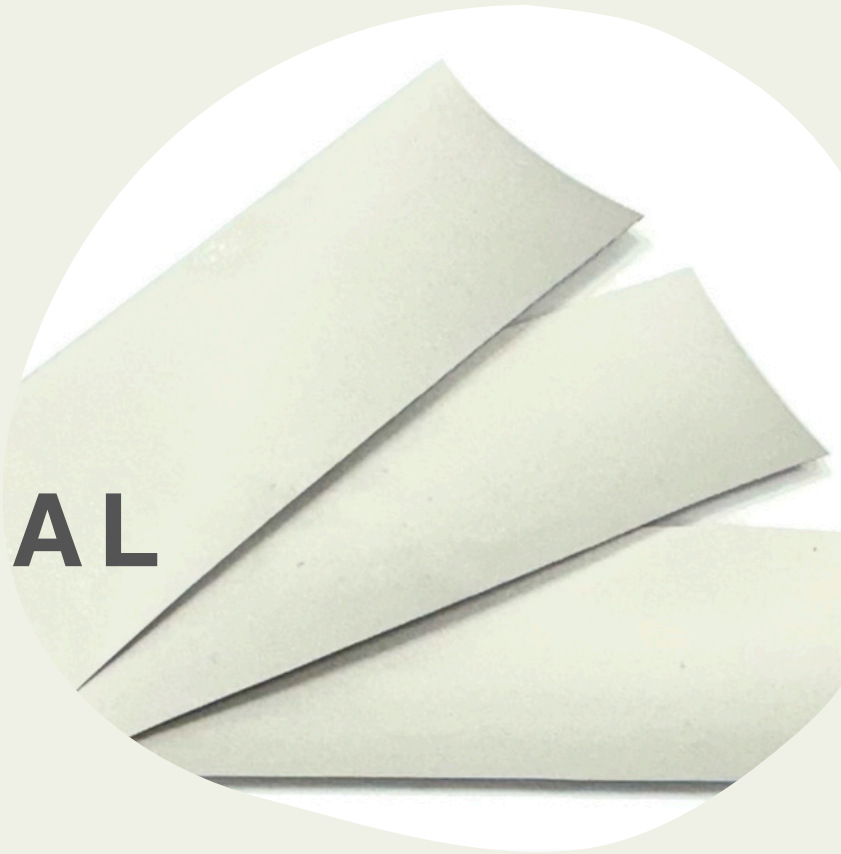
MEASURE BIOLOGICAL SIGNALS



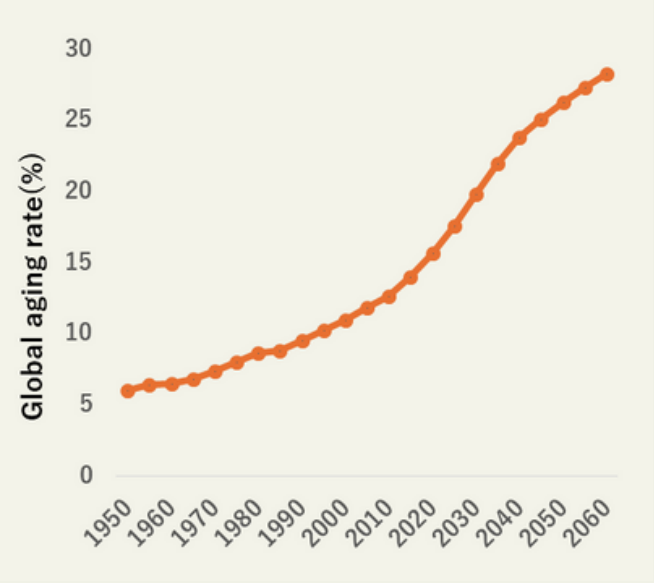
Conductive Electrode Film
MFX-1100

PRODUCT HIGHLIGHTS

A film coated with Ag/AgCl developed
for measuring biological signals.
It's a flexible and robust electrode film,
capable of adhering to the body and
accommodating movement.

In recent years, as aging populations increase worldwide, there has been a rise in patients with lifestyle-related diseases, highlighting the growing importance of healthcare. Preventive medicine, in particular, has garnered attention, leading to an increased demand for daily health management.
To monitor health conditions, various countries are actively developing biosensing devices..

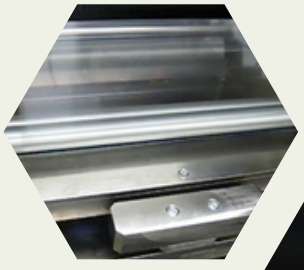
To meet this need, we have leveraged our expertise as a materials manufacturer to develop electrode films for biosensing, utilizing silver/chloride-silver ink, which minimizes potential differences occurring in bioelectrical measurements.



