

LASERLINE: High-Powered Diode Lasers; **SPI: redENERGY** and **redPOWER** industrial fiber lasers; **SUPPLIER NEWS:** SLM Solutions merging with GE Aviation. **WHAT'S IN MY INBOX** – Gum trees!



Offering high-powered diode lasers: LDF - Fiber-Coupled Power, LDM – Compact Power, and OEM – Customized Power.

All Laserline diode lasers are based on a modular concept consisting of several basic components: the diode laser stacks that are the source of the beam, the optical components, and a supply unit with a control and operating panel. Can easily adapt the configuration the customer requires.

The beam source:

Stacks of individual diode bars depending on the output power and required beam quality.

Control and supply:

The compact, mobile supply unit controls and monitors the laser head and its peripheral equipment. The system continuously monitors more than 70 operating parameters, from the laser head to the cooling device - 24/7 availability and operation!

Communication interfaces:

Integrated external devices or control using an LCD display with touch screen technology.

Example usage - Laser Cladding:

Material suitable for laser cladding

Iron based materials

- Low alloyed steels
- Hot working tool steels
- Stainless steel

Nickel based alloys

- superalloys for aircraft industry (e.g. IN718, IN738, ...)

Cobalt based alloys

- Hard facing alloys for wear protection
- High temperature superalloys (up to more than 1000°C)

Particle reinforced materials

- Additions of carbides

Lightweight materials

- Aluminium based (AlMg10Si)
- Titanium based (e.g. TiAl6V4)

Diverse applications are the reason behind the worldwide popularity of Laserline:

Automotive industry

- Valves and valve seats
- Repair or change of shape of forming and cutting tools

Oil industry

- Drilling tools
- Oil string wear protection

Mining

- Hydraulic cylinders
- Hand tools

Foundries

- Pan scrapers
- Taphole drills

Steel industry

- Conveyor rollers in steel mills

Agriculture

- Saws blades
- Harrow disks
- Scraper and counter blades

Aerospace and Energy Generation

- Turbine blade repair
- Vane repair
- Bladed disk repair

Ship industry

- Repair of gear components

Paper industry

- Mixer shafts, rollers, valve seats
- Pulp screens and sieves

Earth moving equipment

- Wear protection





redENERGY® and redPOWER® Industrial Fiber Lasers

SPI Fiber Lasers comprise fused components, meaning the performance is not dependent on the alignment of rods and mirrors nor can dirt or dust ingress the resonator and deteriorate its properties. For manufacturers using SPI Lasers, this eliminates the need for time-consuming routine maintenance.

The absence of water-cooled pump chambers negates the risk of leaks that could cause the rods to fail, avoiding service costs. In addition, the use of a doped fiber as the gain medium in Fiber Lasers results in intrinsically stable beam quality, regardless of any heat load, with high brightness and even in fundamental mode, if designed accordingly.

The Fiber Lasers can be supplied with patented Luminator™ fiber-delivery options, bespoke process tools and scanheads. These ensure safe and reliable 3D manipulation of the Laser beam and positive material processing results.

The range includes both rack-mountable and OEM units, offering both air and water cooled options, (mostly) depending on the respective output powers.

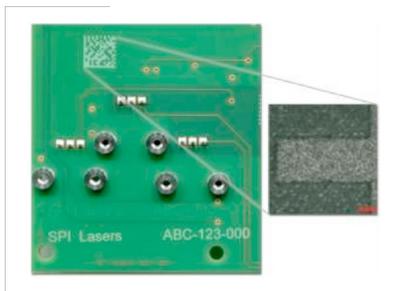
Applications: Marking, Cutting, Welding, Drilling, Engraving, Ablation.

SPI lasers are used in these industries: Aerospace, Automotive, Batteries, Electronics, Dental, Jewellery, Medical, Printing, Scientific, Sensors, Semi-Conductors, Solar panels.

Example application: Marking FR4 PCB

Marking from alpha numeric information to bar codes and ID matrix marks.

High contrast white mark can be made using short pulses at high repetition rates with the redENERGY G4 HS functionality.



NEWS FROM OUR SUPPLIERS:



PRESS RELEASE

Lübeck, September 6, 2016 – Globally leading aircraft engine manufacturer **GE Aviation** today announced its decision to launch a voluntary public takeover offer for all outstanding shares of SLM Solutions Group AG.

In a Business Combination Agreement concluded between GE Aviation and SLM Solutions on September 6, 2016, GE Aviation stated its intention to continue to foster and support SLM Solutions' innovative corporate culture in the future. Along with the commitment to maintain and expand the headquarter in Lübeck and the company's other sites, this also includes a commitment to the workforce and existing management as the drivers of the company's success. GE Aviation also plans to support the company's further growth in various ways, for example by improved global product and service distribution. The existing customer base is going to be maintained and expanded. The further development of SLM Solutions into a supplier of solutions for additive manufacturing is an important strategic step for GE Aviation on its path to becoming a digital industrial company.

CEO Dr. Markus Rechlin explains the advantages of a merger: "GE Aviation is a strong partner with outstanding technology expertise. Together, we will continue to develop our technology at our site in Lübeck and position our company on an even broader basis as part of a large, internationally successful group. We expect the takeover to accelerate SLM Solutions' evolution into a comprehensive systems supplier. For this reason, the takeover offers great opportunities for our employees and customers."

WHAT'S IN MY INBOX!

Lab+Life Scientist – <http://www.labonline.com.au>

We could grow jet fuel on gum trees — if there's anywhere left to plant them!

Scientists from ANU are one step closer to using Australia's iconic gum trees to develop low-carbon renewable jet and missile fuel. The only problem is, the habitat of more than 90% of eucalypt species is set to decline in the near future due to climate change.

