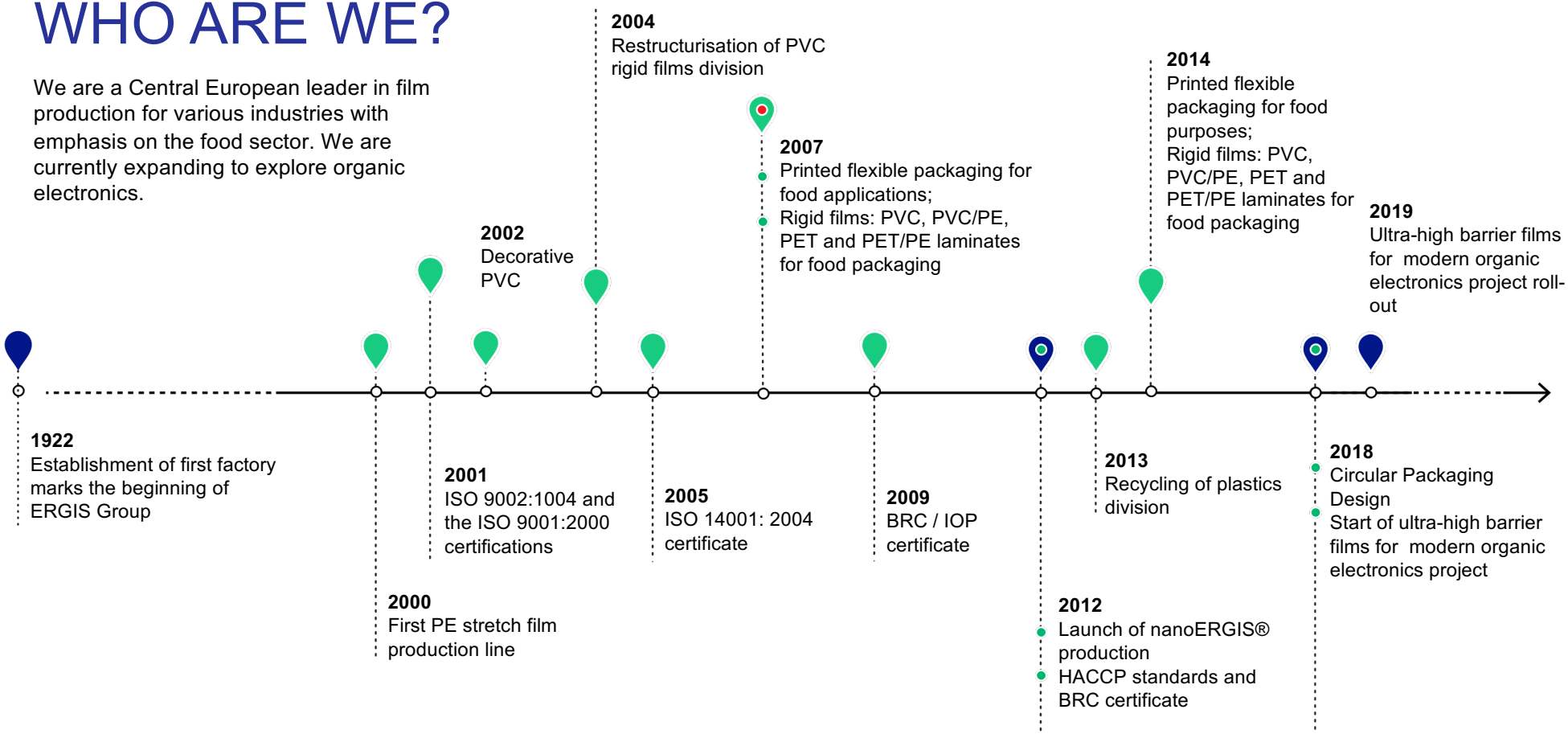
ERGIS GROUP

circular packaging design

NEW DEVELOPMENTS IN FILMS FOR MODERN ORGANIC ELECTRONICS

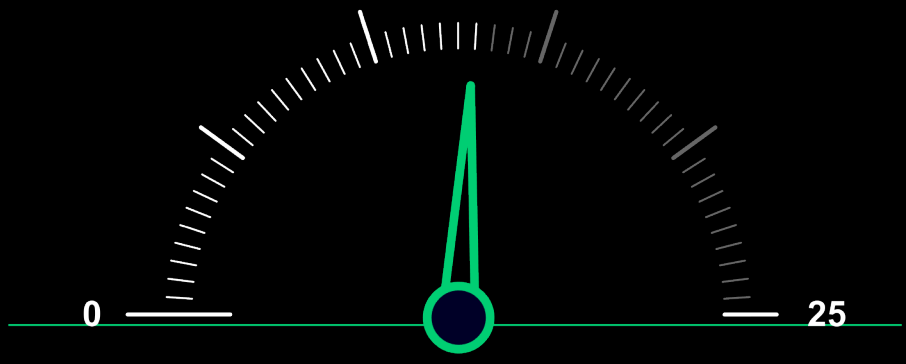
WHO ARE WE?

We are a Central European leader in film production for various industries with emphasis on the food sector. We are currently expanding to explore organic electronics.



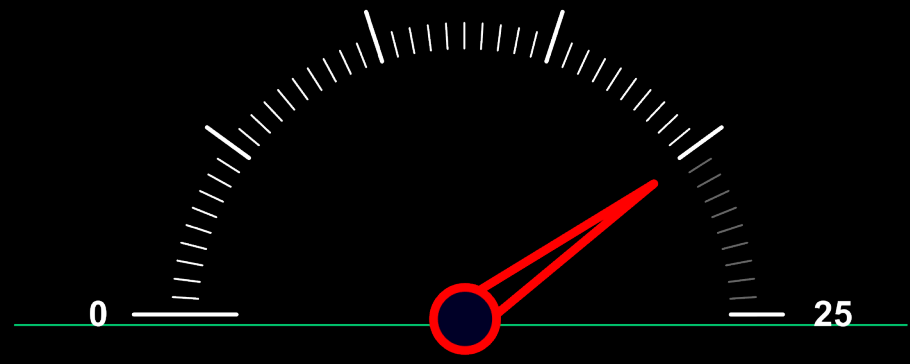
GLOBAL USAGE OF ELECTRICAL ENERGY

The US Department of Energy, the Energy Information Administration (EIA), predicts a global increase in energy consumption of almost 50% by 2050. Increasing the use of organic electronics could assist in moving towards utilizing natural “green” energy.



2018

Mtoe

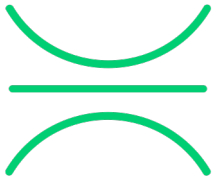


2050

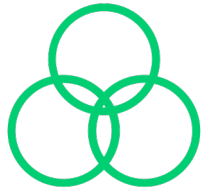
Mtoe

Thin-layer organic electronics are seen as a promising new way of optimizing energy consumption.

WHY CHOOSE ORGANIC ELECTRONICS?

