VGEN-SP Fiber Lasers

High Peak Power and Narrow Lindwith for High Performance in LIDAR and Range-Finding Applications

mks | Spectra-Physics

Incorporating state-of-the-art laser technology, Spectra Physics VGEN-SP lasers provide top performance in technically demanding LIDAR and range-finding applications. The VGEN-SP series of Ytterbium fiber lasers in MOPA configuration offers clients a constant high peak power over a wide range of pulse repetition rate values for stable high performance.

Offering high beam quality, low beam divergence, high peak power, high pulse energy, pulse-on-demand (POD) triggering, and E-Pulse energy control, VGEN-SP lasers are competitively priced yet offer the full range of specifications to meet a wide range of LIDAR applications.

With low weight and small size, the VGEN-SP series is easily deployed. Housed in a robust assembly that meets industrial standards and fitted with a metal armored fiber cable, VGEN-SP lasers deliver a high quality, near diffraction-limited output beam. The lasers' solid construction is maintenance free and reliable, ensuring long-life operation at low operational cost. VGEN-SP LIDAR lasers are rugged and can stand up to the tough conditions and requirements of airborne LIDAR applications for a robust and stable platform.

The VGEN-SP Advantage

- Up to 20 W average output power
- Up to 25 kW peak power
- 35–2500 kHz (tunable) repetition rate
- Pulse-On-Demand (POD) triggering
- E-Pulse energy control function
- Narrow line width down to <100 pm
- Tested at altitude up to 8,000 m (35.6 kpa) with maximum peak power
- High PRF enables higher scanning and data acquisition rates
- Comply with MIL-STD-801F Method 500.4

Applications

- LIDAR and LADAR
- Range finding
- Spectroscopy

VGEN-SP Fiber Laser Specifications[1]

	VGEN-SP-NL-25-10	VGEN-SP-NL-POD-25-20
General Characteristics		
Operational Mode	Short Pulse	Short Pulse, POD with E-Pulse
Wavelength	1064 nm	
Average Output Power	10 W	20 W
Repetition Rate	35-1000 kHz	35-2500 kHz
Pulse Width, typical	3 ns	3.3 ns
Linewidth	<0.1 nm	
Peak Power, max	25 kW	
Pulse Energy, max	75 µJ	
General Parameters		
Operational Voltage	12 VDC	
Operating Temperature	0-50 °C	-5-50 °C
Dimensions	45 x 120 x 275 mm	52 x 120 x 276 mm
Weight	2.3 kg	2.4 kg
Wall-Plug Efficiency	>20%	
Fiber Length	50 cm	
Output Fiber Collimator	6 ±1 mm diameter (other options available)	
Output Beam Parameters	M^2 <1.3	

1. Due to our continuous product improvement program, specifications are subject to change without notice.

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