
Changing the Universe,
One Particle at a Time
ECLIPSE®
ENERGY SYSTEMS, INC.
2345 Anvil Street North
St. Petersburg, FL 33710
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Manufacturing Capabilities

- **State of the art thin film deposition equipment**
  - Continuous film deposition 1 angstrom to 20 microns.
  - Fabrication of multi-layer devices consisting of hundreds of layers.
  - Deposition of up to 12 different materials per cycle.
  - Tri-deposition (3 simultaneous independently controlled depositions).
  - Low Temperature Deposition Capability (Less then 60C).
- **Advanced Prototyping & Manufacturing**
  - Class 1000 Cleanrooms, convertible to class 100.
  - Wet & polymer processing labs.
  - Complete simulation software suite for virtual design.
  - Full machine shop for rapid prototyping
  - 8 thin film deposition coaters – largest 6 ft. by 6 ft.
  - Complete characterization and weather testing lab.
- **Concept Prototyping to Production**

10,500 sq. ft.
Eclipse Laboratory

Eclipse Cleanroom

Complex Thin Film System Design

- **Thin Film Design:** Capability of supplying customers with the research and development of new, specialty, or unique film coatings. A variety of specialty oxide and nitrate films can be created to specific customer needs. Due to the geometry of Eclipse's coaters, curved, large substrates, and wafers can be coated.

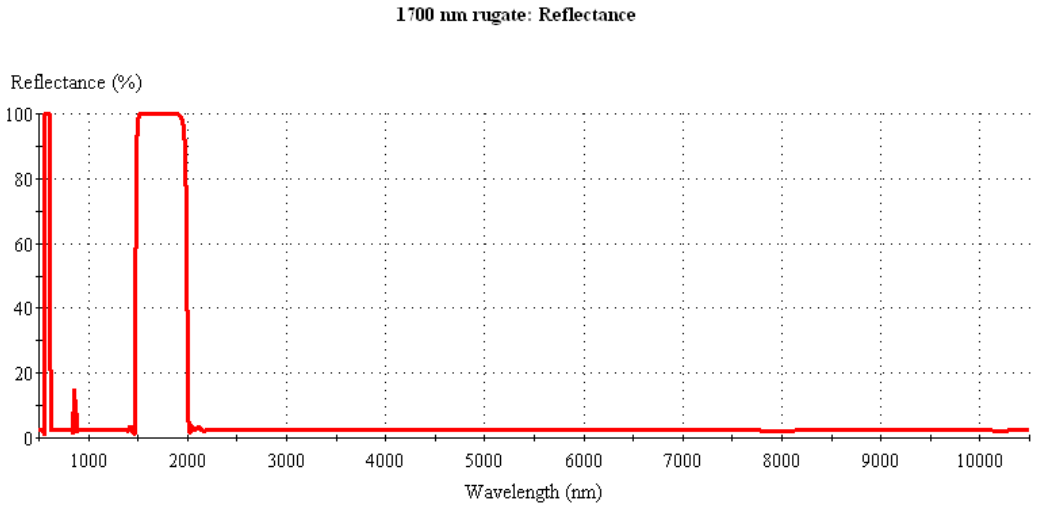
- **Deposition of specialty materials, anti-reflective, band pass, band block, edge filter coatings and hot or cold mirrors** can be designed especially for each substrate type to meet customer needs. Common substrates include plastics, glass, and silicon.

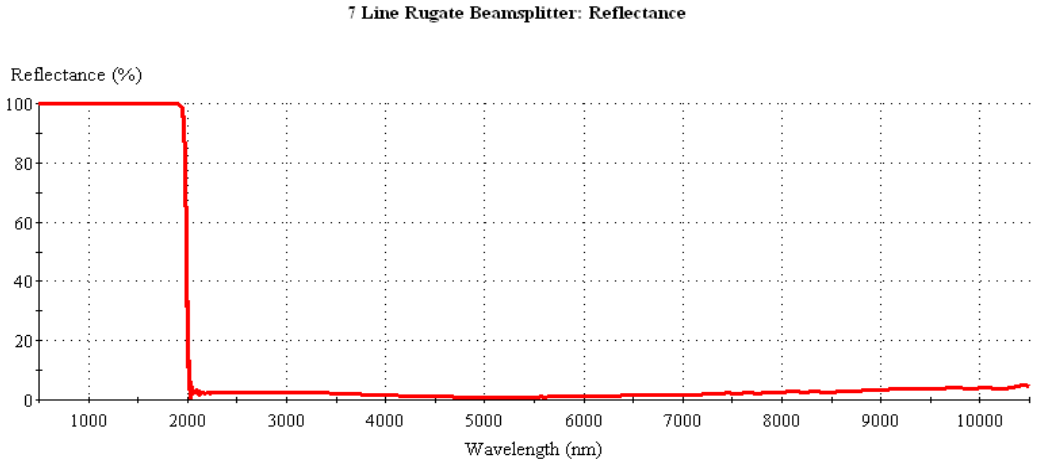
- **High Quality ITO replacements on complex surfaces**: Using a novel process, low stress, high quality ITO replacements can be created. Transmission (normal to the substrate) can be as high as 94%. Sheet resistance can be brought to under 2 ohms/sq. All films are optimized for the customers specific needs.

- **Precious metals** such as **Gold** (Au), **Silver** (Ag), and **Platinum** (Pt) and their required adhesion layers. Commonly deposited metals such as **Aluminum** (Al), **Nickel** (Ni), etc.

- **Select nitrides and oxides** (contact for specific needs). Numerous custom coatings able to be deposited by e-beam, ion-assisted, thermal, and sputtering depositions. Thin films can be deposited commonly at room temperature. Many specialty coatings can be placed on curved surfaces.

Eclipse
Beamsplitter / Cold Mirror



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