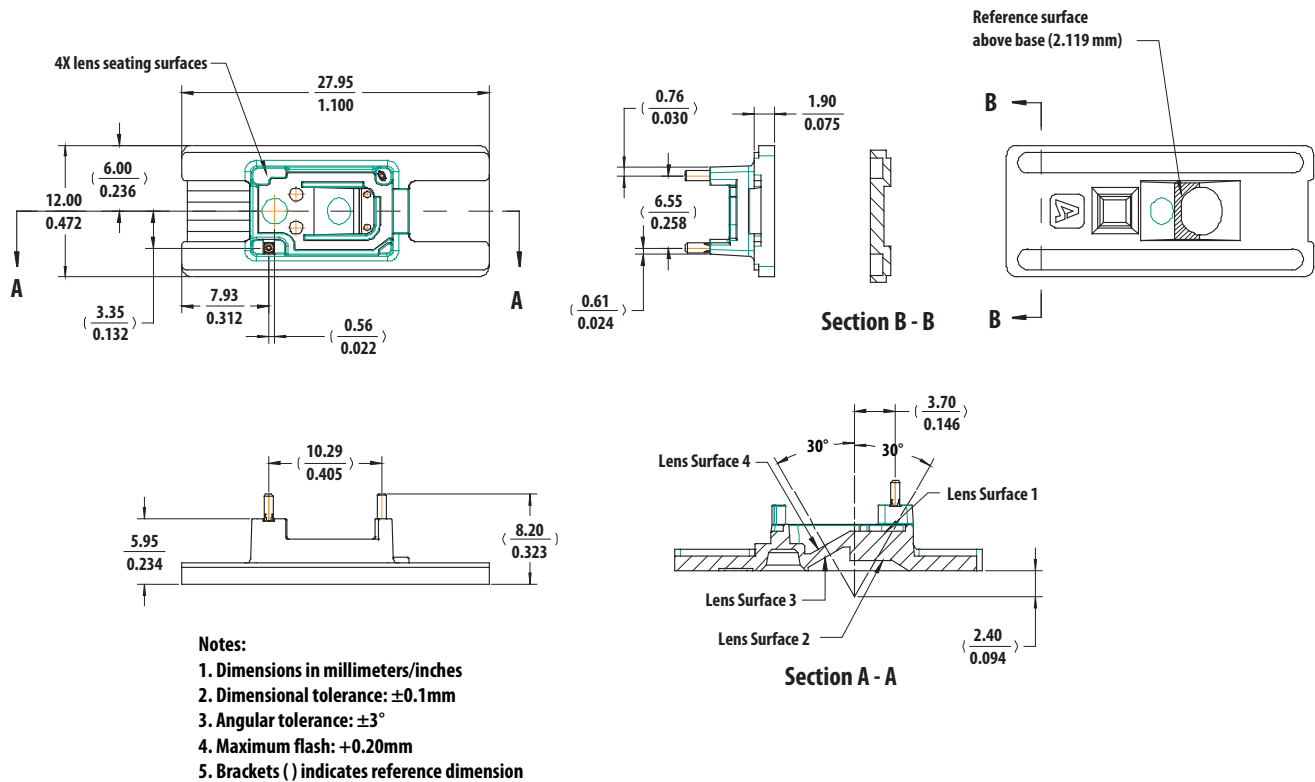


Figure 1. ADNS-6180-001 trim lens outline drawings and details

## 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

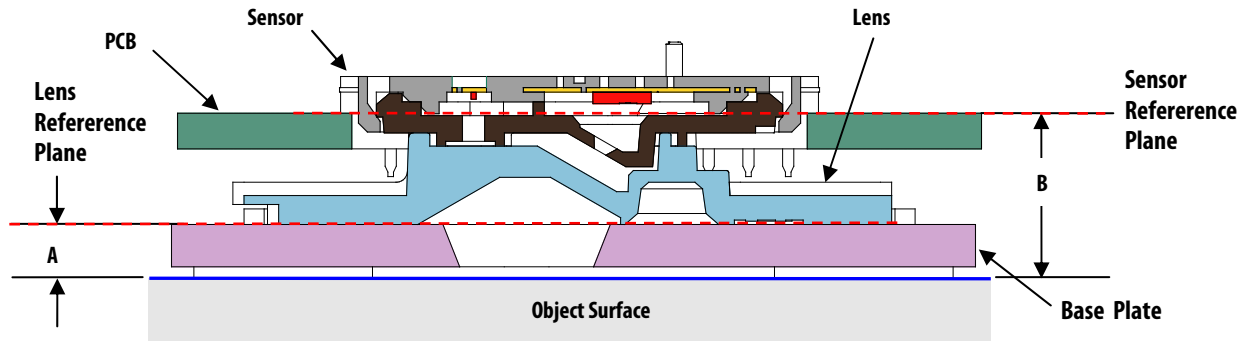


Figure 2. Optical system assembly cross-section diagram

## Lens Design Optical Performance Specifications

All specifications are based on the Mechanical Assembly Requirements.

Parameters	Symbol	Minimum	Typical	Maximum	Unit	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-6180-001 Laser Mouse 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-6180-001 trim lens when used with the ADNS-7700 LaserStream USB sensors. These file can be obtained by downloading from Avago technologies website or by contacting your local Avago Technologies sales representative.

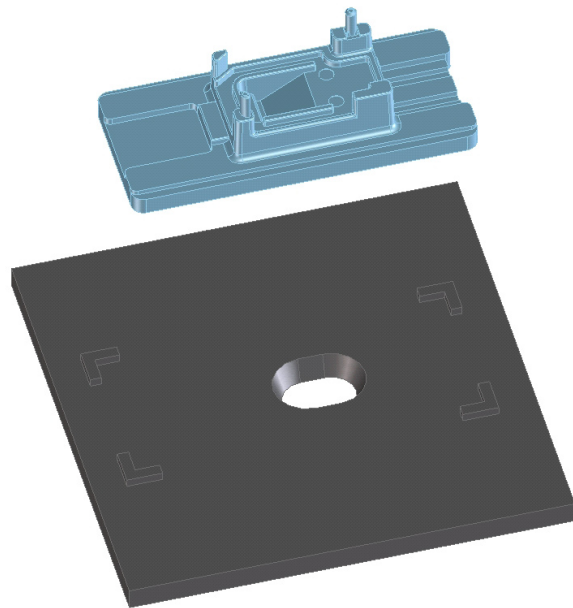


Figure 3. Illustration of base plate mounting features for ADNS-6180-001 laser mouse trim lens

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