ADNS-6190-002

LaserStream™ Gaming Round Lens

Data Sheet

Lead (Pb) Free
RoHS 6 fully
compliant



Picture shown for illustration purposes only.

Description

The ADNS-6190-002 LaserStream gaming round lens is designed for use with Avago Technologies ADNS-9500 and ADNS-9800 LaserStream™ gaming sensors. Together with the integrated VCSEL in the same package, the ADNS-6190-002 round lens provides directed illumination and optical imaging necessary for proper operation of the sensor. The ADNS-6190-002 lens is a precision molded optical component and should be handled with care to avoid scratching and contamination of the optical surfaces.

Mechanical Assembly Requirements

All specifications below reference to Figure1, Optical System Assembly Diagram

Parameters	Symbol	Minimum	Typical	Maximum	Unit	Conditions
Distance from Object Surface to Lens Reference Plane	A	2.18	2.40	2.62	mm	When used with ADNS-9500 and ADNS-9800
Distance from Object Surface to Sensor Reference Plane	B		9.95		mm	Sensor Board must be in contact with lens housing surface

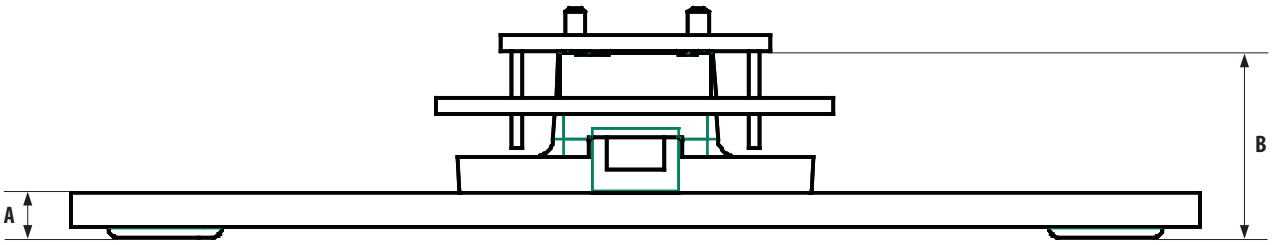


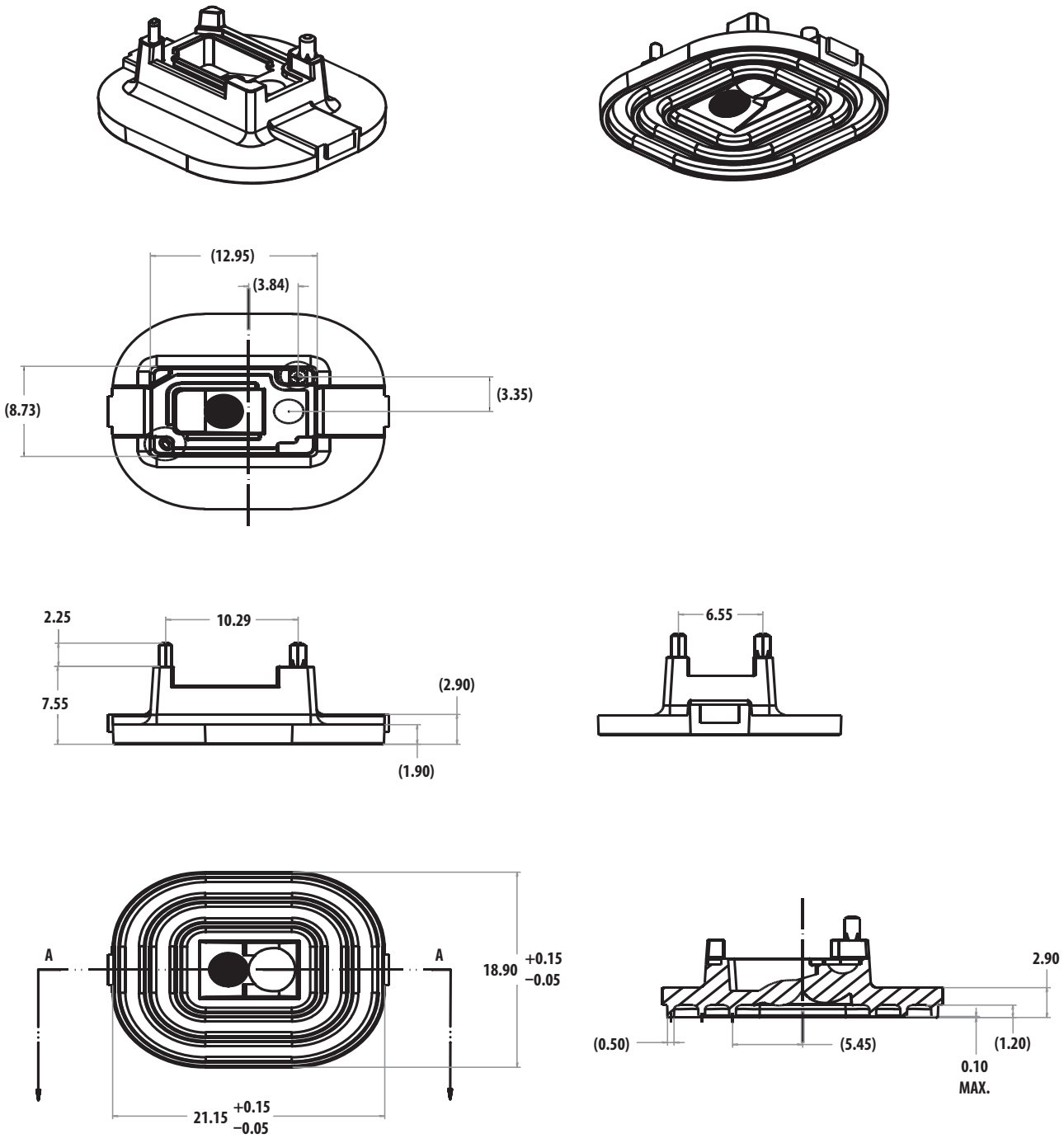
Figure 1. Optical system assembly diagram

