

## Q-SWITCHED LASERS



### CORE\* All-in-One Industrial DPSS Lasers

#### Compact. Powerful. Reliable.

The all-new CORE is the latest addition to our growing line-up of Q-switched nanosecond lasers. The all-in-one concept comes with a fully integrated one-board power supply and control electronics. Its latest hyperclean UV technology and the integrated closed-

loop air purification system ensure exceptional UV lifetimes and off-hands operation for demanding 24/7 applications. And of course, the CORE comes with the same control and user interface as all other InnoLas Photonics nanosecond lasers.

#### Features

- \* Compact all-in-one design
- \* Integrated closed-loop air purification system
- \* Superior pulse-to-pulse stability
- \* Short pulse widths
- \* Low cost of ownership



( i ) Based on an all-in-one design, the CORE comes with exceptional short pulse widths. The latest hyperclean UV technology and the integrated closed-loop air purification system ensure longest laser lifetimes.



## Available Options

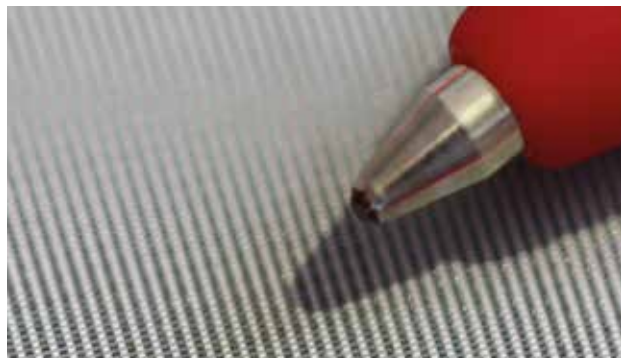
- \* Water cooling
- \* Beam expander box
- \* Motorized variable attenuator
- \* Scan head adapter flanges
- \* Constant pulse energy mode

## Customization

- \* Laser performance
- \* Control and operation modes
- \* Laser interfacing & software control
- \* Branded laser control software
- \* Special laser developments

## Applications

- \* Resistor trimming
- \* ID card marking
- \* Flex materials cutting
- \* PCB marking
- \* Plastics marking



## Q-SWITCHED LASERS



### Specifications

## CORE

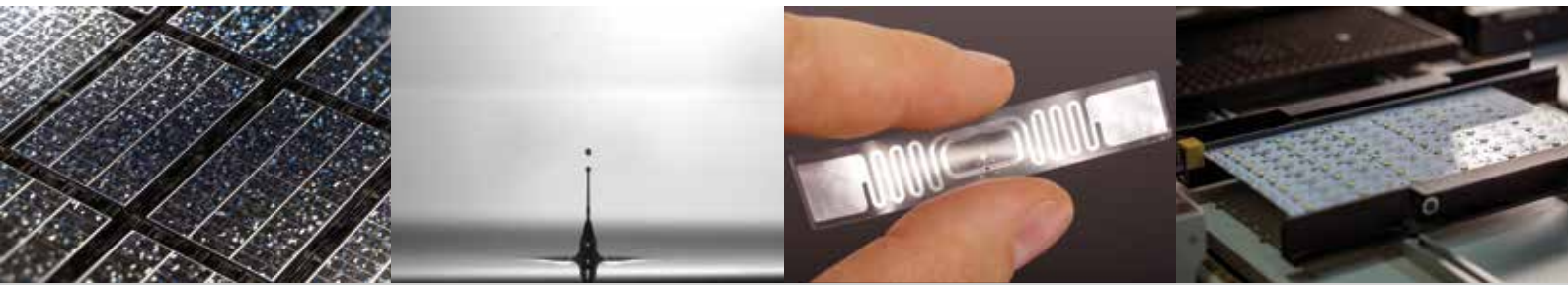
## 355

## 532

## 1064

Model	355-6-V	532-14-V	1064-15-V
Laser Medium	Nd:YVO <sub>4</sub>	Nd:YVO <sub>4</sub>	Nd:YVO <sub>4</sub>
Wavelength	355 nm	532 nm	1064 nm
Nominal Power	6 W @ 40 kHz	14 W @ 60 kHz	15 W @ 40 kHz
Repetition Rate	1 to 150 kHz	1 to 200 kHz	1 to 100 kHz
Pulse Width	< 15 ns	< 25 ns	< 30 ns
Pulse Energy	150 µJ @ 40 kHz	233 µJ @ 60 kHz	375 µJ @ 40 kHz
Peak Power	10 kW @ 40 kHz	9.3 kW @ 60 kHz	12.5 kW @ 40 kHz
Pulse-to-Pulse Stability	< 2% @ 40 kHz	< 1% @ 60 kHz	< 1% @ 40 kHz
Power Stability (rms, 8h)	< 2%	< 2%	< 2%
Spatial Mode	M <sup>2</sup> ≤ 1.2, TEM <sub>00</sub>	M <sup>2</sup> ≤ 1.2, TEM <sub>00</sub>	M <sup>2</sup> ≤ 1.2, TEM <sub>00</sub>
Nominal Beam Diameter (at waist)	0.3 mm	0.4 mm	0.4 mm
Nominal Waist Location (from output)	-340 mm	-340 mm	-250 mm
Beam Divergence (full angle)	1.8 mrad	2.0 mrad	4.0 mrad
Nominal Beam Diameter (at output)	0.7 mm	0.8 mm	1.1 mm
Polarization	Vertical, > 100:1	Horizontal, > 100:1	Vertical, > 100:1
Circularity	> 90%	> 90%	> 90%
Warm-up Time	< 15 min	< 15 min	< 15 min
Operating Voltage	24 VDC	24 VDC	24 VDC
Laser Power Consumption	< 480 W	< 480 W	< 480 W
Cooling	Air	Air	Air
Ambient Temperature	15-35 °C, non-condensing	15-35 °C, non-condensing	15-35 °C, non-condensing
External Control	RS232, USB, TTL, Analog Q-Switch Control	RS232, USB, TTL, Analog Q-Switch Control	RS232, USB, TTL, Analog Q-Switch Control
Dimensions Laser Head (L x W x H)	400 x 150 x 177 mm	400 x 150 x 177 mm	400 x 150 x 177 mm
Dimensions Power Supply (L x W x H)	n/a	n/a	n/a
Weight Laser Head	13 kg	12.5 kg	12.5 kg
Weight Power Supply	n/a	n/a	n/a
Umbilical Length	n/a	n/a	n/a

InnoLas follows a policy of continuous product improvement. All specifications are subject to change without notice. Rev. 1.0, 03/2022. InnoLas Photonics GmbH is DIN EN ISO 9001 certified.



## Technical Drawing

### Laser Head