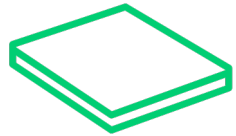


Flexible



Bright and vibrant colors

Lightweight



Thin

Energy-efficient

Cost saving

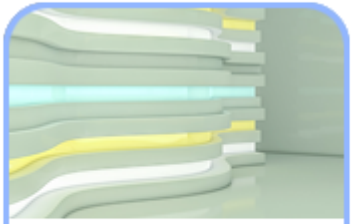
FLEXIBLE ORGANIC ELECTRONICS IN ACTION

DISPLAYS

SENSORS

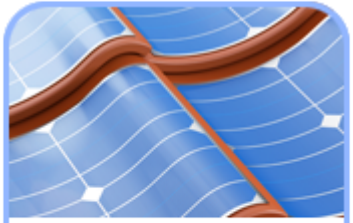
E-NEWSPAPER

OLED SCREENS



LIGHTS
AND LAMPS

MODULAR LIGHT
STRAPS



SOLAR CELLS

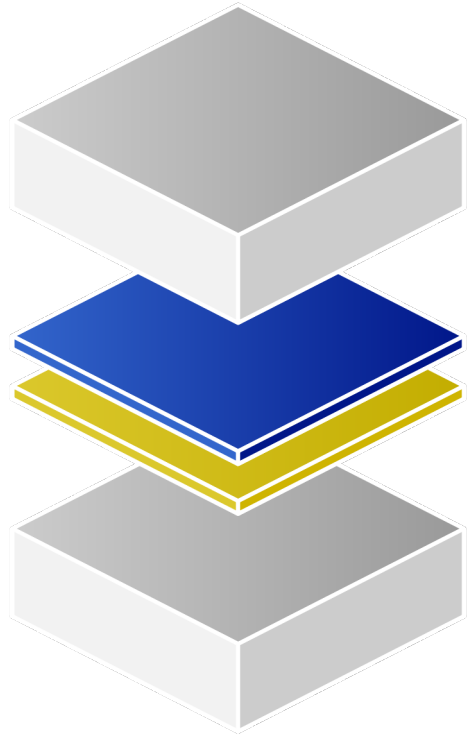
HEAD UP
DISPLAYS

CAR
DISPLAYS

OLED - A NEW GENERATION LIGHT SOURCE

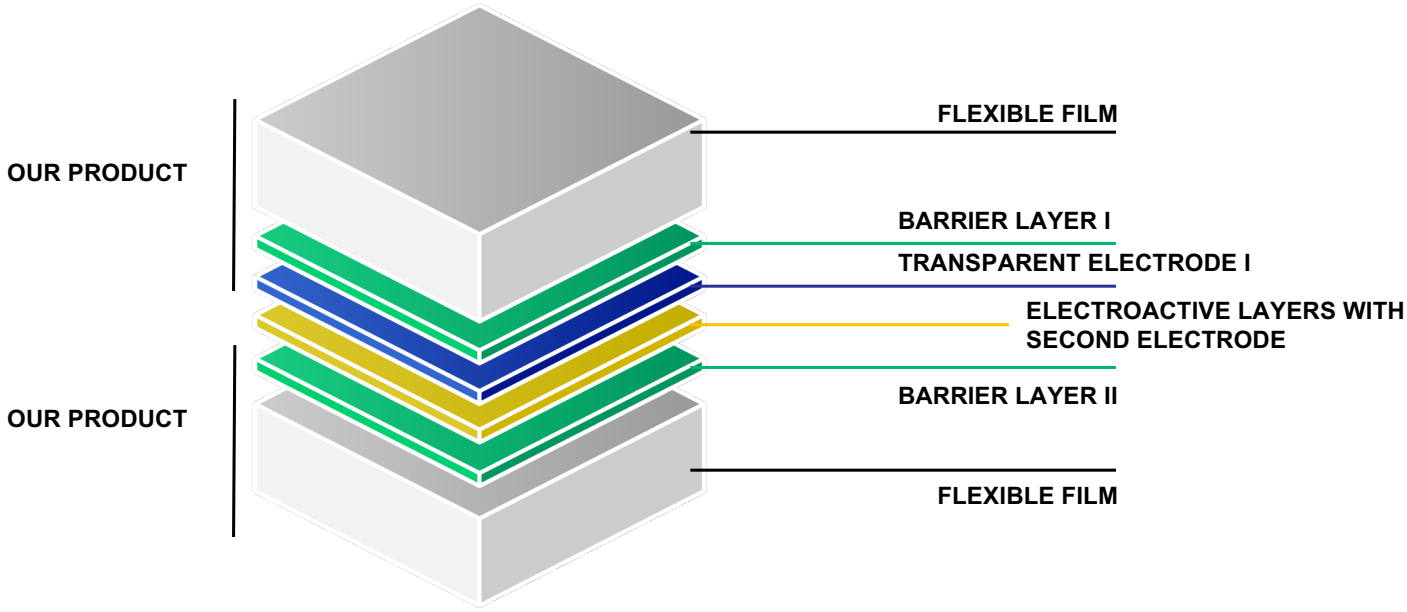
Organic Light Emitting Diode (OLED) - emission of visible light without unnecessary additional backlight of the entire matrix.

Challenges of OLED technology:
Electroactive layer sensitive to oxygen and moisture.

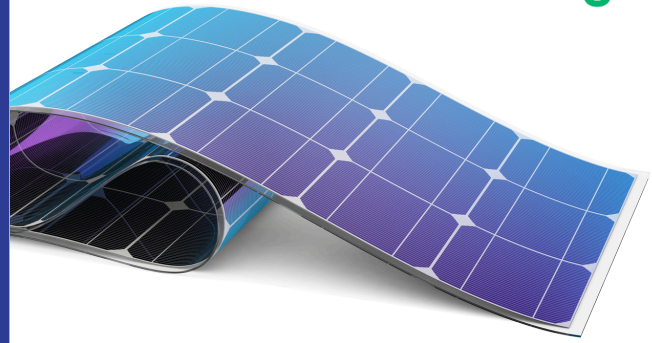


OLED - A NEW GENERATION LIGHT SOURCE

Our solution:
The electroactive material must be protected against oxygen and moisture by means of barrier layers.

