Press

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Osram makes car keys obsolete by unlocking doors with iris scan and facial recognition

Biometric identification arrives in the automotive industry thanks to two new infrared LEDs (IREDs), Synios SFH 4772S A01 or Synios SFH 4775S A01

Biometric identification offers many benefits to drivers such as ending the frustrating search for car keys. Another key benefit involves providing automatic, individualized settings for vehicles with multiple drivers. After a driver is recognized through biometric identification, everything from seat position to favorite radio stations are automatically adjusted. In the future, Synios SFH 4772S A01 or Synios SFH 4775S A01 will help identify drivers using iris scan or facial recognition to unlock the doors and even disable the engine immobilizer.

“By combining our extensive experience in the automotive industry and biometric identification, we created two, new IREDs that will make driving more personal and secure,” said Karl Leahy, Director of Emitters, Lasers and Sensors at Osram Opto Semiconductors. “Like many of our components, they are small in size, giving our customers more space and freedom to design their products.

The new Synios SFH 4772S A01 is ideal for use in iris scanning systems. This application is best known today for unlocking smartphones and tablets without a password. By operating as a light source, the IRED illuminates the iris with invisible light in the correct wavelength, allowing a camera to capture an image of the iris pattern – no matter what eye color. The system then compares this information with stored data, unlocking the device if there is a match. SFH 4772S A01 emits infrared light with a wavelength of 810 nm and achieves an optical output of 1070 mW at 1 A.

The second product, Synios SFH 4775S A01, works in facial recognition and driver monitoring. Both applications require a wavelength of 940 nm. The IRED has an optical output of 1650 mW at 1.5 A, but has also been designed for high-pulse loads up to 5 A.

Both components feature compact dimensions of 2.0 mm x 2.8 mm x 0.6 mm. Depending on requirements, customers can place matching optics over the component to save space. The two power emitters are Lambertian emitters with flat encapsulation. Double-stack chip technology ensures high-output power. Both products are qualified for automotive applications and approved for temperatures up to 125° Celsius. They will be available in spring 2019.

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The compact SFH 4775S A01 was designed for facial recognition and other applications and is suitable for high pulse loads up to 5 A.
Picture: Osram

Osram’s new IREDs make biometric driver identification possible, which provides many benefits such as automatically unlocking doors or adjusting an individual’s seat position. Picture: Osram

ABOUT OSRAM

OSRAM, based in Munich, is a leading global high-tech company with a history dating back more than 110 years. Primarily focused on semiconductor-based technologies, our products are used in highly diverse applications ranging from virtual reality to autonomous driving and from smartphones to smart and connected lighting solutions in buildings and cities. OSRAM uses the endless possibilities of light to improve the quality of life for individuals and communities. OSRAM’s innovations enable people all over the world not only to see better, but also to communicate, travel, work and live better. OSRAM has approximately 27,400 employees worldwide as of end of fiscal 2018 (September 30) and generated revenue of more than €4.1 billion. The company is listed on the stock exchanges in Frankfurt and Munich (ISIN: DE000LED4000; WKN: LED 400; trading symbol: OSR). Further information can be found at www.osram.com.

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