

Onefive GENKI

Cost-effective mode-locked picosecond laser

- Diffraction-limited beam
- Very low amplitude noise
- Clean and narrow optical spectrum
- Pedestal-free, almost transform-limited pulses
- Ultra-compact package
- Maintenance-free 24/7 operation



The GENKI is an industrial-grade, low noise and cost-effective, mode locked picosecond laser that emits close to transform-limited pulses from 4 to 45 ps with a narrow spectral width.

It provides diffraction-limited beam quality and excellent pointing stability. Both free-space as well as simple fiber output are available at various wavelengths.

Options are repetition rate tunability, analog adjustable output power, integration of user-defined opto-electronics and synchronization to external clock for ultra-low timing jitter.

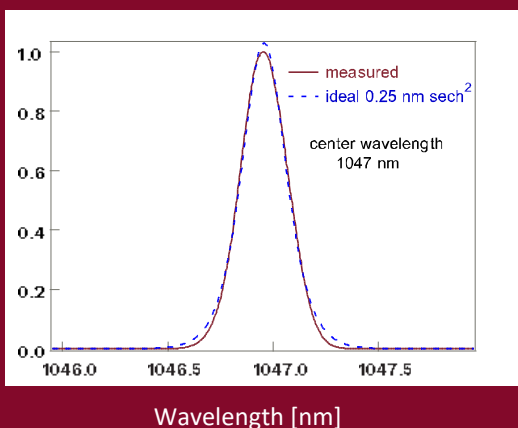
The GENKI is an air-cooled laser module which is also available in a compact and robust enclosure allowing for operation in the harshest environments. The GENKI laser platform is maintenance-free and guarantees 24/7 operation.

Applications

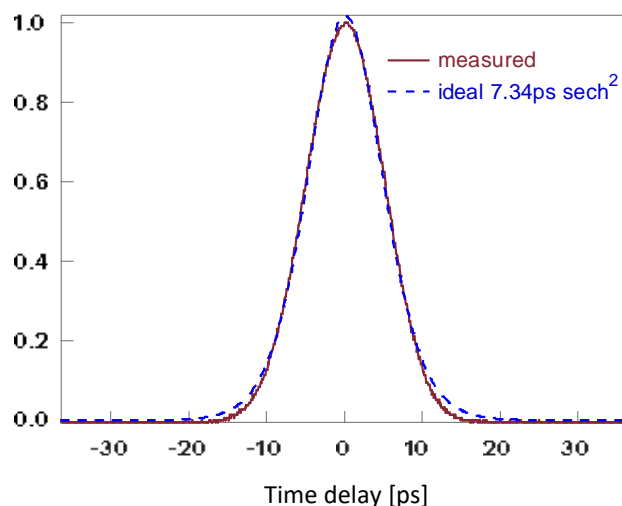
- Seed for amplifiers
- Telecommunication
- Photodetector sampling
- Time-resolved measurements

Typical optical spectrum

Spectral power density [nm^{-1}]



Typical pulse profile - Autocorrelation



Specifications

Optical

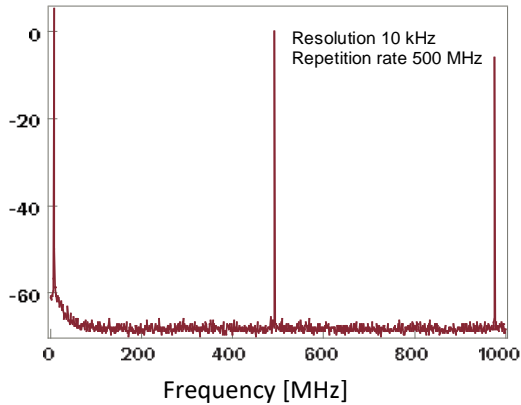
Model	GENKI 10 S	GENKI 10
Center wavelength	1064 ± 2 nm	1064 ± 1 nm
Pulse duration	<10 ps (typ. <8.5 ps)	<10 ps (typ. <8.5 ps)
Average output power	>2 mW	>250 mW
Pulse energy	>40 pJ	>5 nJ
Pulse repetition rate	50 ± 2 MHz	50 ± 2 MHz
Spectral bandwidth	<0.5 nm	<1.5 nm
Beam quality	$M^2 \leq 1.1$, TEM ₀₀	$M^2 \leq 1.1$, TEM ₀₀
PER	>20 dB	>16 dB
Amplitude noise	<1% rms (24h)	<1% rms (24h)
Laser output	Collimated, free space	

Mechanical/Electrical

Warm-up time	<10 minutes
Operation temperature	18°C — 32°C
Storage temperature	-20°C — 55 °C
Power supply	24 VDC/2.5 A or 90—264 VAC, 47—63 Hz
Power consumption	<15 W
Size laser head	150 x 200 x 30 mm ³
Weight laser head	2 kg
Size control unit	165 x 104 x 44 mm ³ (19"/3U rack mount)
Weight control unit	0.5 kg
Cooling	Air

Typical RF spectrum

Noise spectral density [dBc/MHz]



Support and Warranty

All GENKI products come with industry leading reliability and are backed by our standard 2 year warranty.

However, should you need the extra security of an extended warranty and remote diagnostics support this is available in our support and warranty extension package.

Please contact your sales representative for more information.

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See www.nktphotonics.com for global offices and distributors

All GENKI products are produced under our quality management system certified in accordance with the ISO 9001:2015 and ISO 13485:2016 standard.

