

ADNS-8100-002

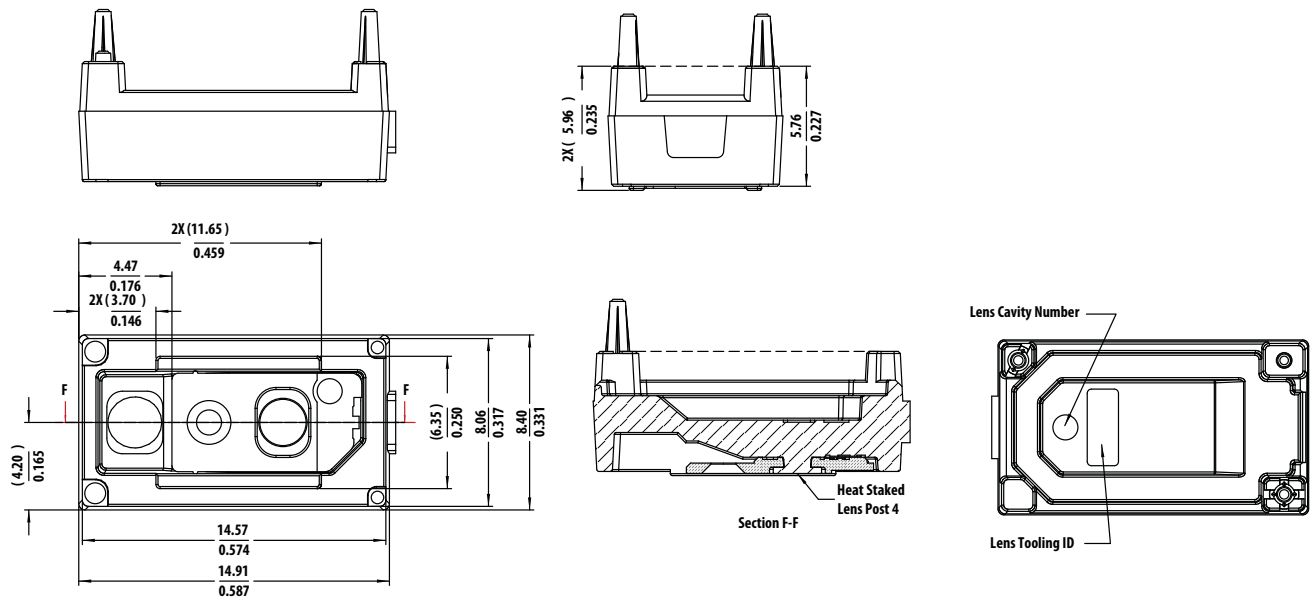
Track On Glass LaserStream™ Small Form Factor Lens



Data Sheet

Description

The ADNS-8100-002 laser mouse Track On Glass LaserStream™ Small Form Factor Lens is designed for use with Avago Technologies ADNS-8020 Track On Glass LaserStream™ sensors. Together with the integrated VCSEL in the same package, the ADNS-8100-002 Track On Glass LaserStream™ Small Form Factor Lens provides the directed illumination and optical imaging necessary for proper operation of the sensor. ADNS-8100-002 Track On Glass LaserStream™ Small Form Factor Lens is a precision molded optical component and should be handled with care to avoid scratching and contamination of the optical surfaces.



Notes:

- 1.0 Dimension in millimeters / inches
- 2.0 General dimension tolerance: $\pm 0.10\text{mm}$ unless specified otherwise
- 3.0 Angular tolerance: $\pm 3.0^\circ$
- 4.0 Maximum flash: 0.20mm
- 5.0 Bracket () indicates reference dimension
- 6.0 Optical details removed
- 7.0 Document Number: ADNS-8100-002-G8_005

Figure 1. ADNS-8100-002 Track On Glass LaserStream™ Small Form Factor Lens outline drawings and details

Mechanical Assembly Requirements

All specifications reference Figure 2, Optical System Assembly Diagram

Parameters	Symbol	Minimum	Typical	Maximum	Unit	Conditions
Distance from Object Surface to Lens Reference Plane	Z_REF	2.20	2.40	2.60	mm	When use with ADNS-8020
Distance from Object Surface to Lens Lowest Plane	Z_LP		2.20		mm	

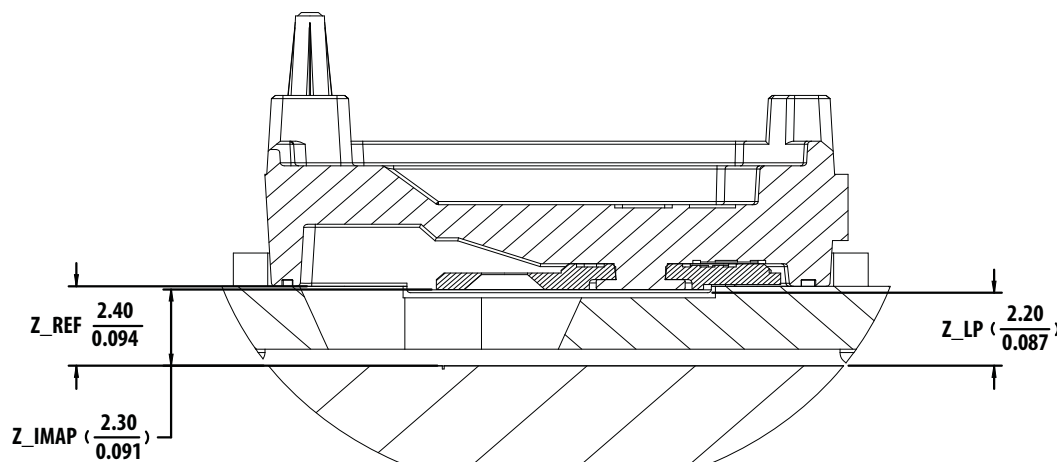


Figure 2. Optical system assembly cross-section diagram

Lens Design Optical Performance Specifications

All specifications are based on the Mechanical Assembly Requirements.

Parameters	Symbol	Minimum	Typical	Maximum	Unit	Conditions
Design Wavelength	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-8100-002 Track On Glass LaserStream™ Small Form Factor 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-8100-002 Track On Glass LaserStream™ Small Form Factor Lens when used with the ADNS-8020 Track On Glass LaserStream sensor. These file can be obtained by downloading from Avago technologies website or by contacting your local Avago Technologies sales representative.

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

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