

## Mektec and YA-MAN's Stretchable FPC<sup>\*1</sup> Incorporating Hydrogel Featured in New Beauty Product

With Domestic Stable Supply, High-quality FPC Continues to Be Used in Beauty Devices

NOK Corporation (Headquarters: Shibadaimon, Minato-ku, Tokyo; Representative Director, Group Chief Executive Officer: Masao Tsuru; hereinafter referred to as “NOK”) is pleased to announce that its group company, Mektec Corporation (Headquarters: Shibadaimon, Minato-ku, Tokyo; Representative Director, Chief Executive Officer: Taro Ito, hereinafter referred to as “Mektec”) has collaborated with YA-MAN LTD. (Headquarters: Koto-ku, Tokyo; CEO: Kimiyo Yamazaki, hereinafter referred to as “YA-MAN”) to develop the stretchable FPC incorporating hydrogel, which will be used in YA-MAN’s wearable EMS facial beauty device, the Design Lift More, launched on August 1, 2024. The stretchable hydrogel-incorporated FPC will be built into the beauty device’s Stretch Fit Sheet, an electrode sheet for the mouth area.

The stretchable FPC incorporating hydrogel efficiently transmits EMS electrical signals while conforming to the body's contours. This innovative technology is being used for the second time in YA-MAN's products, following its debut in the Design Lift EMS facial device for the eye area launched in November 2023. As with the previous product, it will be manufactured at Mektec's Ushiku Plant in Ibaraki Prefecture. Mektec is committed to producing a stable supply of high-quality items.



The stretchable FPC incorporating hydrogel used for the Stretch Fit Sheet

Mektec, in alignment with other NOK Group companies, strives for Essential Core Manufacturing—creating pivotal products that shape society. As a leading FPC manufacturer, Mektec contributes to the evolution of electronic devices by focusing on material development and designing shapes and circuits based on function. True to its name, the stretchable FPC incorporating hydrogel is processed with Mektec's proprietary technology, allowing normally non-stretchable hydrogel to move seamlessly with the stretchable FPC<sup>\*2</sup>. Designed for repeated use, Mektec has successfully integrated highly adhesive hydrogel with a thickness of 1 mm while preventing any leakage or unpleasant sensations from the cross sections. This achievement is thanks to the development of a unique press processing technology.

#### ■ About Design Lift More and Stretch Fit Sheet

Design Lift More, a wearable beauty device from “YA-MAN TOKYO JAPAN”, features a higher EMS output level than its predecessor. In addition to treating the eye area, it also addresses wrinkles around the mouth using the Stretch Fit Sheet.

#### • Product Links

Design Lift More

[https://www.YA-MAN.com/Form/Product/ProductDetail.aspx?shop=0&pid=yjmd1nym&bid=yaman\\_tokyo\\_japan](https://www.YA-MAN.com/Form/Product/ProductDetail.aspx?shop=0&pid=yjmd1nym&bid=yaman_tokyo_japan)

Stretch Fit Sheet

[https://www.YA-MAN.com/Form/Product/ProductDetail.aspx?shop=0&pid=yjnz1m2ym&bid=yaman\\_tokyo\\_japan](https://www.YA-MAN.com/Form/Product/ProductDetail.aspx?shop=0&pid=yjnz1m2ym&bid=yaman_tokyo_japan)

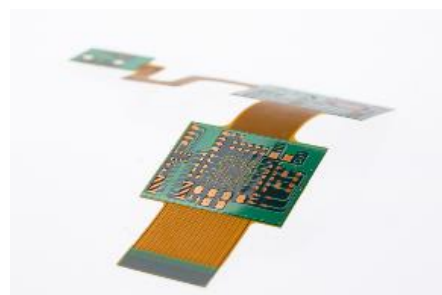
Inquiries related to this press release

Corporate Communications, Corporate Affairs Group, CEO Office, NOK Corporation

TEL: +81 3-5405-6372 Email: mb\_nok\_corporate\_affairs@jp.nokgrp.com

#### \*1 About Flexible Printed Circuits (FPC)

An FPC is a type of printed circuit board made of laminated layers of polyimide film and copper foil. It functions as an electrical wire in electronic devices. With a thickness of just 0.1 mm, it is lightweight, flexible, and durable. An FPC can be fitted into bent shapes and small gaps, allowing devices to become smaller, lighter, and thinner.



Multi-layer FPC

## \*2 About Stretchable FPCs

A stretchable FPC is not made of ordinary polyimide film but a thin, breathable, and stretchable sheet bonded with Mektec's proprietary bio-safe adhesive, which safely and flexibly adheres to the body. When connected to a measuring instrument, it can serve as an electrode sheet to capture brain waves, electrocardiograms, and other data. Additionally, when connected to EMS equipment, it can efficiently provide electrical stimulation to muscles.



Stretchable FPC  
(Sample, total length 11cm)

## ■ About NOK Group

The NOK Group is dedicated to "Essential Core Manufacturing — The manufacture of pivotal products that shape society" Through this approach the Group demonstrates its commitment to providing greater safety and comfort, the cornerstones of a prosperous society. The NOK Group consists of 93 companies located in 15 countries and regions with approximately 38,000 employees. Product development is built upon a robust base of foundational research, resulting in large-scale, stable and high-quality production. Moving forward, the Group will continue to provide technologies and products for all industrial areas including automobiles and other mobility sectors, electronic products — centered on PCs and smartphones — office automation equipment, medical and healthcare devices, industrial robots, and satellites.

## ■ About Mektec Corporation

Mektec Corporation, founded in 1969 as a subsidiary of NOK Corporation, specializes in manufacturing Flexible Printed Circuits. With manufacturing and sales bases worldwide, the company develops products and technologies that enable electronic devices such as mobile phones and HDDs to become smaller, lighter, and thinner. These products are supplied under the "MEKTEC" brand name. In 2024, Mektec celebrates its 55th anniversary. On July 1, the company unified its globally recognized brand and corporate name, officially becoming Mektec Corporation.