



PicoLAS

**Flexibilität in der
Laserentwicklung durch
Point-of-Load Wandler**



Fields of Operation

Areas of Application

Since 2005 the PicoLAS GmbH stands for innovative and reliable power supplies for high power laser diodes. Our products are used in a wide range of applications such as medical, entertainment, measurement and security.



Medical



Security



Industry



Entertainment



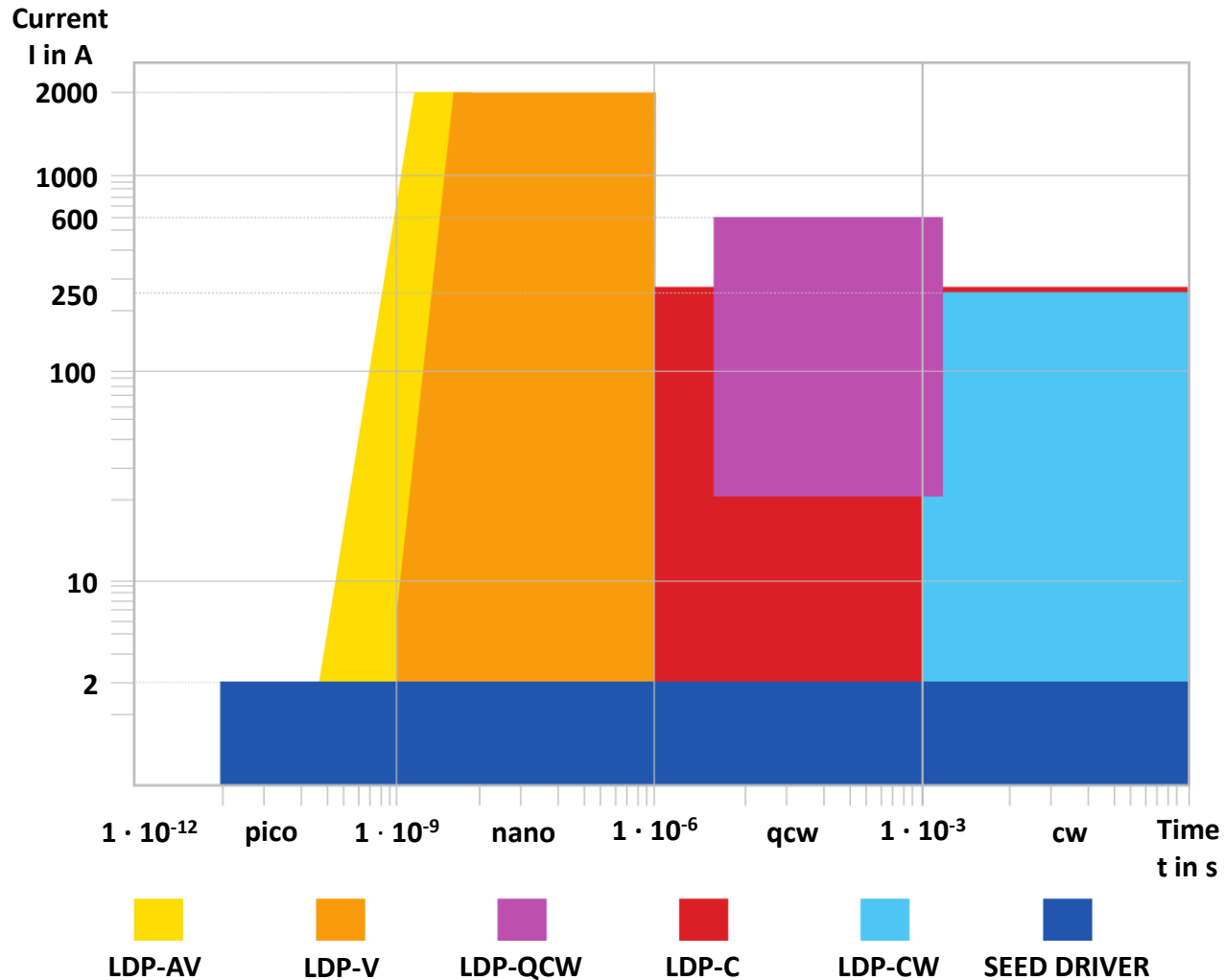
Measurement



Customized Solutions



PicoLAS Product Range

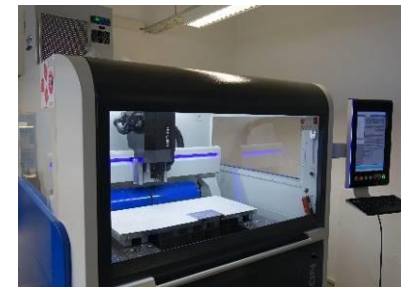
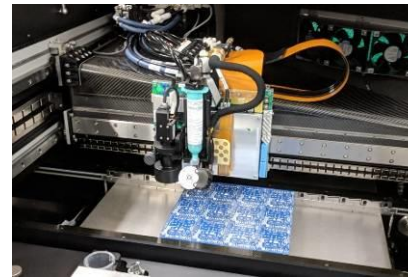


