



## Toshiba launches ultra-small 4-Form-A voltage driven photorelays

*Tiny package enables denser placement of relays in space-critical applications*

**Düsseldorf, Germany, 06<sup>th</sup> January 2022** – Toshiba Electronics Europe GmbH (“Toshiba”) has launched three new 4-Form-A voltage driven photorelays with one of the smallest mounting areas in the industry.

The new devices are suited to a wide range of applications including measuring instruments such as oscilloscopes and data loggers as well as burn-in equipment. They are also ideal for use in semiconductor test equipment (probe cards and test heads for memories, system-on-chip (SoC) and LSI) where there is a need to mount multiple relays on circuit boards with space constraints.

The new products denoted TLP3407SRA4, TLP3412SRHA4 and TLP3475SRHA4 are Toshiba’s first-ever four-circuit, 4-Form-A relays. They are housed in a tiny, newly developed S-VSON16T package measuring 2.0mm x 6.25mm x 1.3mm and requiring a PCB mounting area of just 12.5mm<sup>2</sup>. The area is approximately 14% less compared with the mounting area of four 1-channel relays.

By incorporating input resistors, the new products are able to be voltage driven without any need for external resistors in 3.3V or 5V systems. This further reduces space requirements on circuit boards, allowing more photorelays to be mounted.

All devices are supplied in normally open (1-Form-A / NO) configuration with an off-state voltage of 60V and offer 300Vrms (min.) of isolation. The TLP3412SRHA4 and

TLP3475SRHA4 offer an ON-state current of 250mA with a typical ON-state resistance of just 1Ω while the corresponding figures for the TLP3407SRA4 are 600mA and 0.2Ω.

With typical turn-on and turn-off times of just 220μs ( $t_{ON}$ ) and 50μs ( $t_{OFF}$ ), the TLP3412SRHA4 and TLP3475SRHA4 are ideally suited to use in high-speed testers and other similar applications.

The operating temperature ( $T_{opr}$ ) range for all devices is -40°C to +125°C, allowing use in high temperature applications while ensuring thermal design margins are easily met or exceeded.

Volume shipments of the new devices start today.

Datasheets for the new devices can be downloaded from the following links:

TLP3407SRA4 - <https://toshiba.semicon-storage.com/eu/semiconductor/product/isolators-solid-state-relays/photorelay-mosfet-output/detail.TLP3407SRA4.html>

TLP3412SRHA4 - <https://toshiba.semicon-storage.com/eu/semiconductor/product/isolators-solid-state-relays/photorelay-mosfet-output/detail.TLP3412SRHA4.html>

TLP3475SRHA4 - <https://toshiba.semicon-storage.com/eu/semiconductor/product/isolators-solid-state-relays/photorelay-mosfet-output/detail.TLP3475SRHA4.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](http://www.toshiba.semicon-storage.com).

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