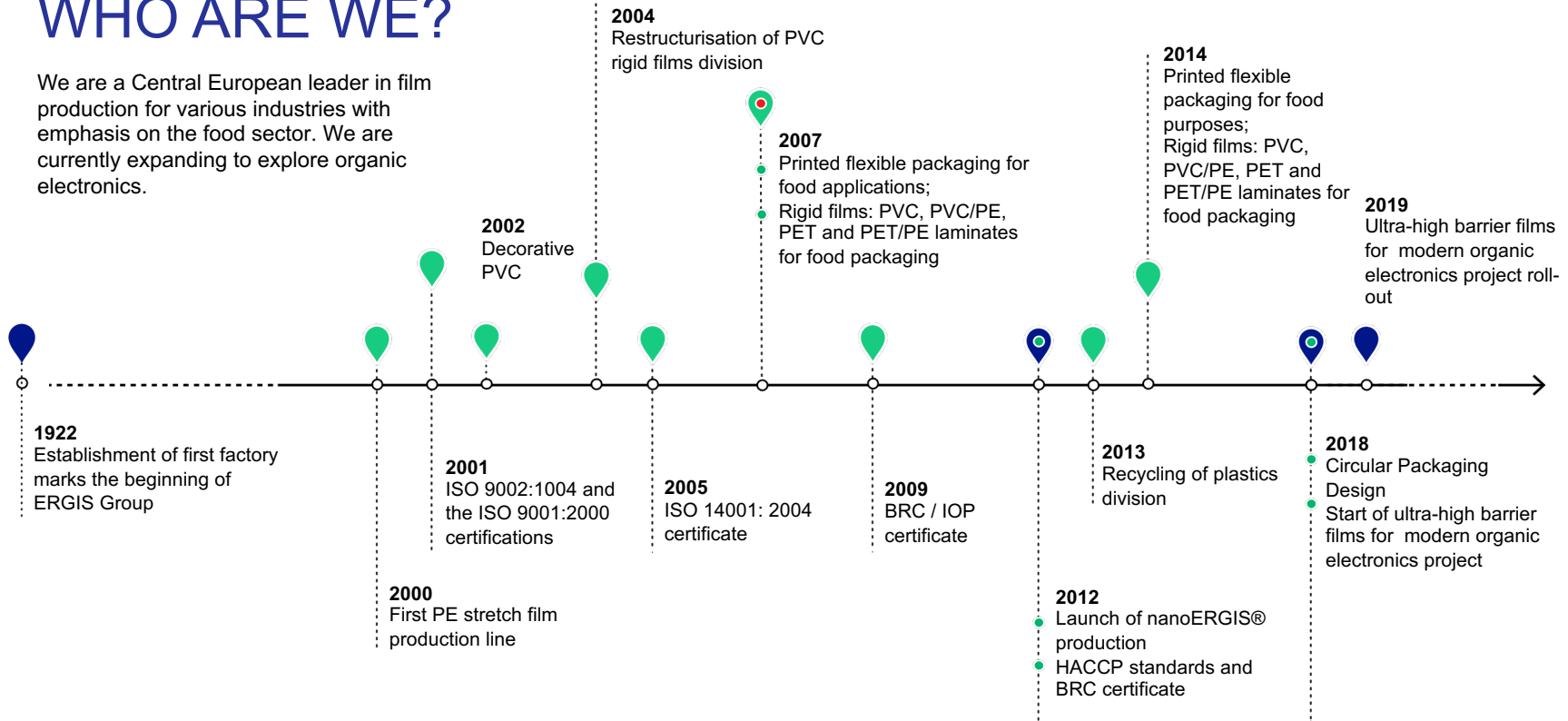




NEW DEVELOPMENTS
IN FILMS FOR MODERN ORGANIC
ELECTRONICS

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

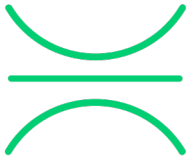
The US Department of Energy, the Energy Information Administration (EIA), predicts a global increase in energy consumption of almost 50% by 2050. Increasing the use of organic electronics could assist in moving towards utilizing natural “green” energy.



