Vishay Intertechnology Releases AEC-Q100 Qualified RGBIR Color Sensor in Compact 2.67 mm x 2.45 mm x 0.6 mm Package

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Automotive Grade Device Allows for the Calculation of Color Temperature, Light Source Differentiation, and Placement Behind Dark Cover Glass

MALVERN, Pa., April 02, 2025 (GLOBE NEWSWIRE) -- The Optoelectronics group of Vishay Intertechnology, Inc. (NYSE: VSH) today introduced the industry's first AEC-Q100 qualified RGBIR color sensor. The Vishay Semiconductors VEML6046X00 features a highly sensitive photodiode, low noise amplifier, and 16-bit ADC in a miniature, opaque 2.67 mm by 2.45 mm surface-mount package with a low 0.6 mm profile.

With separate red, green, blue, and infrared (IR) channels, the Automotive Grade device released today allows for the calculation of the color temperature to enable white point balancing for displays. The spectral sensitivity of the VEML6046X00's green channel matches that of the human eye to ensure highly accurate measurements, while IR channel facilitates a stable output over a wide range of light sources. With an ambient light range from 0 lx to 176 klx, the sensor will not saturate in daylight, while its high sensitivity of 0.0053 lx/ct allows the device to be placed behind dark cover glass.

Offering a high operating temperature range to +110 °C, the VEML6046X00 will be used for automotive display backlight controls, infotainment systems, rearview mirror dimming, interior lighting control systems, heads-up displays, color recognition, CCT measurement, mood lighting, and laser front light monitoring. The sensor supports the easy to use I²C bus communication interface for these applications and offers an interrupt function.

The VEML6046X00 features a supply voltage range of 2.5 V to 3.6 V, I²C bus voltage range of 1.7 V to 3.6 V, and low shut down current consumption of 0.5 µA typical. RoHS-compliant, halogen-free, and Vishay Green, the device offers a Moisture Sensitivity Level of 2a and a floor life of four weeks in accordance with J-STD-020E.

Samples and production quantities of the new RGBIR color sensor are available now, with lead times of 16 weeks.

Vishay manufactures one of the world's largest portfolios of discrete semiconductors and passive electronic components that are essential to innovative designs in the automotive, industrial, computing, consumer, telecommunications, military, aerospace, and medical markets. Serving customers worldwide, Vishay is **The DNA of tech.**® Vishay Intertechnology, Inc. is a Fortune 1000 Company listed on the NYSE (VSH). More on Vishay at www.Vishay.com.

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Link to product datasheet:
http://www.vishay.com/ppg?80173 (VEML6046X00)

Link to product photo:
https://www.flickr.com/photos/vishay/albums/72177720324688343

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