**TEEM Photonics**: Powerchip laser platforms; **SLM Solutions Group**: Rolls-Royce has purchased two SLM®500 quad laser systems. **WHAT’S IN MY INBOX?** Gummy bears and Giants!

**NEW Powerchip Laser, 5 kHz 350 ps**
PNV-M01050-1x0

The PNV-M01050 PowerChip™ passively Q-switched microchip laser is the newest addition of the Powerchip series at 355nm. With a pulse frequency of 5 kHz, a pulse duration kept under 350 ps and an excellent beam quality, this laser inherits an outstanding reliability and draws from the experience gathered from the wide OEM reach won by Powerchip lasers. It features a completely integrated platform which includes the laser head, power supply and air cooling in a compact, rugged, and turnkey package.

**532 nm 50 kHz High Performance Laser**
SNG-50F-1x0

The SNG-50F was developed to extend the limits of the SNG-20F version. Its special design enables a 3x higher average power of 150 mW and a shorter pulse duration. The SNG-50F is part of the more advanced generations of Microchip Series designed for higher average power. This laser first produces 1064nm pulses which are directly generated from the diode pumped passively Q-switched Nd:YAG microchip engine. A second harmonic generation stage produces the 532 nm radiation with a very good beam quality and lifetime.

The SNG-50F excels in UAV Lidar and PCB repair applications due to its compact, light weight format and good reliability. Microchip lasers are also easy to operate and service; controllers can be used with every laser head model and swapped within minutes while keeping constant operating parameters.

**355 nm 40 mW 600 ps Long Life**
SNG-40P-10x

The SNG-40P laser is part of the more advanced generations of Microchip Series designed for long life UV emission, it brings 4x more energy per pulse than the SNG-20F while keeping the pulse duration at 600 ps. This laser first produces 1064nm pulses which are directly generated from the diode pumped passively Q-switched Nd:YAG microchip engine. A third harmonic generation stage produces the 355 nm radiation with a very good beam quality and lifetime.

Microchip lasers are also easy to operate and service; controllers can be used with every laser head model and swapped within minutes while keeping constant operating parameters.

**Want more info? +61 2 9979 7646**
Rolls-Royce selects SLM Solutions' SLM®500 quad-laser machine for next stage additive manufacturing industrialization.

Lübeck, June 14, 2019. SLM®500 quad-laser machines have been selected by Rolls-Royce to help develop its Additive Layer Manufacturing capability. The machines will play an important role in helping Rolls-Royce in the competitive adoption of additive layer manufacturing for aerospace components.

SLM Solutions focuses solely on metal additive manufacturing technology and pioneered multi-laser machines. This years-long experience mastering multi-laser optics, together with their patented bi-directional recoating mechanism makes selective laser melting systems the most productive on the market. With four lasers enabling build rates up to 171 cm³, the SLM®500 serves as the flagship metal 3D printer for high volume processes while offering automated, closed-loop material supply, recovery and sieving to minimize operator handling of metal powder. Speed and safety are common requirements, but aerospace is a challenging environment for manufacturing because of the rigorous certification process that requires a reliable, high standard of part quality.

Rolls-Royce required multi-laser systems to meet both their productivity demands and maintain rigorous quality controls previously established. This also led them to adopt the four laser SLM®500, the first quad-laser machine introduced to the market in 2013. Essential to their selection of SLM Solutions as a supplier was the control of inert gas flow to maintain a controlled working atmosphere across the build chamber.

Gas flow and control within the multi-laser machine was rigorously investigated by the Rolls-Royce team because of its direct correlation to build quality, and the sintered wall gas flow of the SLM Solutions’ machines provided optimal results in a compact footprint for their needs.

With an eye forward SLM Solutions has included Rolls-Royce as a beta customer for machine accessories to cooperate on future developments.

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Email for a copy of the Press Release
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WHAT'S IN MY INBOX?

Do we really want to talk about the growth in food thickening agents when there's gummy bears!!
https://www.youtube.com/watch?v=astISOttCQ0

and .......

On the shoulders of (laser) Giants

Maurice Fabry was born in Marseille, France in 1867, and as one-half of the team that developed the Fabry-Perot interferometer, he joined the staff of Marseilles University in 1894. His early studies centred on light interference, becoming renowned as a leader in optics and spectroscopy.

Together with his colleague and collaborator Alfred Pérot, they designed the Fabry-Pérot interferometer. Since the interferometer could provide high spectral resolution for planets or stars and medium to high resolution for nebulae and galaxies, Fabry pursued studies in astronomy.

In 1913 Fabry and Buisson discovered the ozone layer in the Earth’s upper atmosphere. In 1929 Fabry hosted the first international meeting on atmospheric ozone!

Substantial development in laser technology is evident 100 years on, but have we fully developed our appreciation of the ozone layer?