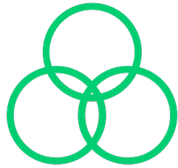
Thin-layer organic electronics are seen as a promising new way of optimizing energy consumption.



WHY CHOOSE ORGANIC ELECTRONICS?



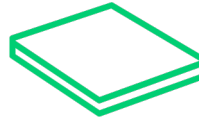
Flexible



Bright and
vibrant colors



Lightweight



Thin



Energy-
efficient



Cost saving

FLEXIBLE ORGANIC ELECTRONICS IN ACTION



DISPLAYS



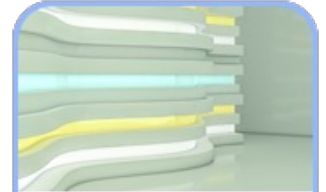
SENSORS



E-NEWSPAPER



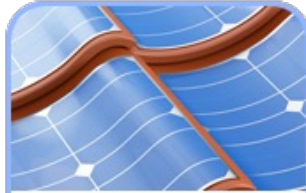
OLED SCREENS



**LIGHTS
AND LAMPS**



**MODULAR LIGHT
STRAPS**



SOLAR CELLS



**HEAD UP
DISPLAYS**



**CAR
DISPLAYS**

OLED - A NEW GENERATION LIGHT SOURCE

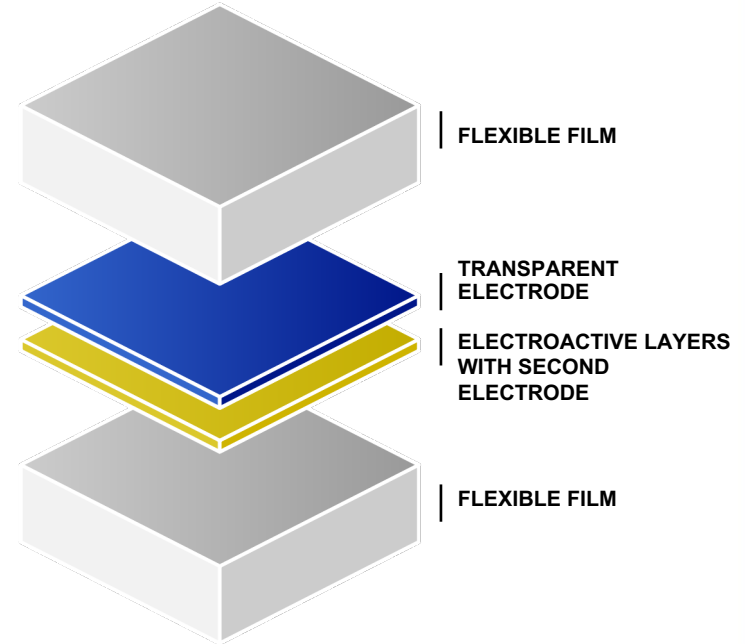


Organic Light Emitting Diode (OLED) - emission of visible light without unnecessary additional backlight of the entire matrix.



Challenges of OLED technology:

Electroactive layer sensitive to oxygen and moisture.

