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**GMP**  
GENERAL  
MICROTECHNOLOGY  
& PHOTONICS

SYSTEMS FOR INDUSTRY  
RESEARCH  
TELECOM & MEDICINE



**omicron**  
LASERAGE

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**omicron**  
LASERAGE

**SOLE**®



Up to 6 wavelengths beam-combined  
in one compact housing

26 different wavelengths available

Direct modulation and fast switching between wavelengths

Single-mode, polarization maintaining fiber coupling  
with customized fiber outputs

Vibration isolated

USB 2.0 control interface

Windows™ based laser control software included

OEM versions available



The laser light engines combine up to six wavelengths in a compact and rugged design. Wavelengths between 375nm and 830nm and optical output powers up to 300mW per laser line are possible. Especially designed for today's demanding applications in biotechnology like confocal microscopy or flow cytometry. High-speed analogue and digital modulation as well as fast switching between the individual wavelengths are realized by Omicron's proprietary DEEPSTAR® technology. All light engines offer single-mode polarization maintaining fiber coupling or free-space light output with high stability.

## SOLE® Compact laser light engines

### Available models:

SOLE®-3 - Channel light engine with up to 3 wavelengths  
SOLE®-6 - Channel light engine with up to 6 wavelengths

### Wavelengths and powers (internal laser power):

375nm / 20mW, 70mW  
395nm / 120mW  
405nm / 60mW, 120mW, 300mW  
415nm / 120mW  
425nm / 120mW  
445nm / 50mW, 100mW  
457nm / 100mW  
460nm / 100mW  
473nm / 20mW, 80mW, 100mW  
488nm / 20mW, 60mW, 80mW, 100mW, 150mW, 200mW  
515nm / 25mW, 50mW, 80mW, 100mW  
515nm / 150mW \*  
532nm / 25mW, 50mW, 100mW, 150mW \*  
540nm / 25mW, 50mW \*  
561nm / 25mW, 50mW, 75mW, 100mW, 150mW \*  
568nm / 50mW, 75mW, 100mW, 150mW \*  
594nm / 25mW, 50mW, 100mW \*  
638nm / 40mW, 100mW, 150mW  
642nm / 140mW  
647nm / 140mW  
660nm / 130mW  
685nm / 50mW  
705nm / 40mW  
730nm / 40mW  
785nm / 120mW  
808nm / 140mW  
830nm / 140mW

\*DPSS lasers

### Fibre coupling:

Type: Single-mode, polarization maintaining or multi-mode fibres  
Fiber output: FC/APC, FC/PC, FCP8, SMA and collimated outputs diameter on customers demand

No. of fibre outputs: 1 or 2

Diode lasers: digital modulation: > 180MHz  
analogue modulation: > 3MHz

DPSS lasers: electronic shutter: > 300kHz  
digital modulation: > 2,5MHz  
analogue modulation: > 2,5MHz

Extinction ratio: electronic shutter: > 300kHz  
digital modulation: > 500:1  
analogue modulation: > 1000:1

Input signals: electronic shutter: > 50dB  
digital modulation: TTL  
analogue modulation: 0...10V  
electronic shutter: TTL

Control interfaces of the laser sources: Type: USB2.0 / RS-232

Laser control software: Windows™ based laser control software

Supply voltage: Mains: 90 ...245VAC, 50/60Hz

Mechanical size: SOLE®-3 19" rack type housing with 2 height units  
L x W x H: 480mm x 484mm x 88mm (without fibre coupler)

SOLE®-6 19" rack type housing with 3 height units  
L x W x H: 610mm x 484mm x 132mm (without fibre coupler)