

News Release

## **trinamiX develops the world's first consumer spectroscopy module for smartphones together with LUMILEDS and VIAVI**

- Cooperation of light source, detector, and filter manufacturers
- Near-infrared spectroscopy solution that allows consumers to check health indicators (biomarkers) anywhere, anytime.
- Tailor-made solution for smartphones running on the Snapdragon® 8 Gen 3 reference design – first unveiled at Snapdragon Summit 2023

**Ludwigshafen, Germany/Las Vegas, USA/Chandler, USA, November 30, 2023** - trinamiX, pioneer in miniaturization of NIR spectroscopy modules, has developed a miniaturized spectroscopy module that can be integrated into a smartphone together with top-class partners: LUMILEDS, a leading manufacturer of LED light sources, and VIAVI Solutions, a world leader in the manufacture of optical filters, light shaping optics and handheld industrial spectrometers with an extensive experience in the consumer electronics market.

The near-infrared (NIR) spectroscopy module runs on Qualcomm Technologies' latest Snapdragon® 8 Gen 3 reference design and was first unveiled at the 2023 Qualcomm Snapdragon Summit. In the future, consumers will be able to use their mobile devices to visualize previously "invisible" health indicators – so-called biomarkers – and check them non-invasively anytime and anywhere. Based on real, molecular measurements, smart apps will provide well-founded, personalized recommendations for skin care, nutrition, and many other applications in the future.

In its search for an optimal light source, trinamiX has found the ideal partner in LUMILEDS. The LED developed by LUMILEDS emits broadband in the long-wave near-infrared range and meets the demanding requirements of smartphone manufacturers in terms of size, energy consumption, lifetime, and stability.

With VIAVI, another strong partner was added. Their filters enable the precise determination of relevant wavelengths to extract biomarker information from the spectrum. The exceptionally high quality and precision of its filters make the company a reliable partner in the entire value chain: from prototyping to mass production.

The detector and the read-out electronics were specially developed by trinamiX for modules in smartphone-compatible size. The highly sensitive infrared detectors are particularly small due to patented encapsulation but are robust and durable. trinamiX also contributed spectroscopy and chemometrics know-how and initiated the integration of Consumer Spectroscopy into smartphones.

"trinamiX Consumer Spectroscopy promises to revolutionize the way we understand and evaluate our health, nutrition, and more," says Wilfried Hermes, Director Consumer Electronics North America and Europe, trinamiX GmbH. "This would not have been possible without the expertise of LUMILEDS and VIAVI. Both partners have repeatedly pushed the boundaries of what is technically feasible. Together, we have been able to create an exciting technology that will redefine the use of smartphones."

"The close co-operation between trinamiX and Lumileds has made the never before possible a reality, a miniaturized spectrometer integrated in a smartphone," says Noman Rangwala, Head of LED product marketing and management at Lumileds. „The many applications this innovation enables in consumer medical applications are truly impactful. We are excited to be part of this innovative team."

"VIAVI is proud to be part of a team of industry-leading ecosystem partners working collaboratively to put spectroscopy into consumers hands," says Adam Scheer, Vice President, Product Management of the Optical Security and Performance Products group of VIAVI Solutions. "Over the past decade, we have developed unique capabilities to develop and manufacture optical filters with superior performance characteristics at smartphone scale leveraging our proprietary magnetron sputter coating platforms. We are looking forward to seeing all the consumer spectroscopy applications that the trinamiX solution can enable."

Thanks to the perfect interaction of the partners, tailor-made solutions can be realized for different, even highly specialized applications: ideal for wearables, IoT devices and other household and consumer electronics.

Learn more about trinamiX Consumer Spectroscopy at  
[Consumer Spectroscopy / trinamiX \(trinamixsensing.com\)](https://www.trinamixsensing.com)

## **About trinamiX GmbH**

trinamiX GmbH develops cutting-edge biometric and mobile NIR spectroscopy solutions, which are used in both consumer electronics and industrial designs. The company's products enable humans and machines to better capture data with the goal of understanding the world around us. This results in improved decision making as well as stronger biometric security. trinamiX, based in Ludwigshafen (Germany), was founded in 2015 as a wholly owned subsidiary of BASF SE. The company employs over 240 people worldwide and holds more than 600 patents and patent applications. Learn more about trinamiX at [www.trinamixsensing.com](http://www.trinamixsensing.com).

## **About LUMILEDS**

Lumileds is a global leader in OEM and aftermarket automotive lighting and accessories, camera flash for mobile devices, MicroLED, and light sources for general illumination, horticulture, and human-centric lighting. Our approximately 6,000 employees operate in over 30 countries and

partner with our customers to deliver never before possible solutions for lighting, safety, and well-being. To learn more about our company and solution portfolios, please visit [lumileds.com](http://lumileds.com).

## About VIAVI

VIAVI (NASDAQ: VIAV) is a global provider of network test, monitoring and assurance solutions for telecommunications, cloud, enterprises, first responders, military, aerospace and railway. VIAVI is also a leader in light management technologies for 3D sensing, anti-counterfeiting, consumer electronics, industrial, automotive, government and aerospace applications. In 2023, we celebrate over 100 years of Network Transformation and Optical Innovation. Learn more about VIAVI at [www.viavisolutions.com](http://www.viavisolutions.com). Follow us on VIAVI Perspectives, LinkedIn and YouTube.

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