

Green Fiber Lasers

General:

V-Gen's VPFL-G and VCFL-G series of lasers, with SHG (second harmonic generation) converted to green wavelength (532 nm), incorporate cutting edge technology to provide top performance in such precision-intensive applications as solar cell and silicon scribing and processing, thin film cutting and more. The VPFL-G lasers -- short-pulse, Ytterbium fiber lasers in MOPA configuration -- and the VCFL-G lasers -- CW, Ytterbium fiber lasers -- provide output power of up to 10W and 5W, respectively for cost-effective operation.

An all-fiber system, the VPFL-G's RS232/TTL control interface operates and tunes the various laser parameters -- output power, pulse energy, repetition rate and pulse width -- for full and reliable system usage for a wide range of operations. A high pulse repetition rate (>500kHz) combined with very short pulse (~Insec) and high peak power enable high system throughput for maximum operation efficiency.

Housed in a robust assembly that meets industrial standards and fitted with metal armored fiber cable, the VPFL-G and VCFL-G deliver a high quality, near diffraction-limited output beam. The VPFL-G's and VCFL-G's solid construction offers clients a maintenance free and reliable system ensuring long-life operation at low operational cost

Highlights:

- OEM ready
- Maintenance free for cost saving operation
- Low weight and small size for easy deployment
- Simple parameter setting and system testing by PC or hand-held computer
- Complies with the industry standard
- Tunable parameters for wide range of operations
- Very high pulse repetition rate with very short pulse
- High reliability and long life time

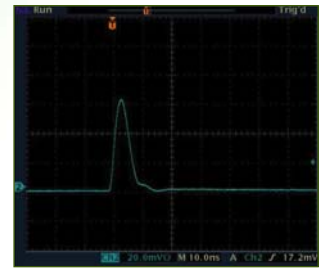
Applications:

- Solar cell and Silicone scribing and processing
- Marking
- Material processing
- Micromachining
- Scribing
- Thin film cutting
- Medical
- Pumping
- Entertainment and display



Main features:

- RS232 and TTL interfaces
- Up to 10 W average output power (5 W in CW system)
- Up to 10 kW peak power
- 1 – 50 nsec (tunable) pulse width
- 50 – 500 kHz (tunable) repetition rate
- High wall plug efficiency
- High beam quality ($M^2 < 1.35$, $M^2 < 1.1$ in CW system)
- Forced air for efficient system cooling



1 nsec pulse



Evaluation kit



PC user application

Parameter	Unit	VPFL-G-5000	VPFL-G-10000	VCFL-G-5000
Operational mode		Short Pulse		CW
Wavelength	nm	532		
Ave. output power	Watts	5	10	5
Repetition rate	kHz	50 - 500		N/A
Pulse width	nsec	1 - 50		N/A
Peak power (max)	kW	10		N/A
Pulse energy (max)	μJ	100	200	N/A
General Parameters				
Operational voltage	VDC	12VDC (the system includes auto-range AC-DC power supply)		
Operating temp.	C°	0 - 40		
Dimensions	mm	290 X 250 X 100		
Weight	Kg	5		
Wall-plug efficiency	%	> 20		
Fiber length	cm	100 (other options available)		
Output fiber collimator	mm	4 mm diameter (other options available)		
Output beam parameters		$M^2 < 1.3$		$M^2 < 1.1$

About V-Gen

V-Gen develops, manufactures and markets high quality innovative laser systems for a wide range of industrial and medical applications. The company's laser systems are the product of extensive experience and the cutting edge know-how that V-Gen's professional team has developed over the years.

In the industrial field the company develops and manufactures pulsed Ytterbium fiber-lasers for such applications as marking and micro-machining. V-Gen's short pulse versions are primarily implemented in LIDAR and range-finding. In the medical field, V-Gen develops and manufactures diode lasers for photodynamic therapy (PDT).

V-Gen relies upon a qualified and professional distribution network to market and sell its products around the world. With a broad international base of installed systems, V-Gen laser solutions have earned the company a reputation for quality, reliability and innovation.

