

# A-WAVE SERIES LASER

For SLA<sup>®</sup> 3500 500 5000 7000 Viper si<sup>2</sup><sup>™</sup>



- High power replacement for Spectra Physics
- Up to 700 mW output power
- For SLA 3500 500 5000 7000 and Viper si<sup>2</sup>
- Minimal hardware change only cables, system is backward compatible
- No need for Buildstation code SW modification
- SL resin material proven
- Transparent for the operator
- Faster, digitally controlled and efficient, High Speed Shutter for jump to part
- Lower Power Consumption, Lower Heat dissipation, Air Cooled, increase UPS capacity
- New design and latest components
- Easier Maintenance
- Field replaceable optics
- Warranty : 1 year - hours unlimited. Additional years of warranty available upon request

Truly maximize the SLA system productivity with high vat power, up to 700 mW @ 40Khz, excellent beam profile for smooth sidewall, high Rep. Rate , up to 50 KHz for fast scan speed, and integrated power modulation to take full advantage of the Buildstation<sup>™</sup> software control.

The A-Wave Series for SLA systems is a commercial product, not a specific design made for an application or a an exclusive supplier. Critical components like laser diode have low cost of ownership and are field replaceable.

It features a patent pending harmonic conversion technologies , with 24/7 proven reliability in various industrial applications.

Installs in one day and it fits exactly on laser pins location.



The 19" power supply is installed internally to the system without external accessories.

No need for build style modification.

Fully tested on materials , does not alter vat properties , does not alter part properties.

The laser unit is air sealed to increase operating lifetime.

Thanks to the harmonic conversion design does not require periodic tuning to recover crystal damage, thus reducing maintenance costs.

**KEY**  **SERVICE**  
YOUR Customized Experience

# Technical Characteristics



A-Wave UV/355 nm series, are Q-switched TEM 00 mode lasers and engineered for the highly demanding 24/7 production environment, consisting of a laser head and a laser controller connected with an umbilical cable. The fiber coupled pumping diodes are located in the laser controller for easy field replacement. The laser head is assembled and sealed in a clean room to assure long term reliability and dust free contamination.

Many companies have already choose A-Wave for their most demanding applications since its introduction. Not only for rapid prototyping but also for wafer dicing/scribing, LCD repair, electronic circuits trimming, components marking, memory repair, photolithography, PCB manufacturing and flexible circuitry, marking, engraving and diamond cutting.

For more info  
<http://www.kstm.it>  
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SLA Model	VAT Power	Spot Size Diam.
Viper si <sup>2</sup>	100 mW min.	0,075/0,250 mm
350 3500	400 mW min.	0,250 mm
500 5000	600 mW min.	0,250 mm
7000	700 mW min.	0,250/0,750 mm

  

Wavelength (nm)	355
Max Pulse Repetition Rate	50 kHz
Spatial Mode	TEM 00
Operating Voltage (VAC)	90-260
Line Frequency (Hz)	47-63
Cooling	Air
Ambient Temperature (°C)	15-30
CE , CDRH , Rohs	Compliant

If your process requires high laser power, A-Wave is the perfect choice.

Higher power, excellent beam quality, faster and more efficient digital driven fast shutter.

It meets or exceed original laser specs driving the SLA system at full drawing speed.

Specification are subject to change.



## Upgrade to A-Wave

## Refurbishing Spectra Physics

**Power** A-Wave delivers up to 700 mW taking the SLA at its maximum performance. Maintains its output power for long time. Not effected by crystals damage.

Refurbishing will just recover SP standard specifications. SP will need crystals re-tune every "n" hours, degrading laser beam quality and power. Means service cost for Time & Materials visits and system down time.

**Service** A-Wave is a entire new unit. Spare parts are up to date and have lower running cost.

SP is based on discontinued products, like T20 power supply or B-Head. Refurbishing just means replacing DHG & THG Crystals and diode when they are at end of life. All the rest is the same. SP is a customized product made on 3D Systems specs. Some of its components are discontinued by SP itself. Some other are difficult to find and expensive to repair. Not all the parts are available on the market like PCB boards.

**Warranty** A-Wave comes with one year full warranty. Additional years of full coverage is also possible.

When refurbished, only DHG & THG crystals and diode will be covered for one year warranty. If the laser fails on other components warranty will not apply.