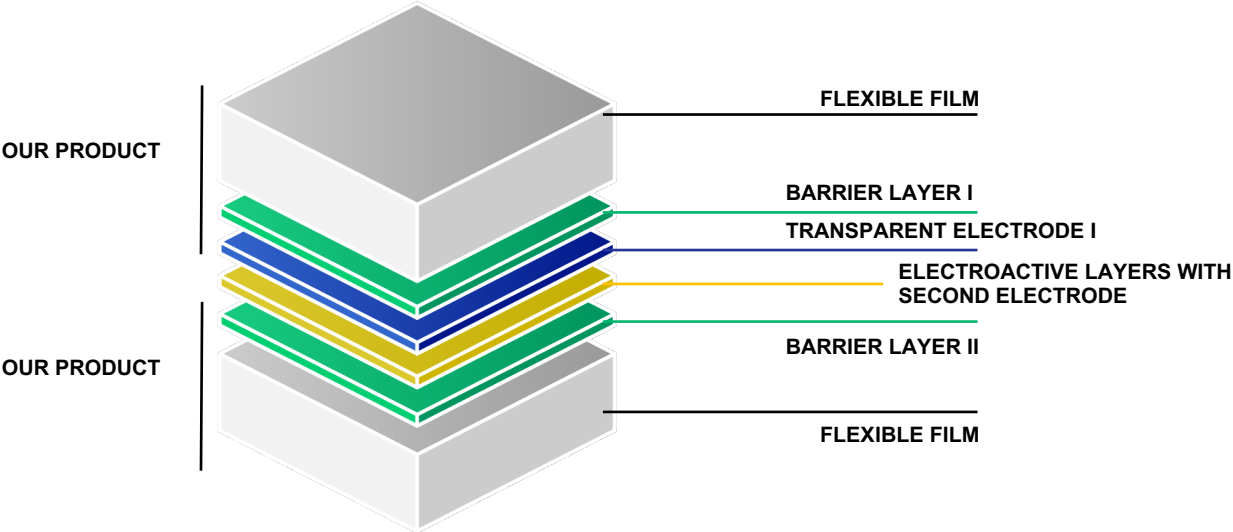


OLED - A NEW GENERATION LIGHT SOURCE



Our solution:

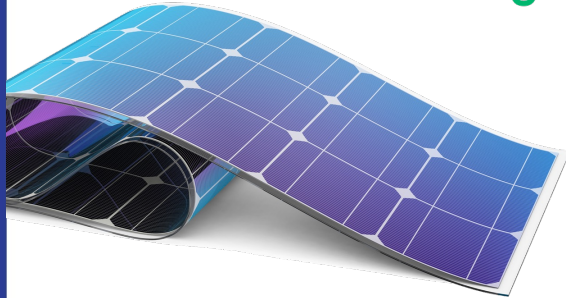
The electroactive material must be protected against oxygen and moisture by means of barrier layers.



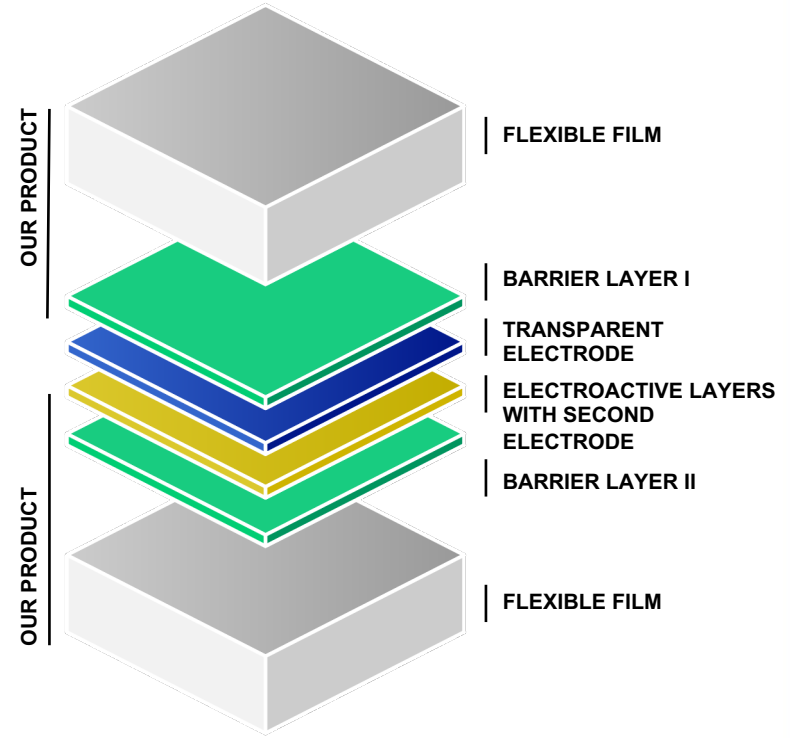
OLED - A NEW GENERATION LIGHT SOURCE



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.



