GIGAOPTICS
femtosecond technologies

GIGAJET 20C

femtosecond oscillator

highspeed femtosecond oscillators

GIGAOPTICS highspeed femtosecond oscillators operate at uniquely high repetition rates up to 5 GHz and offer a remarkable versatility and compactness. Their robust design allows them to serve as reliable tool in scientific and industrial applications.

Unprecedented signal-to-noise ratios and high data acquisition rates were achieved in time-resolved, THz- and nonlinear spectroscopy as well as in nonlinear microscopy. Our products have supported a true revolution in the field of high precision optical frequency metrology and serve as key component, i.e. as clockwork in novel optical atomic clocks.

Visit our website www.gigaoptics.com to explore our products and learn more from our detailed application notes. Contact us at info@gigaoptics.com to request further information or discuss your intended application.

We offer expertise in femtosecond technology.

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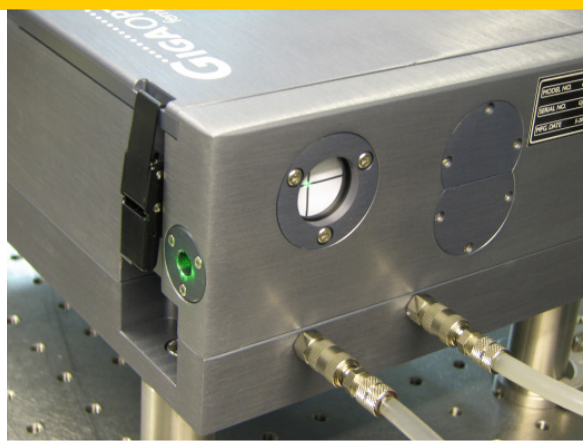

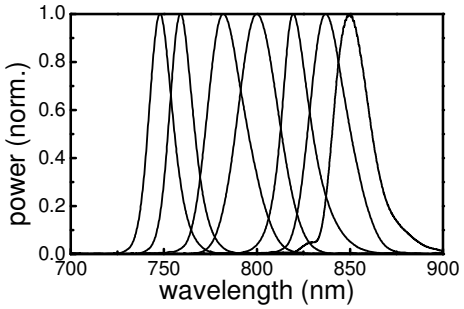

Typical output spectra from GIGAJET 20C

description

GIGAJET 20C offers a high repetition rate combined with a wide continuous tuning range of the central wavelength. Typical applications are nonlinear microscopy, ultrafast time-resolved pump-probe spectroscopy and THz spectroscopy.

The housing is fully enclosed and entirely temperature-stabilized. Passive repetition rate stability of 100 Hz has been demonstrated for cooling water stable to 0.1°C.

Initial installation and training in customer's lab are provided. Protected by U.S. patent 6,618,423 and European patents.

applications

- for details (www.gigaoptics.com) ultrafast time-resolved pump-probe spectroscopy
- multi-photon and SHG microscopy
- THz generation and spectroscopy
- precision optical spectroscopy/frequency metrology
- see our application notes

technical specifications/system requirements

(subject to change without notice)

repetition rate	1 GHz
pulse length	≤ 50 fs [*1]
output power	700 mW [*2]
tuning range	750 nm – 850 nm [*3]
beam quality	M^2 ≤ 1.2 (sag. plane) ≤ 1.6 (tang. plane)
dimensions	320×200×107 mm^3

[*1] after appropriate extracavity compression (not included)

[*2] @ 5.5 W pump power in a TEM_{00} mode pump beam of 532 nm wavelength (equivalent to a Coherent Verdi™)

[*3] tuning accomplished manually, suitable spectrometer for monitoring must be provided by customer

operating temp.	21°C ±5°C
power requirements	electrical power not required
cooling water req.	flow 0.5 – 1.5 l/min. temp. ~20°C, stable to ±0.1°C

contact information

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