

# Case Study

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## OEM – Aerospace and Defense Industry

### Technical situation

An aerospace firm needed to protect their printed circuit boards from the harsh environment of deep space deployment. Their current process comprised of a heavy spray on coating of a wet conformal coating. The criteria comprised of a light weight coating strong enough to protect and last the long term travails of outer space. The shock and vibration of the flight and MTBF (Mean Time between Failures) required the need for a unique solution.

### Solution

PRS recommended a solution that included the use of Parylene using a UV tracer. Parylene is a thin film coating with excellent Tensile Strength allowing assemblies to be protected with a minimum increase in weight and size. The application uses a chemical vapor deposition process, insuring an even and complete coating of the target product. The UV additive provides a color visual marker as a critical aid in the final inspection process. The entire application process requires specialized equipment that PRS has developed and operates in 10K PPM Clean room cells at their San Jose and Huntington Beach locations respectively.

### Benefits

The use of Parylene with UV tracer has eliminated some of the weight and bulk of traditional conformal coatings. The UV Tracer process allows the Parylene coating to be inspected in “Black light” environments. The strength of Parylene insures the protection of customer product against the harsh environment of space flight and deployment resulting in a significant cost savings for the customers short and long term needs.