



Toshiba release high voltage automotive photorelay

The new device is suited for use with battery management systems

Düsseldorf, Germany, 24. January 2022 – Toshiba Electronics Europe GmbH (“Toshiba”) has launched a new normally open (NO) 1-Form-A photorelay that is intended for use in a multitude of battery- and hybrid-electric vehicle applications including within the battery management system (BMS), ground fault detection and identifying faults with mechanical relays.

The new TLX9160T consists of an infrared emitting diode optically coupled to a photo-MOSFET and is Toshiba’s first device with a high output withstand voltage (V_{OFF}) of at least 1500V. The device is capable of operating from a supply voltage (V_{DD}) of up to 1000V, ensuring that it is compatible with the vast majority of traction batteries.

Housed in a modified SO16L-T package that is made from a resin material in IEC60664-1 material group I, which has a Comparative Tracking Index (CTI) exceeding 600, the TLX9160T has four fewer pins (pins 11 to 14 are removed from the standard SO16L package). The product features a creepage distance of at least 5mm at its detector, ensuring that it is compatible with supply voltages up to 1000V – as defined by IEC60664-1. As a result, the isolation voltage (BV_S) is 5000Vrms (min.) and internal creepage and clearance distances are 8mm.

The maximum forward current (I_F) is 30mA while the On-state current (I_{ON}) is 50mA with an Off-state current (I_{OFF}) of just 100nA. Suitable for the rugged automotive environment, the device is fully AEC-Q101 qualified with an operating temperature (T_{opr}) from -40°C to $+125^{\circ}\text{C}$.

Shipments of the new device are starting today.

For more information, please visit: <https://toshiba.semicon-storage.com/eu/semiconductor/product/isolators-solid-state-relays/photorelay-mosfet-output/detail.TLX9160T.html>

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About Toshiba Electronics Europe

[Toshiba Electronics Europe GmbH](#) (TEE) is the European electronic components business of [Toshiba Electronic Devices and Storage Corporation](#). TEE offers European consumers and businesses a wide variety of innovative hard disk drive (HDD) products plus semiconductor solutions for automotive, industrial, IoT, motion control, telecoms, networking, consumer and white goods applications. Next to HDDs, the company's broad portfolio encompasses power semiconductors and other discrete devices ranging from diodes to logic ICs, optical semiconductors as well as microcontrollers and application specific standard products (ASSPs) amongst others.

TEE has headquarters in Düsseldorf, Germany, with branch offices in France, Italy, Spain, Sweden and the United Kingdom providing marketing, sales and logistics services. The company president is Mr Tomoaki Kumagai.

For more company information visit TEE's web site at www.toshiba.semicon-storage.com.

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