# ® COPYRIGHT 2012 EDMUND OPTICS, INC. ALL RIGHTS RESERVED 7/12

### AN INTELLIGENT PRE-SCREENING OPHTHALMOLOGY DEVICE

Bangalore, India - FORUS HEALTH is addressing the healthcare delivery crisis in the developing world with an innovative, lowcost, portable pre-screening ophthalmic device: 3nethra, built with Edmund Optics' optical components. Forus Health's charter is to eradicate avoidable blindness while confronting India's outstandingly high ophthalmologist to patient ratio of approximately 1:60,000. 3nethra can detect five major ailments of the eye, such as cataract, glaucoma, diabetic retina, refraction, and cornea problems. The device is designed so that even a minimally trained technician can operate it in the absence of an ophthalmologist, easing its deployment and use in rural environments. Additionally, 3nethra has telemedicine and data center capability to connect the entire eye care ecosystem. Forus Health's customers consist of a broad set of healthcare providers, such as Ophthalmology Hospitals and Clinics, Diabetic and Diagnostic Clinics, and Vision Centers including health kiosks and general physicians.

*3nethra* has undergone formal clinical validation and compliance testing for CE standards and the device has already been deployed in major ophthalmology hospitals in India.







Ready to design your next product?

Contact us today!

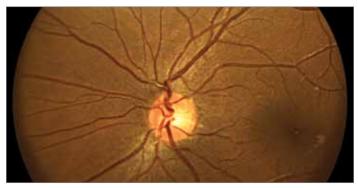


USA: +1 856 547 3488 ASIA: +65 6273 6644 EUROPE: +44 (0) 1904 788600 JAPAN: +81 3 5800 4751

## ® COPYRIGHT 2012 EDMUND OPTICS, INC. ALL RIGHTS RESERVED 7/12

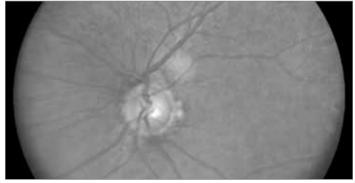
#### PRODUCT DEVELOPMENT CHALLENGE

- Optical components from Edmund Optics® were utilized in the design of the *3nethra*, a low-cost portable pre-screening ophthalmology device.
- Standard spherical optical components such as planoconvex and achromatic lenses were used in conjunction with specialized mirrors and polarizers.
- Previous designs yielded excellent images at the visible spectrum, yet poor images in the NIR. Bright reflections were evident at the center of the image and interfered with the procedure for diagnostics.
- The anti-reflection coating was then adjusted to cover longer wavelengths out to 1000nm, which remedied the reflections and noise in the system. This method of dual inspection is critically important for ophthalmic purposes.
- The visible spectrum allows normal examination of the entire retina surface and cornea, while the NIR spectrum allows for continuous observation without any irritation to the eyes.



Fundus Image with White Light

Image courtesy of FORUS HEALTH



**Fundus Image with NIR Light** 

Image courtesy of FORUS HEALTH

#### **EO PARTNER FORUS HEALTH**

**Market: Life Sciences** 

Application: Ophthalmic Pre-screening using Fundus camera

The Forus name meaning, "For us" in English - me and my community. **FORUS HEALTH** is an innovation-driven technology enterprise that develops affordable technology solutions and "Democratizing Wellness," while addressing healthcare issues in India and around the world. The Bangalore-based start-up, founded by K. Chandrasekhar and Shyam V. Rao, has developed *3nethra*, a low-cost, portable, pre-screening ophthal-mology device. In addition to pre-screening of eye diseases, Forus is aiming to build technology that can scan the retina in order to detect early symptoms of diabetes, cardiovascular, nephrology, and neurological problems. **FORUS HEALTH** has an impressive record, having received nine different awards during only the first couple of years since the company's founding, including Gold Medallist, DST - Lockheed Martin India Innovation Growth Programme, Indo Dutch Innovation Award, Samsung Innovation Quotient, and 2010 Piramal Prize.

FORUS HEALTH has already raised series-A capital funding of \$5 million from IDG Ventures and Accel® Partners.

Ready to design your next product? Contact us today!

