KONICA MINOLTA

## News Release

# Konica Minolta's KM1024iSHE-HM-LV Inkjet Printhead Installed in Microjet's Inkjet Deposition System for a Perovskite Layer

## Contributing to Research in Cutting-edge Domains by Offering a Printhead That Is Highly Resistant to Organic Solvents

Tokyo (October 27, 2025) – Konica Minolta, Inc. (Konica Minolta) announced that the KM1024iSHE-HM-LV, an industrial inkjet printhead that the Company released on September 4, 2025, was installed in the PerovsPrinter, an inkjet deposition system for a Perovskite Layer, which is developed and sold by Microjet Corporation (Microjet).

KM1024iSHE-HM-LV

**Contributing to Research on Perovskite Solar Cells Using an Inkjet Printhead Characterized by Outstanding Solvent Resistance**

Perovskite solar cells are next-generation solar cells which are lightweight, flexible and low-cost to manufacture. Compared to conventional silicon solar cells, perovskite solar cells are thin and lightweight, enabling installation on various surfaces, including building walls. With improvements in power generation efficiency and durability in recent years, there are growing expectations for practical applications. Research is actively being conducted on tandem solar cells, which combine silicon and perovskite solar cells.

Perovskite solar cells are composed of multiple stacked layers, including the perovskite layer which serves as the power-generating layer. In the process of forming the perovskite layer and the adjacent upper and lower layers, inkjet technology is attracting attention and being actively researched as one of the suitable manufacturing methods. This is because it enables non-contact material deposition onto substrates, making it well-suited for coating substrates with surface undulations or curvature. With its high material utilization efficiency and low environmental impact, inkjet technology is being applied not only in the printing industry but also in various industrial fields.

The PerovsPrinter was developed by Microjet, which supports R&D at many universities and companies for industrial applications of inkjet technology through selling systems and undertaking experiments, for deposition of a perovskite layer.

The organic solvents contained in the raw materials for the perovskite layer are likely to damage parts and materials of inkjet printheads. In addition, low viscosity makes it difficult to ensure stable jetting over the long term. The KM1024iSHE-HM-LV, which is installed in the PerovsPrinter, is a new product of the KM1024i series of industrial inkjet printheads, which are suitable for high-resolution, high-speed printing. Thanks to its outstanding resistance to chemicals, such as organic solvents, compared to typical printheads, the printhead is suitable for depositing perovskite material, thereby contributing to stable formation of a perovskite layer.

The KM1024iSHE-HM-LV also realizes stable jetting performance with micro droplets and enables precise deposition. By combining Microjet's expertise in applying inkjet technology in industry and Konica Minolta's high-value-added inkjet printhead, the Company will contribute to such domains as research to spread the use of perovskite solar cells.

Konica Minolta is engaged in the development of barrier film technology that contributes to improving the durability of perovskite solar cells. The company is also working on technologies for inspecting characteristics and quality using hyperspectral imaging. In the growing field of perovskite solar cells, it aims to further expand the use of its film, inspection, and inkjet technologies.

**Values Provided by the KM1024iSHE-HM-LV**

**Outstanding Solvent Resistance**

Thanks to its outstanding solvent resistance, the KM1024iSHE-HM-LV is suitable for depositing solvent-containing materials for perovskite solar cells, display materials, organic semiconductor materials, and metal nanoparticle ink materials.

**Micro Droplet Inkjet**

Capable of high-resolution inkjetting with micro droplets, the printhead enables precise deposition in industrial applications that require high precision.

**About the KM1024i Series**

The series embodies Konica Minolta's key inkjet printheads which are widely used in such applications as sign graphics, coding and marking, printed circuit boards (PCBs), and flat panel displays (FPDs), including LCDs, because of their suitability for high-speed, high-resolution printing.

**High Productivity by High-speed Driving with Extended Print Width**

The proprietary structural design, in which 1,024 nozzles are arranged (on the printhead) with a high density of 360 npi,* featuring an extended print width of 72 mm, is combined with high-speed driving technology to realize fast application and excellent productivity.

**Stable Jet Performance**

The product structure, which demonstrates stable inkjet performance with a proprietary customized design, supports various inks. The inkjet printhead incorporates a heater to enable application of highly viscous inks.

**Enhanced Usability Based on the Common Product Platform for the Series**

The KM1024i series is designed based on the common platform in terms of the exterior and electrical specifications of the inkjet printheads. This makes it easy to replace printheads of different models in the series, enhancing usability.

**Customer Contact**

Inquiry form

Sales Division, IJ Component Business Unit, Konica Minolta, Inc.



* npi (nozzles per inch)

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