

Ascend™ High Power kHz Green Pump Lasers

The Ascend Advantage

- *Optimal performance for pumping Spectra-Physics ultrafast amplifiers*
- *Excellent beam quality for maximum efficiency*
- *Industrial platform with outstanding reliability*
- *Up to >60 W average power*
- *Repetition rates – 1 to 10 kHz*
- *Fully computer controlled*



PULSED DPSS GREEN LASERS FOR Ti:SAPPHIRE AMPLIFIER PUMPING

Elevate your research with the Ascend™ series pump lasers from Spectra-Physics®. Ascend is an industrial diode-pumped solid state, Q-switched laser capable of more than 60 W at 527 nm. Ascend delivers optimal performance for pumping the Spectra-Physics Spitfire® Ace™, Solstice® Ace, and Femtopower™ series amplifiers. Ascend yields the most efficient amplifiers commercially available, delivering industry-leading output power and energy, beam quality and reliability.

Ascend is based upon proprietary technology that employs an ultra-efficient cooling scheme to provide maximum stability and long-term reliability. When used for pumping a Spectra-Physics amplifier, Ascend is the most reliable, most efficient and lowest noise pump laser available.

Ascend configurations can be easily changed to maximize the utility of your amplifier system. The Ascend flexibility means you can design experiments anywhere in the 1 to 10 kHz repetition rate range. Ascend is available in >60 W and >40 W output power levels to support your specific amplifier system configuration and requirements.

Ascend continues Spectra-Physics' long-standing commitment to producing the highest performing, most reliable diode-pumped solid state lasers. Ascend combines industrial reliability and ruggedness with leading-edge performance to maximize the performance of your Spectra-Physics ultrafast amplifier.

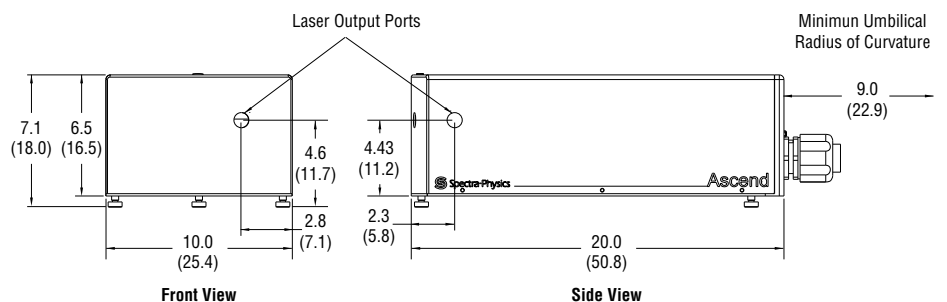
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Specifications^{1, 2}

	Ascend 60	Ascend 40
General Characteristics		
Wavelength	527 nm	
Average Power	1 kHz:	>35 W
	5 kHz:	>60 W
	10 kHz:	>50 W
Pulse Energy	1 kHz:	>35 mJ
	5 kHz:	>12 mJ
	10 kHz:	>5 mJ
Nominal Repetition Rate	1–10 kHz	
Beam Characteristics		
Spatial Mode	Multimode	
Polarization	Linear, horizontal	
Beam Diameter	3 mm (nominal)	
Power Stability (over 8 hours at stable temperature)	<0.15% rms	
Beam Pointing Stability	<10 μrad/°C	
Electrical/Mechanical Specifications		
Electrical Requirements	110/230 VAC, single phase, 60/50 Hz, 2 x 15/10 A	
Laser Head Dimensions	20 x 10 x 7.1 in (50.8 x 25.4 x 17.9 cm)	
Laser Head Weight	40 lbs (18 kg)	
Power Supply Dimensions	Rack Mountable, 18 x 19 x 7 in (45.47 x 48.26 x 17.53 cm)	
Power Supply Weight	30 lbs (14 kg)	
Power Cable Length	Umbilical - 2.95 m	

1. Due to our continuous product improvement program, specifications are subject to change without notice.
2. The Ascend is a Class IV – High-Power Laser, whose beam is, by definition, a safety and fire hazard. Take precautions to prevent exposure to direct and reflected beams. Diffuse as well as specular reflections can cause severe skin or eye damage.

Ascend Dimensions



Dimensions in inch (cm)



www.spectra-physics.com

3635 Peterson Way, Santa Clara, CA 95054, USA
PHONE: 1-800-775-5273 1-408-980-4300 **FAX:** 1-408-980-6921 **EMAIL:** sales@spectra-physics.com

Belgium	+32-(0)800-11 257	belgium@newport.com	Korea	+82-31-8069-2401	korea@spectra-physics.com
China	+86-10-6267-0065	info@spectra-physics.com.cn	Netherlands	+31-(0)30 6592111	netherlands@newport.com
France	+33-(0)1-60-91-68-68	france@newport.com	Singapore	+65-6664-0040	sales.sg@newport.com
Germany / Austria / Switzerland	+49-(0)6151-708-0	germany@newport.com	Taiwan	+886 -(0)2-2508-4977	sales@newport.com.tw
Japan	+81-3-3794-5511	spectra-physics@splasers.co.jp	United Kingdom	+44-1235-432-710	uk@newport.com