



Toshiba releases 2.5A output smart gate driver photocoupler for IGBT and MOSFET control and power protection in industrial applications

New device's features also enable space and system cost savings

Düsseldorf, Germany, 11 August 2022 – Toshiba Electronics Europe GmbH (“Toshiba”) has launched a $\pm 2.5\text{A}$ output smart gate driver photocoupler able to control IGBTs and MOSFETs, reliably protecting power devices from over-current. The device is suited to a wide range of applications including inverters, AC servo drives, photovoltaic (PV) inverters and uninterruptible power supplies (UPSs).

The TLP5212 features a new totem pole output with two N-channel MOSFETs, to ensure compatibility with specifications widely used in applications such as industrial equipment. In addition, the new photocoupler incorporates protection functions such as desaturation detection, active Miller clamp, UVLO and FAULT output, eliminating the need for several external circuits. This reduces system costs for fault detection and protection as well as saving space and design effort. Moreover, by incorporating Toshiba’s own reliable and powerful infrared LED, it can be used in severe thermal environments.

The TLP5212 can sink or source up to $\pm 2.5\text{A}$ via its totem pole output. With its propagation delay of just 250ns (max.) and propagation delay skew of $\pm 150\text{ns}$, the device is suited to use in high-speed applications. The operating temperature range (T_a) is -40°C to $+110^\circ\text{C}$, ensuring suitability for industrial and renewable energy use.

Housed in a small SO16L package, the new photocoupler measures just 10.3mm x 10.0mm x 2.3mm, allowing it to be used where space is tight. Even with this compact

package, it features a minimum creepage distance of 8mm, allowing it to be used for applications requiring high levels of safety isolation and insulation ($BV_s = 5000V_{rms}$).

The TLP5212 requires a signal on the input side to resume from protection. A further device, the TLP5222, which resumes automatically after a specified time, is in development.

Mass production of the TLP5212 starts today. Additional information can be found on the Toshiba website:

<https://toshiba.semicon-storage.com/eu/semiconductor/product/isolators-solid-state-relays/detail.TLP5212.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 website at www.toshiba.semicon-storage.com.

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