- » Wide variety of standard products
 - From ultrashort pulses up to cw sources
- » „Point-of-load“ philosophy
- » High power density, high efficiency
- » Baseplate cooled
- » In total 114 different models, including 31 cw drivers
- » Accessoires
 - Pulse generators, TEC driver, Control units, Breakout boards



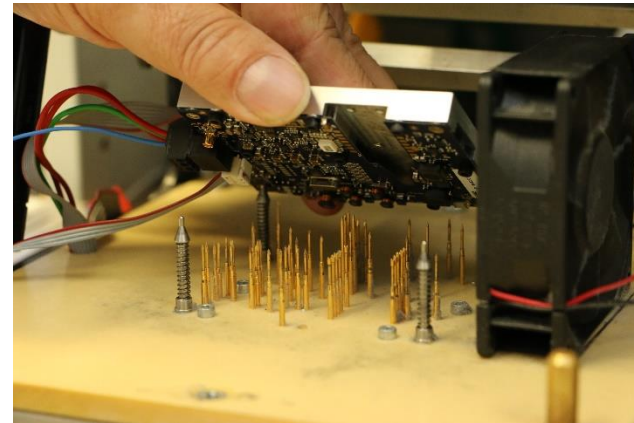
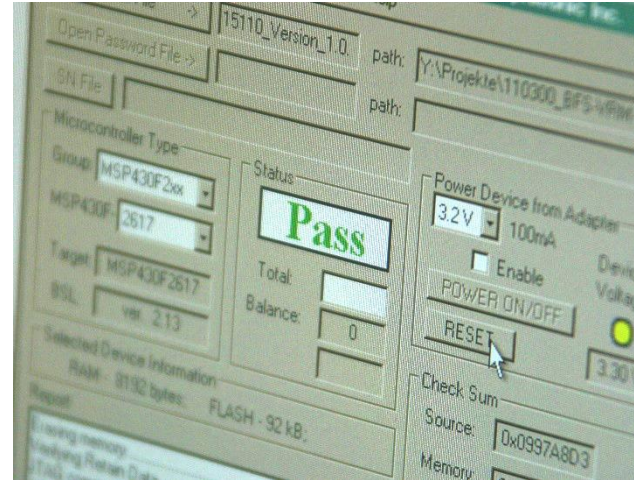
PicoLAS Facts in a nutshell

- » Founded in 2005 in Aachen by Dr. Markus Bartram
- » 100 % in house
- » More than 59.500 manufactured driver units
- » 50 % customized solution
- » 24.532.000 placed components
- » 463.935.000 dots of solder grease jetted



PicoLAS Facts in a nutshell

- » Programmed testing routine
- » 100 % Tracability
- » Flow boxes, Fine placer and Wire bonder
- » Turnover: > 3 Mio. €
 - 1/4 Seeder / Short pulse driver
 - 1/2 Medical
 - 1/4 Others



Seeder & Controller



High Power & Medical



Up to 72 kW peak

Output current: 10 .. 600 A

Output voltage: 10 .. 120 V

Integrated stackprotector

Pulse duration: 3 .. 300 ms

Output current: 1 .. 200 A

Output voltage: 6 .. 50 V

Peak: 6 kW, mean: 3000 W

Three hardware interlock circuits



Advantages of PoL



- » LDP-CW 2050
 - Up to 20 A
 - Up to 50 V
 - Half-Brick

- » LDP-C 40-70
 - Up to 40 A
 - Up to 70 V
 - Full Brick



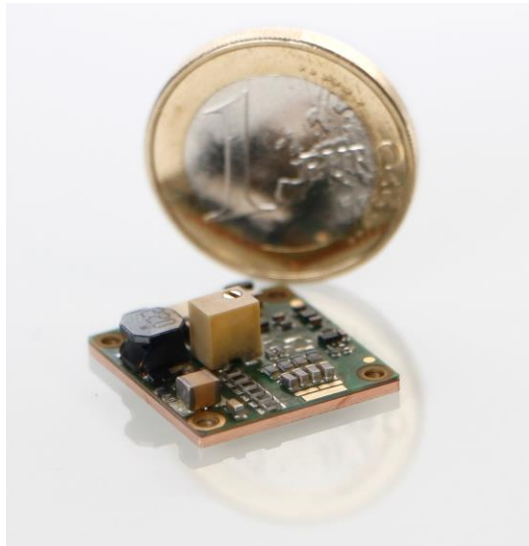
- » LDP- CW 9010
 - Up to 90 A
 - Up to 12 V
 - Half Brick