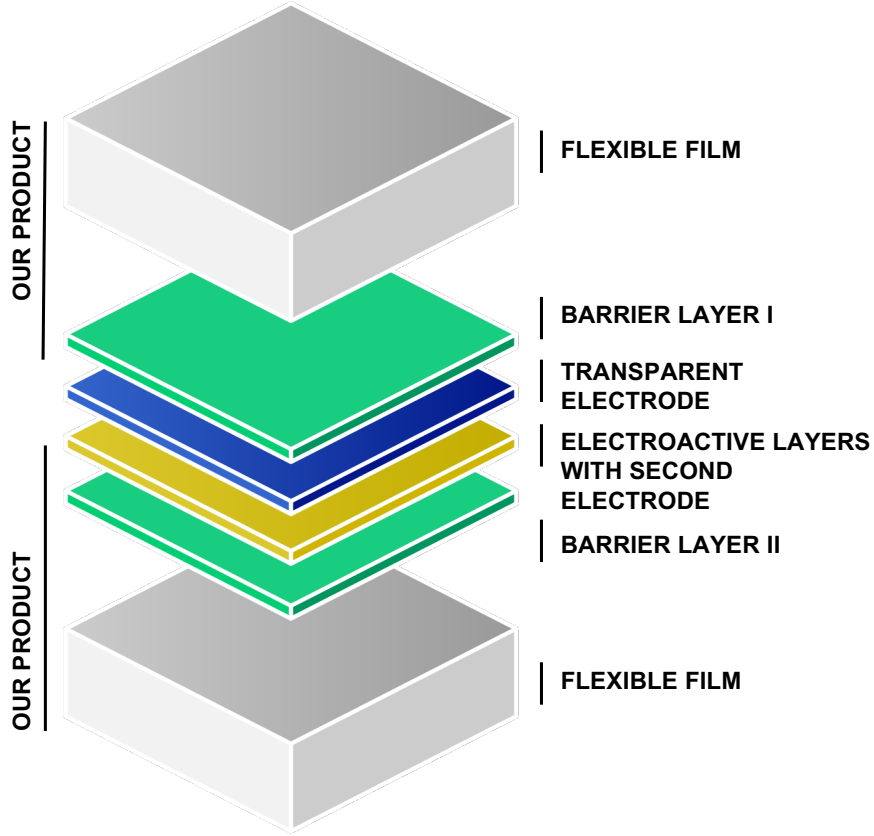


OLED - A NEW GENERATION LIGHT SOURCE



Goal of flexible photovoltaics (FPV) is absorption of sunlight and conversion into electricity. The ideal flexible photovoltaics will be lightweight, highly flexible and optionally partially transparent.

Challenges of FPV technology:
Electroactive layer sensitive to oxygen and moisture.

