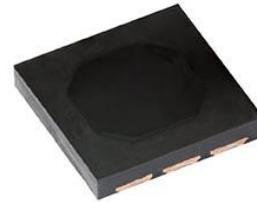




## New K857PE 4-Quadrant Silicon PIN Photodiode is Industry's First in SMD Package, Qualified for Automotive Applications; AEC-Q101 Qualified Device in Opaque Package Delivers Excellent Signal to Noise Ratio and Virtually no Tolerance Between Segments

### Product Benefits:

- Four monolithic diodes integrated into a single 4.72 mm by 4.72 mm by 0.8 mm top-view, surface-mount package
- Active area of 1.6 mm<sup>2</sup> per quadrant
- AEC-Q101 qualified
- 0.1 % low electrical crosstalk
- Virtually no tolerance between segments
- Wide sensitivity range from 690 nm to 1050 nm
- 8.5  $\mu$ A reverse light current
- Daylight blocking filter
- $\pm 60^\circ$  angle of half sensitivity
- RoHS-compliant, halogen-free, and Vishay Green
- Floor life of 168 h in accordance with J-STD-020



### Market Applications:

- Small signal detection for automotive rain / light sensors, industrial automation systems, laser beam alignment, and virtual reality applications

### The News:

The Optoelectronics group of Vishay Intertechnology introduces the industry's first 4-quadrant silicon PIN photodiode in a standard surface-mount package, qualified for automotive applications. Combining high photo sensitivity with low 0.1 % electrical segment to segment crosstalk and virtually no tolerance between its segments, the Vishay Semiconductors K857PE enables a variety of sensor and control applications for the automotive, consumer, and industrial markets.

- Opaque package sides eliminate stray light irradiating the photodiodes, resulting in excellent signal to noise ratio
- Linear photo response enables small signal detection
- The defined gap between the K857PE's four radiant sensitive areas allows for reliable measurement during laser positioning
- The current from each of the device's PIN diodes can be processed individually, resulting in low electrical crosstalk



## The Key Specifications:

- Package size: 4.72 mm by 4.72 mm by 0.8 mm
- Active area: 1.6 mm<sup>2</sup> per quadrant
- Sensitivity range: 690 nm to 1050 nm
- Max. reverse voltage: 20 V
- Reverse light current: 8.5  $\mu$ A per segment at  $E_e = 1$  mW/cm<sup>2</sup> and an 850 nm wavelength
- Angle of half sensitivity:  $\pm 60^\circ$
- Temperature range: -40 °C to +110 °C

## Availability:

Samples of the new 4-quadrant photodiode are available now. Production quantities will be available in Q4 2020, with lead times of 10 weeks.

To access the product datasheet on the Vishay Website, go to <http://www.vishay.com/ppg?80136> (K857PE)

## Contact Information:

### THE AMERICAS

Mr. Jim Toal  
[jim.toal@vishay.com](mailto:jim.toal@vishay.com)

### EUROPE

Mr. Kai Rottenberger  
[kai.rottenberger@vishay.com](mailto:kai.rottenberger@vishay.com)

### ASIA/PACIFIC

Mr. Jason Soon  
[jason.soon@vishay.com](mailto:jason.soon@vishay.com)