

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 potential 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 utilizes a proprietary architecture which produces less heat and an improved cooling scheme to provide maximum stability. When pumping a Spectra-Physics amplifier, Ascend delivers optimal green-to-IR conversion due to the excellent beam quality. The end result is maximum efficiency, low noise, and unmatched reliability, making Ascend the highest performing amplifier pump laser available.

Flexible performance means you can design experiments across the 1 to 10 kHz repetition rate range. Ascend configurations can be changed in the field maximizing the utility of your amplifier system. Ascend is available with several output power levels for specific amplifier system configurations 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}

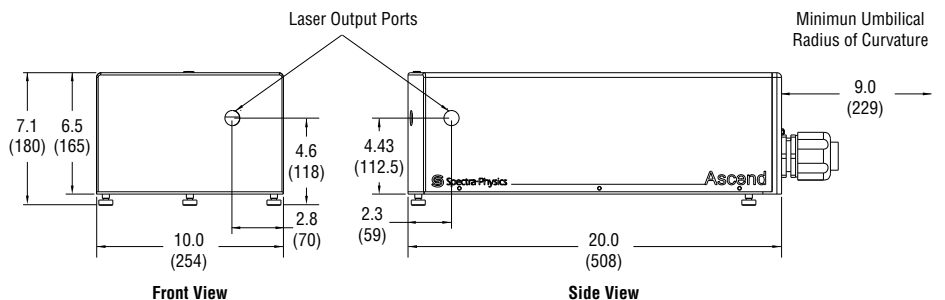
		Ascend 30	Ascend 45	Ascend 60
General Characteristics				
Wavelength		527 nm		
Average Power	1 kHz	>20 W	>25 W	>35 W
	5 kHz	>30 W	>45 W	>60 W
	10 kHz	>25 W	>35 W	>50 W
Pulse Energy	1 kHz	>20 mJ	>25 mJ	>35 mJ
	5 kHz	>6 mJ	>9 mJ	>12 mJ
	10 kHz	>2.5 mJ	>3.5 mJ	>5 mJ
Nominal Repetition Rate		1–10 kHz		
Beam Characteristics				
Spatial Mode		Multimode		
M ² (typical)		30		
Polarization		Linear, Horizontal		
Beam Diameter		3 mm (nominal)		
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)		
Umbilical Length		10 ft (3 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)



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