

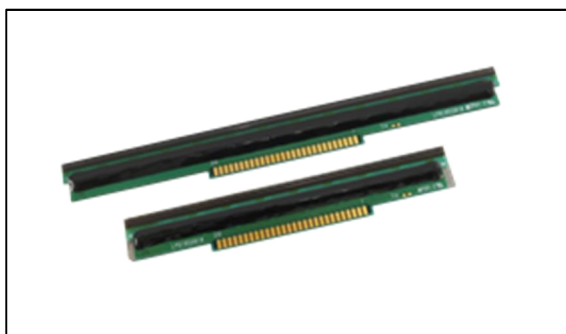
Press information

KYOCERA Develops World's Smallest Thermal Printhead for Barcode Printing

New KMS Series is approximately 40% smaller and uses 20% less power

Kyoto, Japan / Neuss, Germany, July 28, 2016 – Kyocera Corporation (President: Goro Yamaguchi) announced that it has developed the world's smallest*1 flat-type thermal printhead for barcode printers. The new KMS Series consumes 20 percent less power*2 and is available for order this month.

The new compact printhead structure is 40 percent smaller compared with conventional products, with a design to reduce resistance loss helping to save power. Through these advantages, the new KMS Series contributes to a compact design and the improved energy efficiency of portable printers.



KMS Series Thermal Printhead

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Product Overview

Model	KMS Series Thermal Printhead
Application	Portable printers for barcode printing
Production Facilities	Front-end process in Kagoshima Hayato Plant (Japan) Back-end process in Nagano Okaya Plant (Japan)
Start of Production	July 2016 (upon request)
Production Target	350,000 units/year

Development Background

Demand for portable printers for barcode shipping labels has expanded as logistic facilities such as warehouses and distribution centers' volumes have increased globally, not only in developed economies but also in emerging Asian countries. With the need for compact sizes and a reduction in power consumption — since most printers in these facilities use portable batteries — there is an increasing demand for smaller, more energy-efficient printheads for use in next generation printers.

Product Features

1. World's smallest printhead for portable printers

In previous models, the driver IC was mounted on the ceramic substrate in the conventional structure. In the new design of the KMS Series, it is mounted on the circuit substrate.

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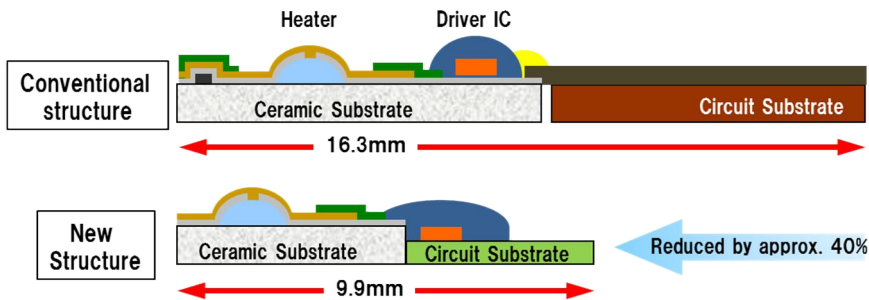
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By changing the attachment method of the substrate and driver IC to wire bonding, the new product features a smaller depth of 9.9mm, reduced by approximately 40 percent from 16.3mm in conventional models. The new product yields the world's smallest size among thin-film flat-type printheads, contributing to a smaller footprint and weight reduction of portable printers.



Comparison of cross-section structures

2. Contributes to energy saving

Because portable printers utilize batteries for operation, there is a need for better energy performance to reduce power consumption. By utilizing its technologies, which have been cultivated over the years, Kyocera optimized the wiring layout to reduce resistance loss and improve the thermal efficiency of the heating element, thus reducing power consumption by up to 20 percent. With its enhanced thermal efficiency, the KMS Series improves the energy performance of portable printers contributing to longer battery life and higher work efficiency in label printing.

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*1 World's smallest size among flat-type thermal printheads for barcode printers. Based on research by Kyocera (as of June 1, 2016).

*2 When compared to Kyocera's conventional thermal printheads with similar functions.

For more info about Kyocera Printing Devices, please visit:

<http://global.kyocera.com/prdct/printing-devices/index.html>

For more information about Kyocera: www.kyocera.eu

About Kyocera

Headquartered in Kyoto, Japan, Kyocera Corporation is one of the world's leading manufacturers of fine ceramic components for the technology industry. The strategically important divisions in the Kyocera Group, which is comprised of 235 subsidiaries (as of March 31, 2016), are information and communications technologies, products which increase quality of life, and environmentally friendly products. The technology group is also one of the oldest producers of solar energy systems worldwide, with more than 40 years of experience in the industry.

The company is ranked #531 on Forbes magazine's 2016 "Global 2000" listing of the world's largest publicly traded companies.

With a global workforce of over 69,000 employees, Kyocera posted net sales of approximately €11.59 billion in fiscal year 2015/2016. The products marketed by the company in Europe include printers, digital copying systems, microelectronic components, and fine ceramic products. The Kyocera Group has two independent companies in the Federal Republic of Germany: Kyocera Fineceramics GmbH in Neuss and Esslingen and Kyocera Document Solutions in Meerbusch.

The company also takes an active interest in cultural affairs. The Kyoto Prize, a prominent international award, is presented each year by the Inamori Foundation — established by Kyocera founder Dr. Kazuo Inamori — to individuals and groups worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind

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(converted at approximately €360,000 per prize category).

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