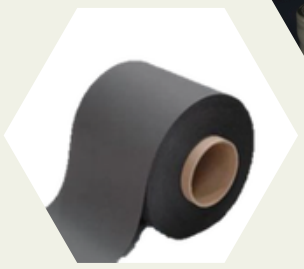
Reference source: Cabinet Office Annual Report on the Ageing Society 2023

The fusion of three expertise areas

Printing expertise



Ink expertise



Film expertise

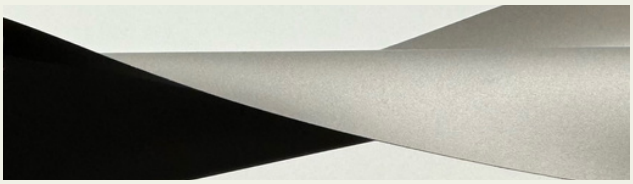
Conductive Electrode Film
MFX-1100

※PAT.P

MFX-1100
Features and Specification

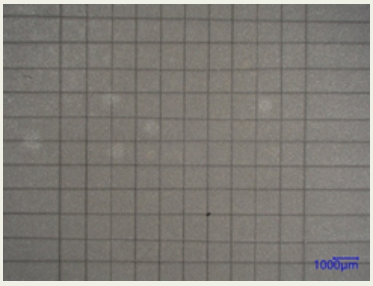
■Features

- ✦ The electrodes maintain low impedance even after long-term use.
- ✦ The electrodes can remain attached during X-ray imaging, aiding in accurate diagnosis.
- ✦ The silver/chloride-silver coating exhibits high adhesion and a structure that minimizes peeling.
- ✦ We utilize flexible polyurethane material that naturally conforms to body movements.



■Specification

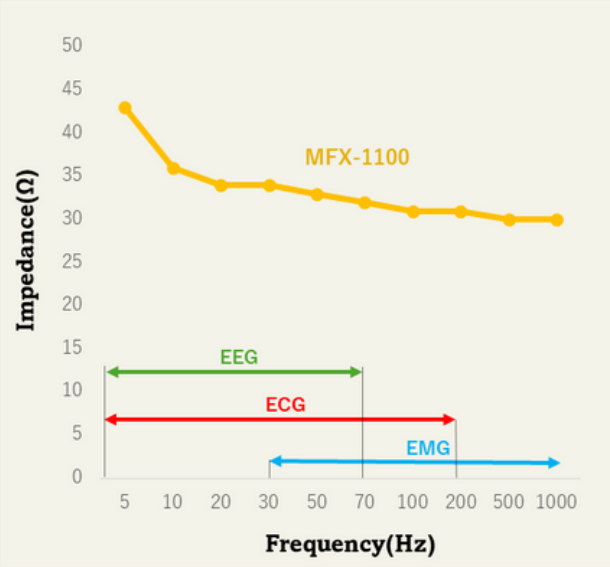
Silver：Silver Chloride ratio	9：1 (wt%)
Substrate	PU
Substrate thickness	100μm
Coating thickness	3μm
Surface resistance	8.1x 10^{-1} Ω/sq.
Flexibility	φ2mm mandrel diameter. No cracking.
Tensile modulus	33 MPa
Tensile strength	24 MPa
Cross-cut test	5B



The cross-cut test resultt

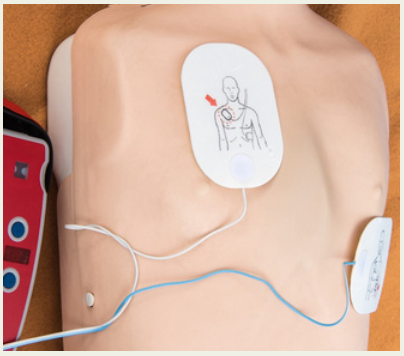
■Achieves low impedance across each frequency band

The frequency bands for typical EEG, ECG, and EMG are as shown in the lower right diagram. The MFX-1100 achieves low impedance across all frequency bands, allowing it to be used for a wide range of biosensing applications with a single electrode. Moreover, it maintains low impedance even during long-term use, enabling repeated usage.



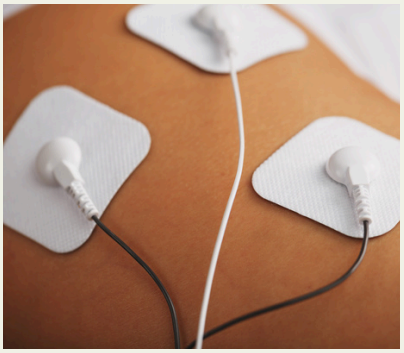
■Applicable applications

AED pads



ECG electrode

EMG electrode



EEG electrode

WE ARE

Pelnox

ABOUT US

SINCE ITS ESTABLISHMENT IN 1970, THE COMPANY HAS CONSISTENTLY DEVELOPED ITS TECHNOLOGY AS A RESIN FORMULATOR AND HAS A WIDE VARIETY OF PRODUCT TYPES,
OUR PRODUCTS ARE CHARACTERIZED BY THEIR ORIGINALITY.

WE HAVE A DIVERSE LINEUP OF PRODUCTS RANGING FROM EPOXY-BASED PRODUCTS (LIQUID AND POWDER), URETHANE, AND SILICONE-BASED INSULATING MATERIALS TO COATING MATERIALS AND CONDUCTIVE PASTE MATERIALS.
OUR CUSTOMERS AROUND THE WORLD USE MORE THAN 900 TYPES OF PRODUCTS, AND WE HAVE A SOLID TRACK RECORD OF BEING CHOSEN.

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