



For Automotive and Consumer Applications, New VEML6031X00 AEC-Q100 Qualified Ambient Light Sensor in Compact 2.67 mm x 2.45 mm x 0.6 mm Package Offers High Dynamic Range to 228 klux and Resolution of 0.0034 lx/ct for Dark Lens Designs

Product Benefits:

- AEC-Q100 qualified
- Features a highly sensitive photodiode, low noise amplifier, 16-bit ADC, and infrared (IR) channel in a miniature, opaque 2.67 mm by 2.45 mm surface-mount package with a low 0.6 mm profile
- Highly linear behavior from 0 lx to 228 klux eliminates the need for a correction formula
- Resolution down to 0.0034 lx/ct allows for operation in applications with low transmittance (dark) lens designs
- IR channel enables light source detection and sensitivity adjustments to compensate for lux errors
- High operating temperature range to +110 °C
- Robust package with an improved signal to noise ratio
- Supports the easy to use I²C bus communication interface
- Features an interrupt function
- Selectable integration time down to 3.125 ms allows for fast response times
- Low shut down current consumption of 0.5 μ A typical
- Moisture Sensitivity Level of 2a and a floor life of four weeks in accordance with J-STD-020
- RoHS-compliant, halogen-free, and Vishay green



Market Applications:

- Display backlight controls, infotainment systems, rearview mirror dimming, interior lighting control systems, and heads-up displays

The News:

The Optoelectronics group of Vishay Intertechnology today introduces a new AEC-Q100 qualified ambient light sensor for automotive and consumer applications where very high sensitivity is needed for sensing light through dark cover materials. The Vishay Semiconductors VEML6031X00 features a highly sensitive photodiode, low noise amplifier, 16-bit ADC, and IR channel in a miniature, opaque 2.67 mm by 2.45 mm surface-mount package with a low 0.6 mm profile.

- The Automotive Grade device enables ambient light spectral sensitivity close to that of the human eye
- Supports multiple slave addresses for applications requiring more than one sensor
- The sensor provides excellent temperature compensation to maintain stability despite changes in ambient temperature



The Key Specifications:

- Ambient light range: 0 lx to 228 klx
- Ambient light resolution: 0.0034 lx/ct
- Operating voltage range: 2.5 V to 3.6 V
- I²C bus voltage range: 1.7 V to 3.6 V
- Output code: 16-bit, I²C
- Operating temperature range: -40 °C to +110 °C

Availability:

Samples and production quantities of the new ambient light sensor are available now, with lead times of eight to 12 weeks for large orders.

To access the product datasheet on the Vishay Website, go to <http://www.vishay.com/ppg?80007> (VEML6031X00)

Contact Information:

THE AMERICAS

Mr. Jim Toal
jim.toal@vishay.com

EUROPE

Mr. Kai Rottenberger
kai.rottenberger@vishay.com

ASIA/PACIFIC

Mr. Jason Soon
jason.soon@vishay.com