- » LDP- CW 130-05
 - Up to 130 A
 - Up to 5 V
 - Full Brick



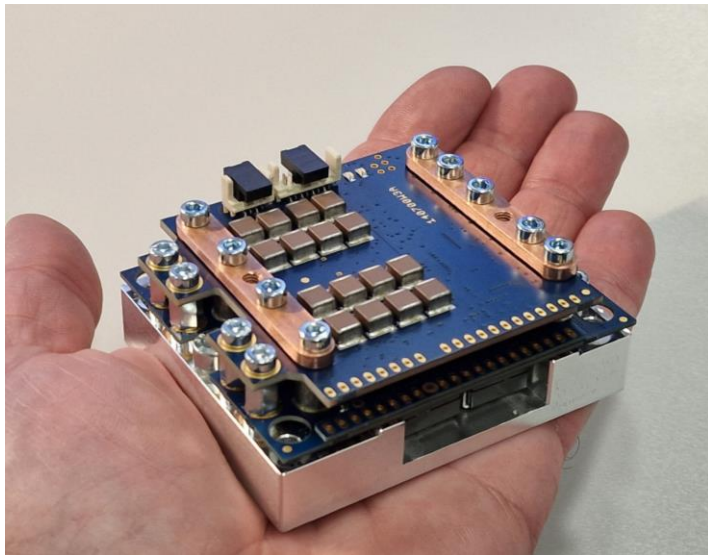
Example of PoL Assembly



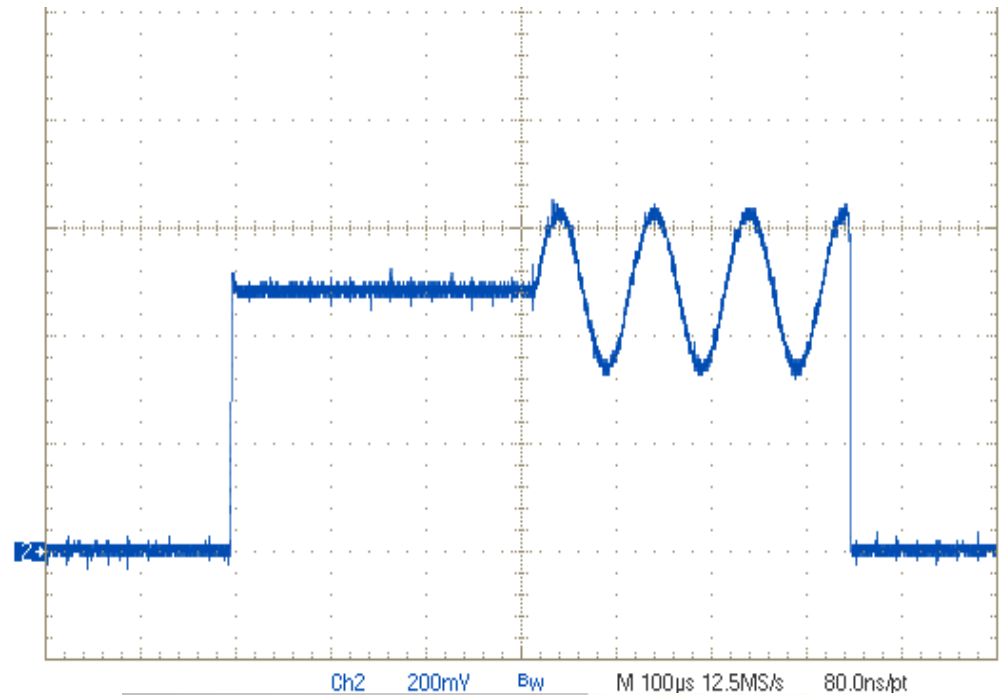


GaN FET Improvements

- » LiDAR driver
- » < 5 ns
- » 480 A
- » Sgl .. 100 kHz



- » High Power LD driver (cw, qcw, modulated)
- » 300 A, 24 V
- » 98 % Efficiency
- » > 100 kHz modulation
- » Power density: 23 kW/Liter





PicoLAS

*“Coming together is a beginning;
keeping together is progress;
working together is a success.”*

Henry Ford

