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## New infrared LED from Osram is first to market for unlocking smartphones by iris scanning

Fujitsu smartphone uses innovative light emitting diodes for iris recognition

Osram infrared technology is making smartphones even smarter by enabling mobile devices, for the first time, to be unlocked by scanning the iris of the user. Fujitsu Limited is using iris scanning in its ARROWS NX F-04G smartphone, which is being marketed by the Japanese telecommunications company NTT DOCOMO Inc. This smartphone, which is currently available only in Japan, is the first in the world with this extremely secure functionality for consumers, using infrared light emitting diodes (IREDs) from Osram Opto Semiconductors as the light source. These IREDs are the only products capable of the high power needed for iris scanning from a compact package. "We are delighted that once more an innovation from our company has made its way into an everyday application and has set new standards for the entire industry," said Bodo Ischebeck, Vice President Infrared Components at Osram Opto Semiconductors.

Secure methods for unlocking cell phones and tablet computers are gaining importance because these devices are being used increasingly for sensitive applications such as online banking and online shopping. Not only do these methods provide better security, they also offer a more convenient way for users to authenticate their phone. Manufacturers are therefore turning more and more to biometric identification as a secure and convenient solution. In addition to fingerprint scans, many manufacturers are now considering iris scanning. With this new biometric unlocking method, an infrared light illuminates the user's eye, and the camera on the smartphone simultaneously takes a picture of the iris in which characteristic features are then identified.

The Oslux SFH 4780S light emitting diode from Osram's subsidiary Opto Semiconductors currently offers the best size-to-performance ratio and for the first time opens up compact and reliable iris scanning for

## IR LEDs for Smartphones

mobile devices. It is only 2.4 millimeters high and achieves a typical radiant intensity of 2900 milliwatts per steradian – a combination that is currently available only from this infrared LED.

The Oslux SFH 4780S has a wavelength of 810 nanometers (nm). This enables the iris scanner to identify iris patterns for all eye colors – brown, blue, green and gray – with a high degree of reliability. The light source is also extremely efficient, minimizing drain on mobile device batteries. Osram Opto Semiconductors was recently presented with the 2015 Kaiser Friedrich Research Award for its work in developing the Oslux SFH 4780S IRED.



The high output and compact dimensions of the Oslux SFH 4780S make it ideal for iris scanning.

Picture: Osram

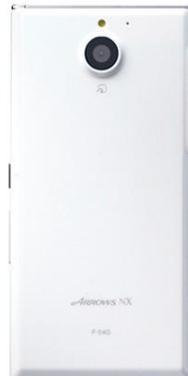




Iris Green



White



Black



**ARROWS NX** F-04G

The ARROWS NX F-04G is the world's first smartphone to use iris scanning as an unlocking method.

Picture: Fujitsu

#### ABOUT OSRAM OPTO SEMICONDUCTORS

OSRAM, with its headquarters in Munich, is one of the two leading lighting manufacturers in the world. Its subsidiary, OSRAM Opto Semiconductors GmbH in Regensburg (Germany), offers its customers solutions based on semiconductor technology for lighting, sensor and visualization applications. OSRAM Opto Semiconductors has production sites in Regensburg (Germany), Penang (Malaysia) and Wuxi (China). Its headquarters for North America is in Sunnyvale (USA). Its headquarters for the Asia region is in Hong Kong. OSRAM Opto Semiconductors also has sales offices throughout the world. For more information go to [www.osram-os.com](http://www.osram-os.com).

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