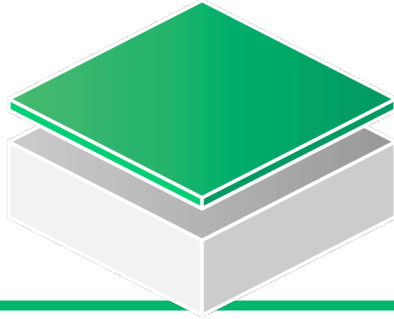
Challenges of FPV technology:
Electroactive layer sensitive to oxygen and moisture.



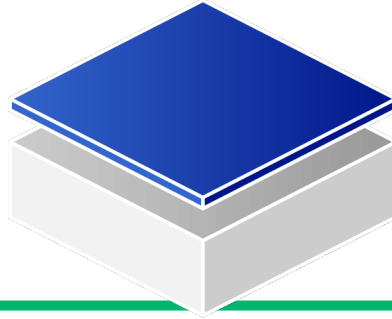
OUR SOLUTION FOR FLEXIBLE ORGANIC ELECTRONICS

Ergis ultra barrier film
noDiffusion[®]

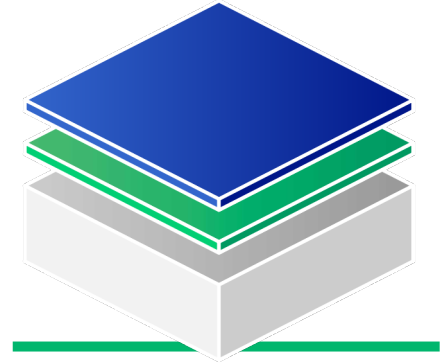
OUR RANGE



Ergis noDiffusion®
BARRIER FILMS

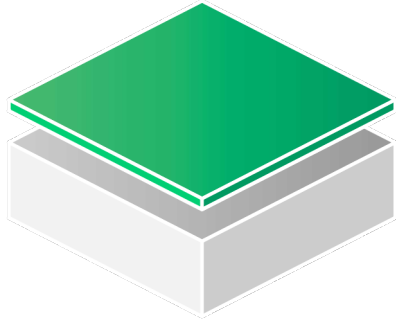


Ergis noDiffusion®
FILMS WITH A
TRANSPARENT
CONDUCTIVE LAYER



Ergis noDiffusion®
BARRIER FILMS WITH
A TRANSPARENT
CONDUCTIVE LAYER

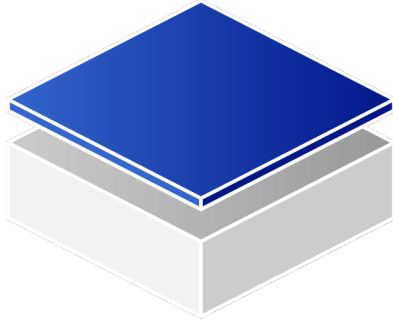
Ergis noDiffusion® BARRIER FILMS



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

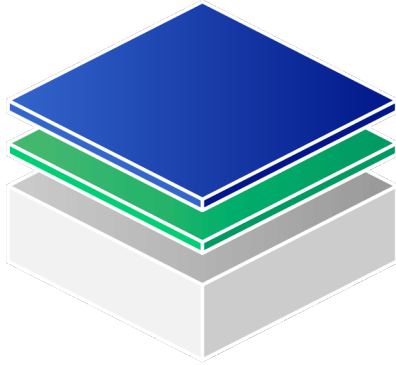
Ergis noDiffusion[®]

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

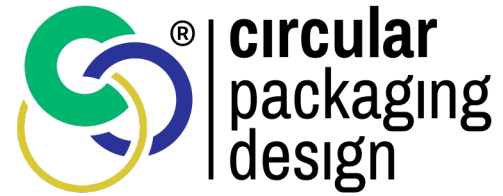
Ergis noDiffusion® BARRIER FILMS WITH A TRANSPARENT CONDUCTIVE LAYER



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www.ergis.eu



WARSAW. BERLIN. PARIS

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