

VEMD8083 High Speed Silicon PIN Photodiode

Delivers Smaller Size and Enhanced Sensitivity for Biomedical Applications

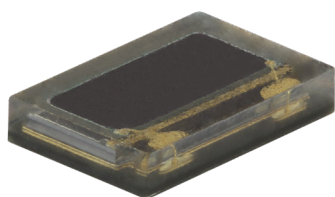


ADVANTAGE

Offers large sensitive area of 2.8 mm² and high light current to 16 μ A in compact 3.2 mm by 2.0 mm by 0.6 mm form factor

KEY PRODUCT FEATURES

- ✓ Pin to pin compatible with competing solutions
- ✓ Suitable for visible and near infrared radiation Wide spectral range from 350 nm to 1100 nm
- ✓ Fast rise and fall times of 30 ns
- ✓ Low diode capacitance of 50 pF
- ✓ $\pm 60^\circ$ angle of half-sensitivity



MARKETS AND APPLICATIONS



CONSUMER

- Health and care
 - Monitoring (heart rate monitoring, pulse oximetry)
 - Wearables devices

ADDITIONAL BENEFITS

- The device's high sensitivity is especially valuable in biomedical applications like photoplethysmography (PPG), where it detects variations in blood volume and flow by measuring light absorption or reflection from blood vessels. Accurate detection in these scenarios is essential for diagnosing and monitoring conditions such as cardiovascular disease
- While its chip size is reduced comparing to the previously released design, the photodiode's package is optimized to support a large radiant sensitive area, which enables high reverse light current
- Small form factor helps for easier customer integration in a low profile space constrained devices such as smart rings

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