Press Release

ams launches world's smallest proximity/light sensor module to enable phone makers to reduce bezel width

News facts:

- New TMD2755 3-in-1 sensor has 40% smaller footprint than comparable competitors, enabling phone makers to narrow the bezel and increase display area
- Optical design of TMD2755's package optimized for large air gap between sensor and cover glass
- ams hits new market sweet spot as manufacturers look to extend mid-range smartphone offerings

Premstaetten, Austria (July 22, 2020) -- ams (SIX: AMS), a leading worldwide supplier of high performance sensor solutions, today launches the world's smallest integrated ambient light sensor (ALS) and proximity detection module, enabling mobile handset OEM's serving the mid-range market segment to develop mobile devices with virtually bezel-less displays. The TMD2755 module is 40% smaller in area and 64% smaller in volume than comparable devices in the market today.

Innovative sensor design

The TMD2755 provides a complete integrated 3-in-1 sensor solution, simplifying the phone manufacturer's implementation, reducing board space requirements and enabling a best-in-class low-profile system design. The TMD2755 combines a low-power VCSEL emitter (with integrated, factory calibrated driver), an IR photodetector, and ambient light sensor in a narrow footprint and low profile 0.6mm height package. The new TMD2755 module's footprint of just 1.1mm x 3.25mm is some 40% smaller than that of the next smallest comparable 3-in-1 (IR emitter + IR detector + ambient light sensor) modules on the market. Just 0.6mm high, the TMD2755 is also 64% smaller in volume.

ams is hitting this new market sweet spot just as phone makers are extending their smartphone offerings to address changing market economics. By enabling the proximity and light sensing function to be accommodated in a narrower bezel, the TMD2755 supports phone manufacturers' drive to increase the viewable display area as a proportion of body size – a key factor in enhancing the consumer appeal of smartphones in the mid-range segment of the market.

A common feature of the narrow-bezel/large display products in this segment is a large air gap between the proximity/light sensor and the cover glass. The TMD2755 is ideally suited for smartphones where the gap between the display and edge of the phone is less than 1mm and where the sensor is buried deeper in the phone therefore requiring a 'large air gap' solution. With offset emitter/detector alignment, the sensor solution can reside far away from the touch panel glass and only require a small slot width in the glass for optical operation. The device features high proximity crosstalk compensation and supports operation behind highly-diffusive glass by compensating for unwanted reflected crosstalk. It also provides accurate and stable measurement under dark

glass in low light-level environments. The TMD2755 provides a highly cost-effective solution by eliminating the need for a light pipe and interposer and the cost of two separate sensors therefor reducing the total bill of materials cost. In addition, phone makers can easily implement a single optical sensing solution based on the TMD2755 across multiple phone models, reducing development effort and keeping to a minimum the number of stock-keeping units required to be kept in inventory.

Jian Liu, Strategic Marketing Director in the Integrated Optical Sensors business line at ams, said: "Leading smartphone manufacturers are extending their share of the mid-range market by increasing the handset feature set and performance. The TMD2755, with its narrow package coupled with low noise, ultra-high sensitivity and superior proximity performance, has been designed to deliver the best price/performance product for large air gap designs while maximizing the screen-to-body ratio for narrow-bezel handsets."

The TMD2755 proximity/ambient light sensor module is available for sampling. For sample requests or for more technical information, go to https://ams.com/tmd2755.

About ams

ams is a global leader in the design and manufacture of advanced sensor solutions. Our mission is to shape the world with sensor solutions by providing a seamless interface between humans and technology.

ams' high-performance sensor solutions drive applications requiring small form factor, low power, highest sensitivity and multi-sensor integration. Products include sensor solutions, sensor ICs, interfaces and related software for consumer, communications, industrial, medical, and automotive markets.

With headquarters in Austria, ams employs around 8,500 people globally and serves more than 8,000 customers worldwide. ams is listed on the SIX Swiss Exchange (ticker symbol: AMS). More information about ams can be found at https://ams.com

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