



NDI Radix™ Lens

A wipeable retro-reflective marker for use with optical measurement applications.

The Radix™ Lens is a retro-reflective passive marker that can be integrated into OEM surgical instruments for use with the Polaris® family of optical navigation solutions to pinpoint instrument positions.

The Radix Lens features a smooth plastic surface that makes it less susceptible to liquid and particulate contamination and, therefore, less prone to accuracy degradation.

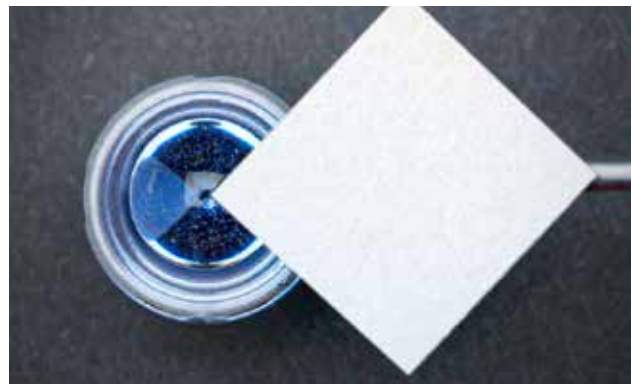


Radix Lens Features:

- Facilitates accurate optical tracking in harsh environments
- Solid contamination is easy to identify and remove, resulting in better tracking recovery
- Partial occlusions have minimal impact on tracking performance
- Minimizes interruption to surgical workflow
- Low profile marker eliminates marker-to-marker interference on planar tools

Resistant to Partial Occlusions

As a benefit of its form factor, the Radix Lens is inherently resistant to partial occlusions. An occlusion that partially covers one side of the lens will be reflected on the opposite side. Due to the resulting symmetrical occlusion, the marker centroid is still tracked accurately. The Radix Lens has a viewing angle of $\pm 60^\circ$, which ensures it is readily “seen” (detected) by the Polaris® optical tracker within the measurement volume.



Reduced Marker Interference

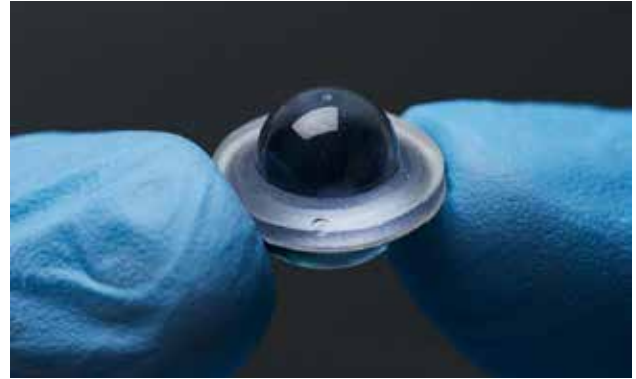
The Radix Lens alleviates possible marker-to-marker interference on OEM surgical instruments by way of its low marker profile. Radix Lenses and passive marker spheres can be used on separate tools during the same procedure. For example, Radix Lenses could be attached to a patient reference array or the base of an OEM surgical robot to track its relative position, while passive marker spheres are attached to a handheld OEM surgical instrument.



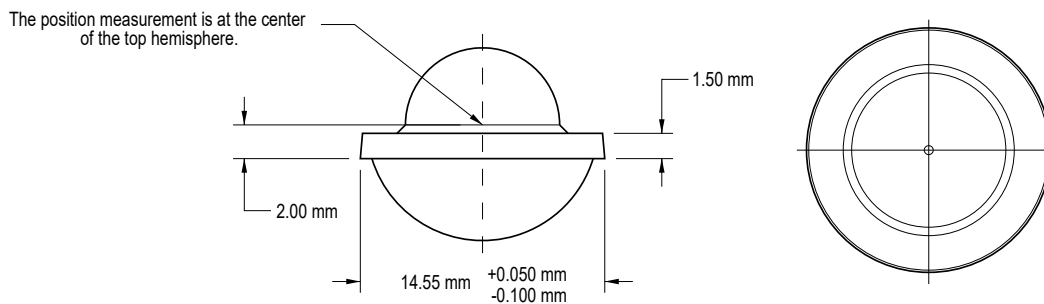
Guidelines for Handling and Cleaning the Radix Lens

To ensure optimal performance of the Radix Lens, it's essential to handle it carefully and avoid contact with the back surface of the lens during assembly. The reflective coating on the back surface is delicate and can be easily damaged by touch or rubbing, which could significantly reduce the lens performance.

Before using any cleaning products, it's important to validate them to avoid causing any damage to the lens. NDI recommends cleaning only the upper hemisphere of the lens with water and a clean microfibre optical cleaning cloth. It's also advisable to avoid using paper-based cloth products as they can leave scratches on the lens surface.



Mechanical Specifications



*The position of the lens is measured at the center of the top hemisphere, which is 2.0 mm above the bottom surface of the flat central flange. This surface is the part of the flange that touches the tool or base where the lens is attached.



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*The Radix Lens is not a medical device; its suitability, testing, certification, and validation in a particular application must be determined and completed by the OEM medical device customer or end user prior to use.

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