Lens Design Optical Performance Specifications

All specifications are based on the Mechanical Assembly Requirements.

Parameters	Symbol	Minimum	Typical	Maximum	Unit	Conditions
Design Wavelength	λ		842		nm	
Lens Material* Index of Refraction	N	1.5693	1.5713	1.5735		λ = 842 nm

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



Notes:
1. Dimensions in millimeters.
2. Dimensional tolerances: ±0.10mm unless otherwise specified.
3. Maximum flash +0.20mm
4. Brackets ( ) indicate reference dimensions
5. Lens surfaces for indication only

Figure 2. ADNS-6190-002 round lens outline drawings and details

Mounting Instructions for the ADNS-6190-002 Laser Mouse Round 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-6190-002 round lens when used with the ADNS-9500 and ADNS-9800 sensor. These files can be obtained by downloading from Avago Technologies website or contacting your local Avago Technologies sales representative.

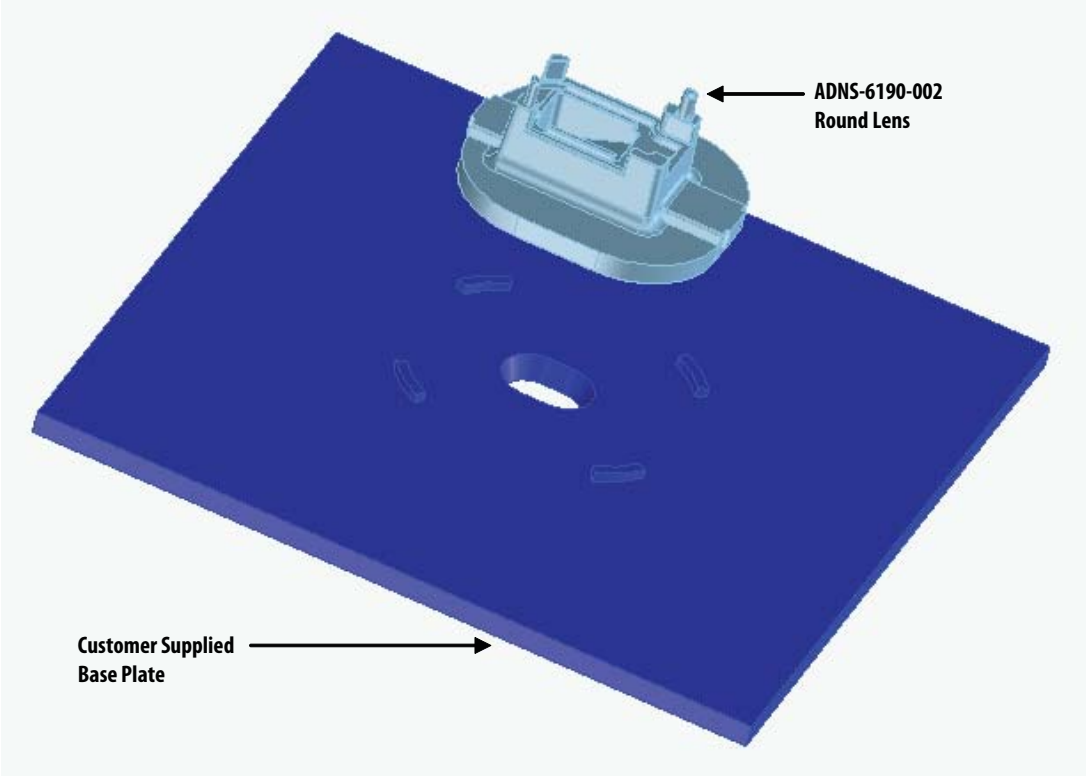


Figure 3. Illustration of base plate mounting features for ADNS-6190-002 round lens

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