teem PHOTONICS

FOR YOUR APPLICATION,
FIND YOUR PULSED LASER SOLUTION

NEW RELEASE

Sub-nanosecond Amplified Microchip PicoSpear Series

KEY FEATURES

- **Ultra-short pulses 250 ps**
- **Peak power up to 260 kW**
- **1064 or 532 nm emission**
- **Excellent beam quality – TEM00, M^2 <1.2**

The PicoSpear laser series gets more versatile with the introduction of a new model with much higher peak power exceeding 200 kW (IR) and a pulse width as short as 250 ps.

Designed with precision and efficiency in mind, this laser series delivers exceptional performance and reliability.

APPLICATIONS

- Instrumentation
- LIDAR and laser ranging
- Atmospheric monitoring
- Raman Spectroscopy
- Fluorescence microscopy
- Material ablation at µm and nm scale
- PCB repair
- 2-photon photopolymerization

TECHNICAL SPECIFICATIONS

	BNP-260K-000	BNG-120K-000
Wavelength(1)	1064 nm	532 nm
Repetition Rate(2)	10 to 1 000 Hz	10 to 1 000 Hz
Constant Pulse width range (FWHM) (3)	250 ps	250 ps
Output power(4)	65 mW	30 mW
Output energy(5)	65 µJ	30 µJ
Peak Power	260 kW	120 kW
Short term (10min) power stability(6)	±2%	±3%
Long term (2 hrs) power stability(6)	<±3%	±5%
Energy Stability (5s)	3%	3%
Beam profile	Gaussian TEM00	Gaussian TEM00
Beam diameter at output: Horizontal Vertical	On demand On demand	On demand On demand
M²(7)	1.2	1.2
Beam ellipticity(8)	1.2	1.5
Polarization	Linear PER >20 dB	Linear PER >20 dB
Energy control function	RS232, Analog 0-5 V	RS232, Analog 0-5 V
Synchronization signal function	Output, TTL-type Embedded photodiode	Output, TTL-type Embedded photodiode

NOTES

(1) Available also in 355 nm. Contact factory for more information about the technical specifications.
(2) The repetition rate is factory-set to a fixed value between10 and 1,000 Hz. The user has the possibility to change the rep rate through the device RS232 remote interface. Up to 3 fixed values can be optimized when producing the device. Please contact factory. The energy per pulse would be adjusted accordingly.
(3) Measured with 8GHz photodiode and 6GHz oscilloscope. Typical value, to be confirmed with production.
(4) Measurement performed with an OPHIR thermal power sensor (OPHIR 3A-FS-SH).
(5) The energy per pulse value is indicative and will be defined according to other parameters.
(6) For temperature variation < ± 3°C and < 3°C/hour, stability is measured with calorimeter - detector band [DC, 2Hz].
(7) Mean average value M = √(XY), X and Y being respectively the major and minor axis of the ellipse.
(8) Beam ellipticity is calculated as the ratio of the main axis far field divergence.