

## Netvia turns to Taiyo America's PSR-4000 BW01DI solder mask for fast exposure, consistency and reliability

One of the critical steps in circuit board fabrication is imaging, which is a process of transferring a PCB design to a manufacturing panel. Typically, this step is carried out using a silver halide or diazo film called a photo tool, which has a negative image of the desired copper conductive circuitry. It is aligned to the resist-coated panel and then flooded with high-intensity UV light. Only selected areas of the resist are exposed and hardens while the non-exposed resist will be removed in the developer. However, technological developments have made it possible to expose the traces directly with a highly-focused laser beam, a process called direct imaging, or DI. DI has nearly eliminated registration issues in the solder mask processing area.

Recently, Taiyo America, Inc. has released several new DI solder mask versions with the assistance of Orbotech and Schmoll with their generous equipment installations in our R&D lab. Among the several DI products that were developed, we focused on **PSR-4000 BW01DI** to be the ultimate DI solder mask featuring extremely fast exposure time while maintaining straight side walls, and all the other excellent properties you would expect from a Taiyo-made solder mask.

Among the first to utilize **PSR-4000 BW01DI** is NetVia Group located in Irving, Texas. NetVia Group has been manufacturing high-end circuit boards for the telecommunications, medical, aerospace and defense industries since 1984. Looking for a solder mask that would provide better resolution with a faster exposure time, they evaluated the capabilities of **PSR-4000 BW01DI**. Using an OLEC/Fabcon Microprint Di, they were able to maintain 2 mil dams exposing at 125 mJ with a positional accuracy of less than 1 mil. This result represented a 2x improvement compared to their current direct imaging solder mask, which lead NetVia's Process Engineering Manager Jason Svoboda to state, "We are extremely pleased with the performance of **PSR-4000 BW01DI** so far."

*If you are interested in learning more about **PSR-4000 BW01DI** and trying it on your DI equipment, please contact your local Taiyo America representative.*