



**Author:** Mohan Kumar Kannusamy  
**Tel:** +49 7131 67 2289  
**E-mail:** mohankumar.kannusamy@vishay.com

## New TCPT1350X01 and TCUT1350X01 SMD Transmissive Optical Sensors

### The News:

### Vishay Intertechnology Releases New SMD Transmissive Optical Sensors for Automotive and Industrial Applications With Wide -40 °C to +125 °C Operating Temperature Range

Vishay Intertechnology, Inc. (NYSE: VSH) announces two new AEC-Q101-qualified surface-mount transmissive optical sensors for automotive and industrial applications. Designed for harsh low- and high-temperature environments, the single-channel TCPT1350X01 and dual-channel TCUT1350X01 feature a wide operating temperature range of -40 °C to +125 °C.

### Product Benefits:

- AEC-Q101 qualified
- Wide operating temperature range of -40 °C to +125 °C
- Compact dimensions of 5.5 mm by 4 mm by 4 mm
- Typical output current of 1.6 mA
- 3.0 mm gap width
  - Allows for looser mechanical tolerances
- Phototransistor output
- Apertures of 0.3 mm
- Emitter wavelength of 950 nm
- Moisture Sensitivity Level rating of 1 (MSL1)
  - Unlimited floor life
- Compatible with reflow solder processes according to JEDEC-STD-020D
- Halogen free, RoHS compliant, and comply with Vishay's "green" standards

### The Key Specifications:

- Operating temperature range: -40 °C to +125 °C
- Output current (typical): 1.6 mA
- Gap width: 3.0 mm
- Apertures: 0.3 mm
- Phototransistor detectors:
  - TCPT1350X01: 1
  - TCUT1350X01: 2
- Emitter wavelength: 950 nm



## Market Applications:

- Automotive and industrial applications
- Position sensors for encoders in high-temperature environments close to motors
- Ignition locks and adaptive headlights
- Electronic power steering (ESP) systems

## The Perspective:

Designed for harsh low- and high-temperature environments, the TCPT1350X01 and TCUT1350X01 feature a wide operating temperature range of -40 °C to +125 °C. With a 3.0 mm gap width, the devices can be used with a wide variety of materials and allow for looser mechanical tolerances than sensors with smaller gaps, making them ideal for automotive and industrial applications.

The single-channel TCPT1350X01 includes an infrared emitter and phototransistor detector located face-to-face in a surface-mount package, while the dual-channel TCUT1350X01 includes an infrared emitter and two phototransistor detectors. Both sensors can detect motion and speed. With dual channels, the TCUT1350X01 can also be used to detect direction in applications such as electronic power steering (ESP) systems.

**Availability:** Samples and production quantities of the optical sensors are available now, with lead times of eight to 10 weeks for larger orders.

To access the product datasheets on the Vishay Web site, go to  
<http://www.vishay.com/doc?84815> (TCPT1350X01)  
<http://www.vishay.com/doc?84816> (TCUT1350X01)

## Contact Information:

The Americas  
Mr. Dale Henderson  
[dale.henderson@vishay.com](mailto:dale.henderson@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)