



Vishay Intertechnology High Speed PIN Photodiode Delivers Enhanced Sensitivity for Visible Light in Compact 2.0 mm x 1.8 mm x 0.6 mm SMD Package

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Device Offers Simple Integration, Precise Signal Detection, and Design Flexibility for Heart Rate Monitoring and Pulse Oximetry Applications in Wearables

MALVERN, Pa., Feb. 01, 2024 (GLOBE NEWSWIRE) -- Vishay Intertechnology, Inc. (NYSE: VSH) today broadened its optoelectronics portfolio with the introduction of a new high speed silicon PIN photodiode with enhanced sensitivity for visible light. Offered in a compact 2.0 mm by 1.8 mm by 0.6 mm top-view, surface-mount package with clear epoxy for maximum sensitivity, the Vishay Semiconductors [VEMD2704](#) provides fast switching times of 70 ns and low capacitance of 17.6 pF for precise signal detection in wearable devices.

With a radiant-sensitive area measuring 1.51 mm² — and high radiant sensitivity with a reverse light current of 1.17 µA and dark current of 0.03 nA — the device released today detects visible and near infrared radiation over a wide spectrum range from 350 nm to 1100 nm. In wearable devices such as fitness trackers and smartwatches, the photodiode can be used with green LEDs for optical heart rate detection and red LEDs for pulse oximetry applications.

Offering a reduced size compared to previous-generation solutions, the VEMD2074 enables easier integration into smaller products like earbuds, allows several photodiodes to be included in the optical system for more precise signal detection, and offers increased flexibility in sensor placement. The device is also available at a lower cost than previous-generation photodiodes, making it ideal for cost-sensitive devices like smart bands.

The VEMD2704 features a ± 67° angle of half-sensitivity, operating temperature range of -40 °C to +85 °C, and 940 nm wavelength of peak sensitivity. RoHS-compliant, halogen-free, and [Vishay Green](#), the photodiode provides a moisture sensitivity level (MSL) of 3 in accordance with J-STD-020 for a floor life of 168 hours.

Samples and production quantities of the VEMD2704 are available now, with lead times of 20 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 1,000 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/ppg280304> (VEMD2704)

Link to product photo:

<https://www.flickr.com/photos/vishay/albums/72177720314439165>

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