Press Release

ams introduces industry-leading, ultra-high sensitivity digital light sensor

TSL2591 family of intelligent light sensors significantly improves performance and design flexibility for display and non-display applications

Unterpremstaetten, Austria (17 April, 2013) - ams AG (SIX: AMS), a global leader in the design and manufacture of high performance analog ICs and optical sensors for consumer and communications, industrial, medical and automotive applications, today introduced a new performance benchmark with the launch of a digital light sensor family that offers low-light sensitivity down to 0.000377 lux.

Offering a wide 600M:1 dynamic range up to 88,000 lux (bright sunlight), the TSL2591 device family increases design flexibility and offers engineers new levels of performance in ambient light sensors for displays, as well as for a wide range of non-display applications.

Designs using lower-sensitivity light sensors face severe constraints and are forced to meet tight specifications governing the properties of the attenuating material they are placed behind, the physical placement of the sensor, and the minimum intensity of light it must be exposed to in order to deliver sufficiently accurate measurements. With the introduction of the TSL2591 device family, designers now have available to them far greater flexibility in system design and layout. Its ultra-high sensitivity and wide dynamic range mean that it can deliver accurate and meaningful measurements even when exposed to extremely low light levels. This gives the designer the freedom to place the sensor away from the direct path of the light it is measuring and behind a wider variety of darkened glass or attenuating materials.

For display applications, the light sensor TSL2591 device family utilizes a patented ams dual-photodiode architecture that provides extremely accurate ambient light measurements even when placed behind material attenuating as much as 99% of the visible light while automatically compensating for the increased IR component. This enables a photopic response to ambient light intensity that mimics the human eye. Its ultra-high sensitivity reduces or eliminates design concerns for smartphone and tablet displays in which inked glass variations can result in costly design alterations to accommodate less sensitive devices. The TSL2591 can be placed deeper within the end product, providing more efficient and lower-cost solutions which offer the product designer more flexibility from a system design perspective. It also provides for a sleek, seamless industrial design with no unsightly apertures or voids in inked glass.

In addition, the TSL2591 device family provides an interrupt feature that simplifies and improves system efficiency by eliminating the need to poll a sensor for a light intensity value. The primary purpose of the interrupt function is to detect a meaningful change in light intensity. Meaningful change can be defined by the user in terms of light intensity and time, or the persistence of a change in

intensity. TSL2591 is a fully integrated light-to-digital sensor with dual analog-to-digital converters and an I^2C interface. It offers programmable gain and programmable integration time.

The complete ams portfolio of intelligent light sensors, including the TSL2591 device family, is included in the ams online product selector tool. This tool offers a user-friendly parametric search capability enabling engineers to quickly and easily compare design specifications and find the right product for their application.

The Product Selector tool supports five categories of products manufactured by ams: light sensors, LED drivers, magnetic position sensors, power converters, and power management ICs (PMICs). The search capability supports a wide choice of design criteria and includes an innovative virtual navigation pointer to rank products according to parameters such as price, board area or pitch. The tool also provides direct access to analogbench, an online design tool (where available), and to the ams online store so that design engineers can place orders for available devices.

The Product Selector tool is at www.ams.com/productselector

Price & Availability

The TSL25911FN (Vbus=Vdd=3.3V) and the TSL25913FN (Vbus=1.8V) ultra-high sensitivity light sensors are available now from ams and its authorized distributors. They are priced at $0.83 for 1,000 pieces.

Technical Support

Evaluation modules for the TSL2591 are available. The modules have a USB interface and are supported by a software application with a GUI which allows simple configuration and inspection of the device's registers. In addition, ams provides support for device drivers, including C reference code.

For further information on the light sensor TSL2591 or to request samples, please visit www.ams.com/Light-to-Digital/TSL2591.

about ams

ams develops and manufactures high performance analog semiconductors that solve its customers' most challenging problems with innovative solutions. ams' products are aimed at applications which require extreme precision, accuracy, dynamic range, sensitivity, and ultra-low power consumption. ams' product range includes sensors, sensor interfaces, power management ICs and wireless ICs for customers in the consumer, industrial, medical, mobile communications and automotive markets.

With headquarters in Austria, ams employs over 1,300 people globally and serves more than 7,800 customers worldwide. ams is the new name of austriamicrosystems, following the 2011 acquisition of optical sensor company TAOS Inc. ams is listed on the SIX Swiss stock exchange (ticker symbol: AMS). More information about ams can be found at www.ams.com

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