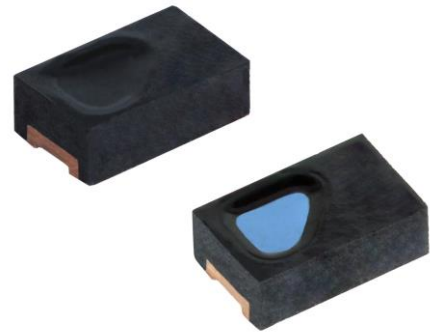




## VEMD4010X01 and VEMD4110X01 Automotive Grade PIN Photodiodes in 0805 Case Size Feature Low 0.7 mm Profile, Black SMD Packages to Eliminate Side Illumination and Increase Signal to Noise Ratio

### Product Benefits:

- Available in compact 0805 case size with a low 0.7 mm profile
- Black packages with opaque side walls
  - Eliminate unwanted side illumination
  - Increase signal to noise ratio
- AEC-Q101 qualified
- Daylight blocking filter (VEMD4110X01)
- Feature a sensitive area of 0.42 mm<sup>2</sup>
- Reverse light current of 2.4  $\mu$ A
- Low dark current of 1 nA
- Fast response times
- $\pm 60^\circ$  angles of half-sensitivity
- Wide temperature range of -40 °C to +110 °C
- 910 nm wavelengths of peak sensitivity
- RoHS-compliant, halogen-free, and [Vishay Green](#)
- Moisture sensitivity level (MSL) of 3 in accordance with J-STD-020 for a floor life of 168 hours



### Market Applications:

- Photo detection in applications such as solar load sensors; automotive rain, light, and tunnel sensors; light barriers for elevators, garage doors, and industrial equipment; and reflective sensors for touchless faucets, toilets, and trash cans

### The News:

Vishay Intertechnology introduces two new surface-mount Automotive Grade silicon PIN photodiodes in the compact 0805 case size with a low 0.7 mm profile — 0.15 mm lower than previous-generation devices. Offered in black packages, the opaque side walls of the Vishay Semiconductors VEMD4010X01 and VEMD4110X01 eliminate unwanted side illumination to increase their signal to noise ratio.

- Profile is 0.15 mm lower than previous-generation devices
- For the detection of visible and near infrared radiation, the VEMD4010X01 offers a sensitivity range from 550 nm to 1040 nm
- For 740 nm to 1040 nm infrared applications, the VEMD4110X01 features a daylight blocking filter and is matched with 830 nm to 950 nm IR emitters



## The Key Specifications:

Part number	VEMD4010X01	VEMD4110X01
Reverse light current ( $\mu\text{A}$ )	2.4	
Reverse dark current (nA)	1	
Spectral bandwidth (nm)	550 to 1040	740 to 1040
Wavelength of peak sensitivity (nm)	910	
Angle of half intensity ( $\pm^\circ$ )	60	
Radiant sensitivity area ( $\text{mm}^2$ )	0.42	
Daylight blocking filter	No	Yes

### Availability:

Samples and production quantities of the VEMD4010X01 and VEMD4110X01 are available now, with lead times of 10 weeks.

To access the product datasheets on the Vishay Website, go to

<http://www.vishay.com/ppg?80134> (VEMD4010X01)

<http://www.vishay.com/ppg?84910> (VEMD4110X01)

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