



## Pre-pulsed green laser for copper welding

The first experiments using a new pre-pulsed laser system show 100% process reliability in copper welding applications.

Within the BMBF funded and PTKA coordinated project SUPREME the company neoLASE developed a new green pre-pulsed laser system for copper welding applications. In cooperation with the Laser Zentrum Hannover e.V. and further industrial partners the project goal is the increase the process reliability in laser welding applications of reflecting metals.

Copper welding for example is highly depending on the copper surface and only every second or third weld is successful. By using the developed green laser, 100% welding efficiency could be demonstrated. Therefore, the green laser system with pulse duration of some nanoseconds was superposed with the high energy, millisecond pulsed welding laser. The high intense green laser allows a constant initiation of the welding process while the green pulse energy is a factor of 1000 smaller than the welding laser pulse energy. The experimental results show that beside the advantage of process reliability increase the power of the welding laser could be reduced.

Within the next months the system will be used for optimizing and developing new micro welding applications in the micro-electronic field.

For further information visit [www.supreme-projekt.de](http://www.supreme-projekt.de) or [www.neolase.com](http://www.neolase.com).