

Nanosecond laser (1550nm high-frequency small-size module)

Overview

Goptica's High-power nanosecond pulse fiber laser uses high-power gain fiber modules, and is equipped with dedicated drive and temperature control circuits, outputting high peak power and high-energy pulse laser with stable laser wavelength and power. It can be used in laser ranging radar, fiber optic sensing systems, etc.

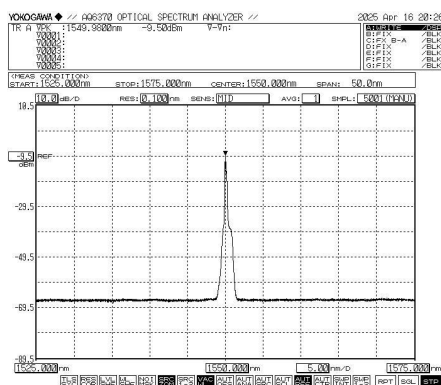


Features

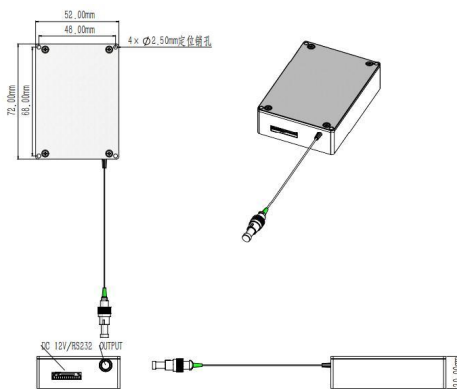
- Small size
- High pulse repetition rate
- Maximum pulse energy $\geq 7 \mu J$

Applied

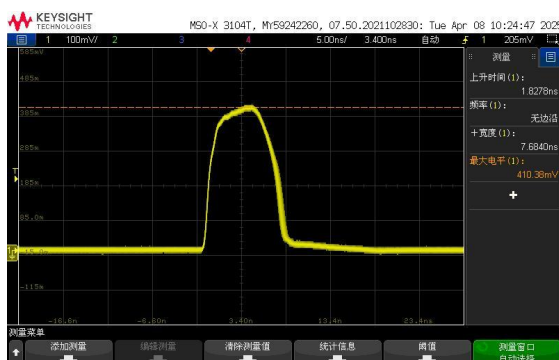
- Lidar
- Laser ranging
- Nonlinear Optics



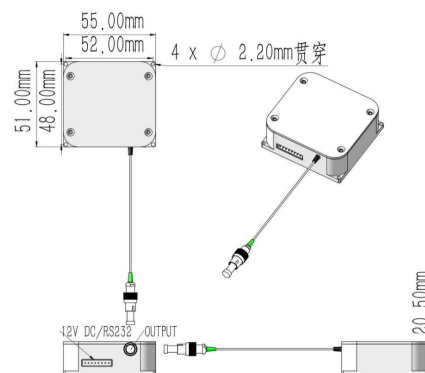
Spectrum, 800mW/500kHz/4ns



M3 module: 52×72×20mm



Single pulse, 800mW/500kHz/4ns



M4 module: 55×51×20.5mm

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Parameters

Optical specifications	Unit	Typical value	Note
Operating Wavelength	nm	1550	
Wavelength accuracy	nm	± 1	
Maximum single-pulse energy	μJ	≥ 7	@Pulse frequency 10kHz, pulse width 7ns
Maximum output peak power	W	≥ 900	@Pulse frequency 10kHz, pulse width 7ns
Maximum average laser power	W	≥ 1	@Pulse frequency ≥ 500 kHz, pulse width 7ns
Pulse width	ns	4~10 adjustable	*Half Full Width
Repetition frequency	kHz	10~3000 adjustable	
Beam quality M^2	-	≤ 1.1	According to the output collimator specifications
Output Isolation	dB	≥ 30	
Short-term Stability (15 min)	dB	$\leq \pm 0.05$	Equivalent $\leq \pm 1.2\%$
Long-term Stability (8 h)	dB	$\leq \pm 0.1$	Equivalent $\leq \pm 2\%$
Laser polarization state	-	Random	
Fiber type	-	G652D fiber	Length ≥ 1 m; 900 μm sheath
Fiber optic connector	-	FC/APC	

Electrical and environmental parameters

Module

Control method	Button/RS232 or USB communication
Communication Interface	DB9 female
Trigger mode	TTL, internal/external trigger (switchable)
Power Supply	DC 12V, <24W
Dimension or code	M3:52(W)x72(D)x20(H)mm; M4:55(W)x51(D)x20.5(H)mm
Operating temperature and humidity range	-5~+35°C; 0~70%

Order Information

Order Information/Model HP-NSFL-B-1550-3/10-2-100/3000-SM-FA-M7252

HP-NSFL-B	Working Wavelength (nm)	Pulse width (ns)	Peak Power (W)	Repetition frequency (kHz)	Fiber type	Output method	Packaging form
	1550	4/10	900	10/3000	SM=G652D	FA=FC/APC C=collimator	M3/M4=Module