



MATERION



ADVANCED MATERIALS

Organic
Light-Emitting
Diode (OLED)
Materials

OLED Materials

The Challenge

There is an ever increasing market demand for electronic displays for information devices. This has led to a growing need for device technologies that reduce energy consumption and improve color characteristics. Manufacturers are turning to organic light emitting diode (OLED) technology to address these concerns. Materion produces a number of high purity PVD materials tailored for OLED display applications.

The Solution

The display industry is seeking new and innovative ways to improve performance and reduce costs. Materion provides critical materials and services to support the manufacture of more efficient, cost-effective OLEDs.

- Advanced materials that meet stringent requirements for purity, oxygen levels and moisture protection
- A wide variety of precious and non-precious PVD materials
- Associated support services such as target bonding, shield kit cleaning as well as reclaim & refining services

BENEFITS

Our materials are designed to exceed our customers' expectations for performance, quality, and dependability. Materion offers highly engineered materials to advance OLED technology:

- High purity, specially-formulated materials
- Produce more lumens per dollar for a variety of applications
- Offer energy savings and richer color display

INNOVATIVE CORA® MATERIAL

Materion's CORA® corrosion resistant silver alloy sputtering target material is used for manufacture of organic electroluminescent (EL) displays as well as applications such as transfective displays.

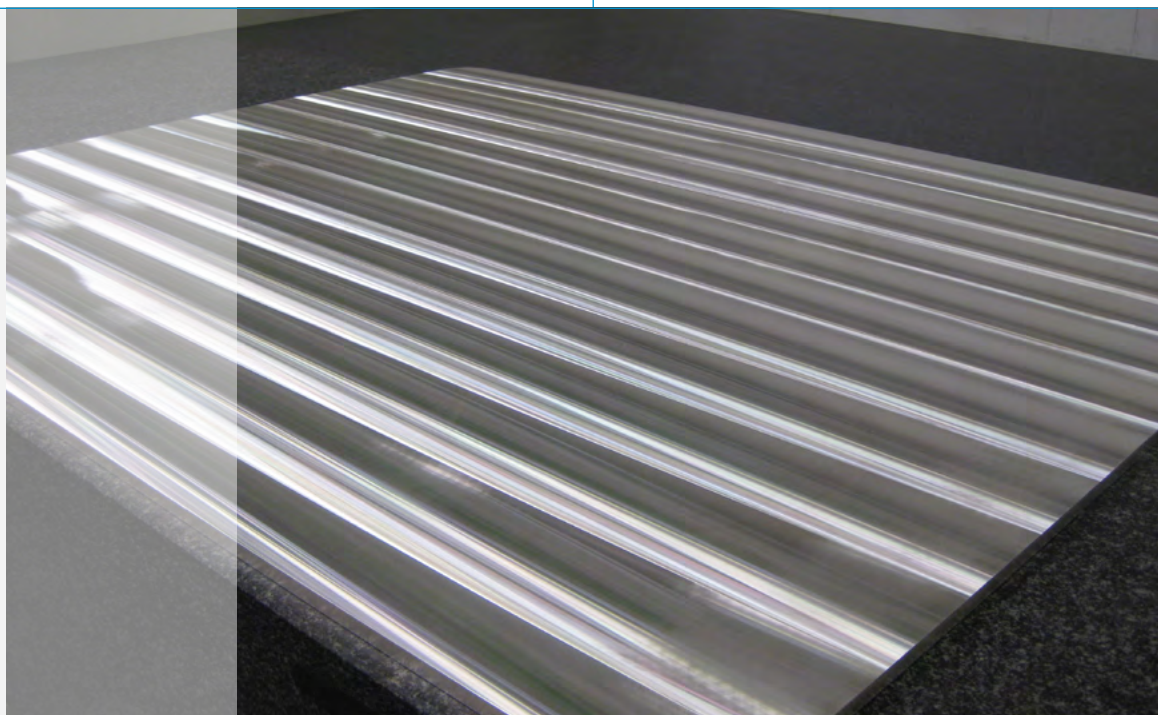
Advantages

- Enhances luminance & longevity of displays
- High reflectivity
- Optimized durability
- Low electrical resistivity
- Highly uniform film properties over large form factors
- Increased yield/utilization

Unique Target Manufacturing Capabilities

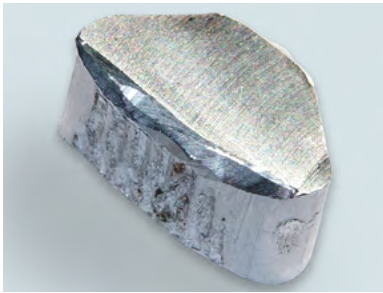
- We provide a broad range of target sizes and service large format markets including single piece targets for Ge4.5, G5.5 and G6; segmented G11 and G8.5 (rotatable)
- Small grain size maintained even for large formats
- Highly uniform stoichiometry over entire target

Materion offers a comprehensive analytical and form factor characterization of all of our PVD materials.





MATERION



ALUMINUM

Materion's aluminum processing capabilities include casting, swaging, drawing and machining.

Material Options

- Standard purity level of 99.99%
- High purity of 99.999%
- Evaporation Material Forms: Granule, Shot, Pellets
- Sputtering Targets: Planar, Rotary



MAGNESIUM

Materion's magnesium processing capabilities include formation and purification.

Material Options

- Purity between 99.9% and 99.995%
- Evaporation Material Forms: Granules, Rod, Pellets
- Sputtering Targets: Planar

Our OLED products include electron injection, cathode and barrier layer materials. We will work with you to develop/customize specialized evaporation materials for your application and manufacturing process.



LITHIUM FLUORIDE

Materion's LiF capability includes chemical synthesis, fluoride chemical melting, sintering and particle size classification.

Material Options

- Purity: Between 99.9% and 99.99%
- Evaporation Material Forms: Granules, Pieces



SILVER

Materion's silver capabilities include refining, casting, forging, oxide reduction, reclamation and grain production.

Material Options

- Standard purity of 99.99%
- Evaporation Material Forms: Shot, Rod, Sputtering Targets: Planar, Rotary



YTTERBIUM

Materion's capabilities surrounding ytterbium include custom-shaped source fabrication and granular particle size classification.

Material Options

- Standard Purity: 99.9%
- Evaporation form factors include granules and shaped sources



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MATERION CORPORATION
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MATERION ADVANCED MATERIALS is a global technology company that develops and manufactures inorganic chemicals and large area coating materials for applications ranging from LED products, architectural and automotive glass, solar panels and specialty thin film coatings. Materion's history under previous company names traces back to the early 1930s. It has been a public corporation since 1956 and encompasses several acquisitions including the former CERAC, Inc. Materion prides itself on understanding the needs of the growing materials market. Our vertically integrated manufacturing approach allows us to provide superior coatings for virtually all applications from the deep UV to the far infrared. We employ a diverse group of chemists, metallurgists and material technologists to offer cutting-edge technologies and superior quality products.