

# Solar Potting Success

First Choice  
Performance;  
Another  
EFI Polymer  
Success Story

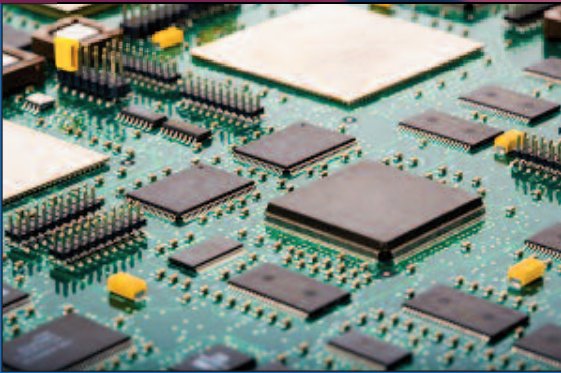


**Solar power faces many challenges in delivery to homes and businesses. Customers expect an ROI on investment that demands 25-30 years of maturation. Can a company find a partner supplier to make solar power systems more productive, more reliable, and smarter? You bet.**

## **The Situation**

In this project EFI worked with the most innovative power conversion company in the solar industry. Our client envisioned changing the way power is delivered from solar modules to the grid. This new technology would revolutionize solar power management by converting power at or near the module allowing the array of panels to operate at higher efficiencies. This new design would also record and transmit performance data for each module allowing customers to monitor and manage their solar power system. The challenge faced by our clients' engineering team became how to protect the complex electronics and EMU components required by this design from out-door operating environments typical of module installations. The client needed the involvement of an expert encapsulation team at the outset of product design to ensure environmental conditions would not impede the performance of this new innovative design.

# Solar Potting Success



*Circuit board potting*

## The Opportunity

EFI Polymers worked with our client from the ground up. We were able to call upon our years of experience, and proven background in developing insulation systems for other smart grid applications requiring rugged environmental performance. We provided weekly design consulting, and developed a system that would meet all the engineering requirements including:

- Thermal conductivity sufficient to maintain critical operating temperature limits
- Corrosion protection to block moisture vapor and protect sensitive electronic components
- CTE protection for surface mount components during extreme thermal cycling -65C to 105C.
- Compatibility with components and design so that maximum operating efficiencies are achieved and sustain for long life.

## The Results

EFI worked step-by-step with the manufacturing process design and implementation teams around the world to ensure on time production start-ups at multiple manufacturing sites. Initial test results proved our product was spot on. The product performed flawlessly throughout thermal cycling. From the first steps of product design to the final high output, six sigma manufacturing process, our team was there to support our clients vision and meet their project goals.

## The Next Level

Today, EFI continues to bring improvements to our client's next generation of power management products. We understand that getting to market is only the first step in our clients winning company strategy. Product evolution and cost reductions are key components to long term market domination. To help our client reach their financial goals we made significant cost reductions in our encapsulation system that helped our client capture a 50% overall cost reduction, enabling our client to leave their competitors in the dust.

## About EFI Polymers

EFI Polymers ranks among the world's leading suppliers of superior performing engineered polymer systems for electrical insulation, adhesives, and specialty coatings applications.

From defining development goals and providing product samples for in-house testing, to the moment a new product is brought online, our team will be there to ensure that your conversion and process is a resounding success.

For nearly 20 years, we have created literally thousands of formulations for hundreds of applications building on our experience to provide our clients with solutions that really work.

**EFI Polymers**

*Formulated Solutions Worldwide*