

02/13

# INSIGHT

## 80W, 500ps IR MOPA developed

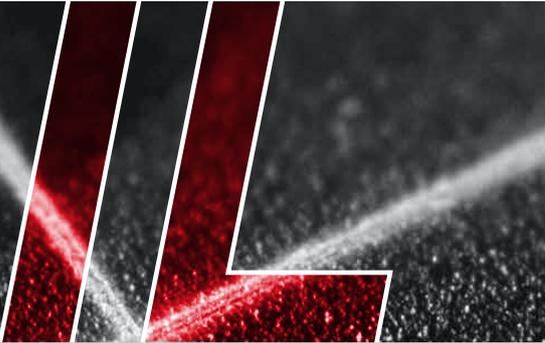
Funded by the Bavarian Ministry of State, InnoLas Laser recently developed a sub-nanosecond MOPA (Master Oscillator Power Amplifier) system achieving an output power of 80W at 1064nm. The actual operating range covers pulse repetition frequencies in the range from 10kHz to 100kHz and pulse widths as short as 500ps. The heart of the MOPA system is a newly developed seed laser source that delivers sub-nanosecond pulses over an exceptionally wide operating range. Coupled into the new amplifier system the pulses get boosted up to 80W by a high efficiency pumping design. InnoLas Laser has therefore developed a new proprietary amplifier concept that combines state of the art pump diode technology with the latest developments in crystal technology and thermal design. Future production of the system will continue InnoLas' field-proven "diodes-in-the-head" design that allows fastest installation and servicing without the need of delicate fiber coupling. On the application side sub-nanosecond pulses are able to produce cold ablation on most materials like glass, ceramics, PV materials, PCB and plastics, combining processing results of picosecond laser sources with the pricing and reliability of 24/7 industrial nanosecond lasers.

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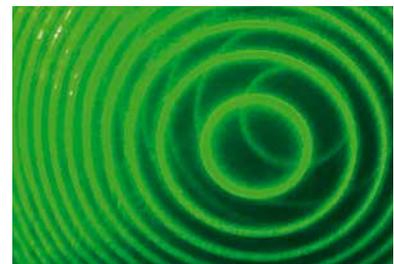
## G-Light cw laser

With the release of the InnoLas G-Light 2 InnoLas Laser is adding another new type of laser to their portfolio for scientific and industrial customers. The G-Light 2 is a continuous wave (cw) single frequency DPSS laser source designed for industrial metrology applications. At 532nm it delivers 2W cw output within spectral bandwidth less than 1MHz and output power noise figure less than 0,1%rms. At any 4 hours of nonstop operation output power stability proofed to be better than 2% and electrical power consumption by the laser controller below 140W. With only convective air cooling the laser head is 80mm x 75mm x 220mm (W x H x L) in size. Optionally the beam can be delivered with a fibre of any length. The G-Light 2 will be suitable for a number of applications such as holography, interferometry or spectroscopy. Promising results were also realized while testing for RAMAN applications requiring high spectral density excitation. The InnoLas G-Light has been developed in co-operation with UniLasers Ltd. (UK), one of the leading specialist in single frequency DPSS lasers.

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Project manager Peter Walther at work



SLM performance