

## Precision Glass & Optics (PG&O<sup>®</sup>)

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For Immediate Release

## PG&O<sup>®</sup> Provides Customized Optical Components for Avotec's Real Eye Nano<sup>™</sup>

• Avotec's unique visual stimulation and eye tracking system for MRI systems is a finalist in SPIE's prestigious Prism Awards - Biomedical Instrumentation category.

## SANTA ANA, CA - March 7, 2016 - Precision Glass & Optics (PG&O -

<u>www.pgo.com</u>), announces the customization of two thin film optical components for a high-field magnetic resonance imaging (MRI) accessory developed by Avotec, Inc. (<u>www.avotecinc.com</u> – Stuart, Florida). The Real Eye Nano<sup>™</sup> is an advanced visual

presentation and eye-tracking system constructed entirely of glass and plastic, with a reduced size that makes it ideal for operation in confined MRI spaces. Functional magnetic resonance imaging (fMRI) is a leading tool in the effort to understand how the human brain functions and a primary target of fMRI research is cognitive disorders associated with increasing age. Optical systems that provide both eye-tracking and visual stimulation are, and will continue to be, a key component in fMRI research.



PG&O developed the dielectric cold mirror and cylindrical prism mirror for the Real Eye Nano. The system allows the MRI patient to view a unique visual demonstration concurrently while the patient's eyes are illuminated with near-infrared (980 nm) light supplied by an IR light-emitting diode (LED) / fused fiber cable / fiber bundle. PG&O contributed expertise in designing and applying the thin-film coating to the large dichroic mirror and in shaping the multi-element lens for this revolutionary fMRI system. According to Dan Bukaty, Jr., president of PG&O, "It was a pleasure to work with Avotec on this interesting project. In manufacturing the dichroic mirror, we used our CMP cold mirror and shaped the optic using waterjet technology, which allows us to produce difficult shapes very affordably. The lens was created from a right angle prism that we coated per our customers specifications, then precisely shaped using our CNC machine."

Precision Glass & Optics partners with customers to find unique optical solutions to specific needs, delivering precision glass, optics and specialized thin film coatings for many different application areas. To find out more, please call 714-540-0126 or visit <u>www.pgo.com</u>.

For more information about Avotec's Real Eye Nano, please go to: Real Eye Nano.

## ABOUT THE COMPANIES:

**PRECISION GLASS & OPTICS (PG&O)** – <u>www.pgo.com</u> – Celebrating the company's 30<sup>th</sup> year, PG&O delivers high quality, precision glass, optics, and optical coatings for a variety of applications. The company has an extremely large inventory of glass products and a full optical fabrication shop to provide advanced optical coatings and manufacturing large mirror blanks. Other services include CNC machining, polishing, slicing, sawing, scribing, grinding, edging, assembly, and more. With three large coating chambers, and an expert, in-house engineering staff, our cost-effective and reliable optics and advanced thin film coatings are ideal for military, aerospace, astronomy, biomedical, imaging, laser, digital cinema, solar markets, and more.

Avotec, Inc. (www.avotecinc.com – Stuart, Florida) manufactures products for use in fMRI (functional magnetic resonance imaging), an imaging technique used to study brain activity. One recently introduced product, the Real Eye Nano<sup>™</sup>, a visual stimulation and eye-tracking system, was a Finalist for the prestigious SPIE Prism Awards 2016. Other products include the Silent Vision<sup>™</sup> family of MR-compatible projectors and fiber-optic glasses used for visual stimulation, and the Silent Scan<sup>™</sup> family of audio systems used for audio stimulation, hearing protection, and communication.

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