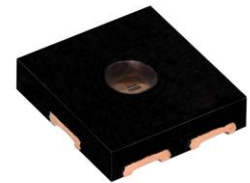


# AEC-Q100 Qualified RGBIR Color Sensor in Compact 2.67 mm x 2.45 mm x 0.6 mm Package Allows for the Calculation of Color Temperature, Light Source Differentiation, and Placement Behind Dark Cover Glass

## Product Benefits:

- AEC-Q100 qualified
- Offered in compact 2.67 mm by 2.45 mm by 0.6 mm surface-mount package
- Separate red, green, blue, and infrared (IR) channels allow for the calculation of the color temperature to enable white point balancing for displays
  - Green channel spectral sensitivity matches that of the human eye to ensure highly accurate measurements
  - IR channel facilitates a stable output over a wide range of light sources
- An ambient light range from 0 lx to 176 klx prevents saturation in daylight
- High sensitivity of 0.0053 lx/ct allows for placement behind dark cover glass
- High operating temperature range to +110 °C
- Supports the easy to use I<sup>2</sup>C bus communication interface
- Features an interrupt function
- Low shut down current consumption of 0.5 µA typical
- Moisture Sensitivity Level of 2a and a floor life of four weeks in accordance with J-STD-020E
- RoHS-compliant, halogen-free, and Vishay Green



## Market Applications:

- 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 News:

The Optoelectronics group of Vishay Intertechnology introduces the industry's first AEC-Q100 qualified RGBIR color sensor.

- The Automotive Grade device 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



### The Key Specifications:

- Dimensions: 2.67 mm by 2.45 mm by 0.6 mm
- Operating voltage range: 2.5 V to 3.6 V
- I<sup>2</sup>C bus voltage range: 1.7 V to 3.6 V
- Peak sensitivity:
  - Red: 600 nm
  - Green: 550 nm
  - Blue: 470 nm
  - IR: 820 nm
- Ambient light range: 0 lx to 176 000 lx
- Ambient light resolution: 0.0053 lx
- Operating temperature range: -40 °C to +110 °C

### Availability:

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

To access the product datasheet on the Vishay Website, go to  
<http://www.vishay.com/ppg?80173> (VEML6046X00)

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