

Industrial Pulsed Fiber Lasers

General

V-Gen's VPFL lasers are short-pulse, Ytterbium fiber lasers in MOPA configuration. Incorporating cutting edge technology, the VPFL series provides top performance in a wide range of precision-intensive industrial applications such as marking, micromachining, scribing and more.

An all-fiber system, the VPFL's RS232/TTL control interface is designed for simple operation and precise tuning of laser parameters -- output power, pulse energy, repetition rate and pulse width. Offering high beam quality, small spot and high pulse energy, V-Gen's lasers are competitively priced yet offer the full range of specifications to meet a wide range of applications.

With low weight and small size, the VPFL is easily deployed. Housed in a robust assembly that meets industrial standards and fitted with a metal armored fiber cable, VPFL lasers deliver a high quality, near diffraction-limited output beam. The VPFL's solid construction is maintenance free and reliable, 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 setting of parameters and system testing by PC or handheld computer
- Complies with the industry standard
- Tunable parameters for wide range of operations

Applications

- Marking
- Material processing
- Micromachining
- Scribing
- Thin film cutting
- Solar cell and Silicon scribing and processing



Main features

- RS232 and TTL interfaces
- Up to 1mJ pulse energy
- Up to 50W average output power (*50W is preliminary)
- Up to 15kW peak power
- 120nsec pulse width (5-100 nsec tunable for ISP version)
- 20-200 kHz (tunable) repetition rate (up to 500kHz for ISP version)
- High wall plug efficiency (>20%)
- High beam quality ($M^2 < 1.3$)
- Forced air for efficient system cooling
- Optional output isolators, collimators and focusers

PC User Application



Tablet optional wireless control

PARAMETER	UNIT	Preliminary*							
		VPFL-5000	VPFL-10000	VPFL-20000	VPFL-30000	VPFL-50000	VPFL-ISP-10000	VPFL-ISP-20000	
Operational mode		Pulse							
Wavelength	nm	1060-1080							
Ave. output power	Watts	5	10	20	30	50	10	20	
Repetition rate (tunable)	kHz	20-100		30-100	50-200	50-500			
Pulse width (tunable*)	nsec	120 +/-20					5-100*		
Pulse energy (max)	µJ	250	500	1000			200	400	
Peak power (max)	kW	2.5	5	10			15		
GENERAL PARAMETERS									
Operational voltage	VDC	12VDC (auto-range AC-DC power supply), 24VDC optional							
Operating temp.	°C	5-40							
Dimensions	mm	95x195x282			95x195x382	95x195x282			
Weight	Kg	4.3			5.5	4.3			
Wall-plug efficiency	%	>20							
Fiber length	cm	300 (other options available)						200	
Output fiber collimator	mm	7.5mm +/-1.5mm diameter (other options available)							
Output beam parameters		$M^2 < 1.3$							

Specifications are subject to change without prior notice

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.