



### **Toshiba introduces lens reduction type CCD linear image sensor for A3 multifunction printers**

Delivers a 40% reduction in random noise and high-speed performance, simplifying system integration for advanced printing and inspection applications

**Düsseldorf, Germany, 14 August 2025** – Toshiba Electronics Europe GmbH (“Toshiba”) introduces the TCD2728DG, an advanced lens reduction type CCD linear image sensor specifically designed for A3 multifunction printers. This product significantly improves upon Toshiba’s existing TCD2726DG by achieving an approximate 40% reduction in random noise (ND $\sigma$ ). This crucial enhancement, which stems from reducing the output amplifier gain, directly improves the image quality in multifunction printers, addressing the impact of irregular noise that affects image quality.

The TCD2728DG features a high-speed CCD linear image sensor with a maximum data rate of 100MHz (primary clock frequency 50MHz  $\times$  2 channels). To mitigate electromagnetic interference (EMI) that can arise with increased operational speed, the sensor incorporates a built-in timing generator and a CCD driver. These devices not only generate the necessary signals to drive the linear image sensor but also substantially reduce the number of required CCD drive terminals, thereby simplifying system development and integration.

Featuring a three-line configuration with 7500 pixels for each red, green, and blue colour filter, the TCD2728DG is well-suited for A3 multifunction printers. Beyond printers, its capabilities extend to various inspection devices, including semiconductor inspection equipment and food sorting equipment. Toshiba is committed to continuously expanding its product lineup to support advanced scanning functions in multifunction printers and diverse sensing applications.

For more information about the TCD2728DG CCD linear image sensor, please visit:

<https://toshiba.semicon-storage.com/eu/semiconductor/product/linear-image-sensors/detail.TCD2728DG.html>

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Note: Image shown is a digital rendering based on product specifications; actual product may vary.

#### **About Toshiba Electronics Europe**

[Toshiba Electronics Europe GmbH](#) (TEE) offers European consumers and businesses a wide variety of 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.

In addition, TEE also offers SCiB™ battery cells and modules with lithium titanium oxide (LTO) for heavy-duty applications and Silicon Nitride (SiN) ceramic substrates used in power semiconductor modules, inverters and converters for their heat dissipation characteristics and strength.

TEE has its headquarters in Düsseldorf, Germany, with branch offices in France, Italy, Spain, Sweden and the United Kingdom providing marketing, sales and logistics services.

Visit Toshiba's websites at [www.toshiba.semicon-storage.com](http://www.toshiba.semicon-storage.com), [www.scib.jp/en](http://www.scib.jp/en) and [www.toshiba-tmat.co.jp/en/](http://www.toshiba-tmat.co.jp/en/) for further company and product information.

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**August 2025**

**Ref. 7633(A1)E**