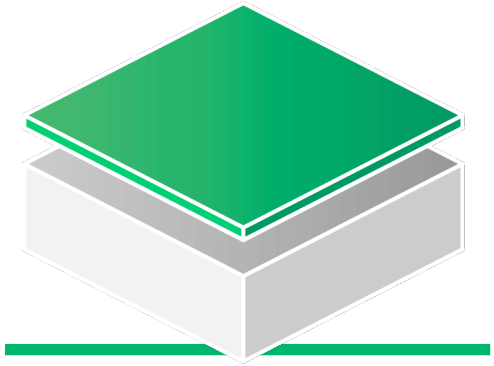


OUR SOLUTION FOR FLEXIBLE ORGANIC ELECTRONICS

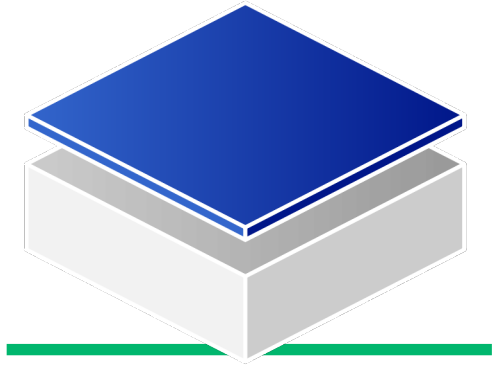
Ergis ultra barrier film

noDiffusion®

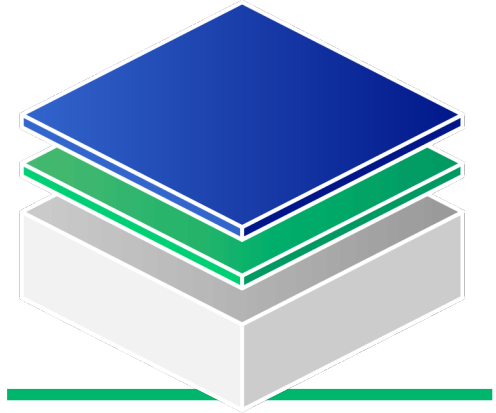
OUR RANGE



Ergis noDiffusion®
BARRIER FILMS

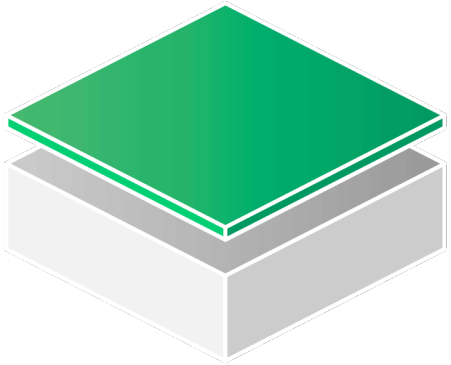


Ergis noDiffusion®
FILMS WITH A TRANSPARENT CONDUCTIVE LAYER



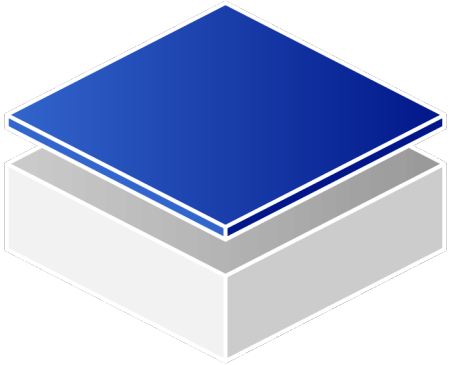
Ergis noDiffusion®
BARRIER FILMS WITH A TRANSPARENT CONDUCTIVE LAYER

Ergis noDiffusion®
BARRIER FILMS



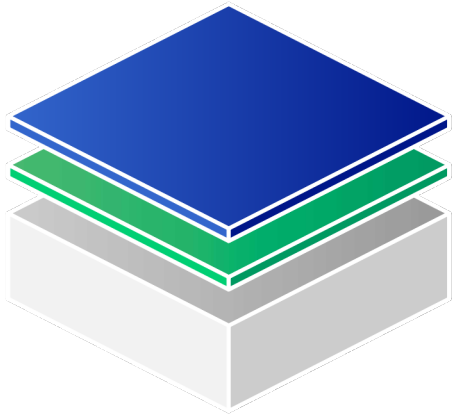
Substrate	PET, PMMA
Water Vapor Transmission Rate (WVTR)	10^{-6}g/m^2 24h
Oxygen Transmission Rate (OTR)	10^{-4} cm^3/m^2 24h
Film Thickness	12-150 µm
Transmittance	> 90% in the visible range
Other properties	Weather resistant, UV stable

Ergis noDiffusion®
FILMS WITH A TRANSPARENT CONDUCTIVE LAYER



Substrate	PET, PMMA
Surface conductivity	15 ohm/square
Film Thickness	12-150 µm
Transmittance	> 80% in the visible range
Other properties	Weather resistant, UV stable

Ergis noDiffusion®
BARRIER FILMS WITH A TRANSPARENT CONDUCTIVE LAYER



Substrate	PET, PMMA
Surface conductivity	15 ohm/square
Water Vapor Transmission Rate (WVTR)	10^{-6} g/m^2 24h
Oxygen Transmission Rate (OTR)	10^{-4} cm^3/m^2 24h
Film Thickness	12-150 µm
Transmittance	> 80% in the visible range
Other properties	Weather resistant, UV stable

ERGIS GROUP

www.ergis.eu

circular packaging design

WARSAW. BERLIN. PARIS

www.cpdesign.expert