



DESCRIPTION

The Chromacity 1040 is an air-cooled, compact, ultrafast ytterbium fibre-based laser providing exceptional performance with turnkey operation. With high average power, outstanding pulse quality and power stability, the 1040 is an ideal laser source for imaging, spectroscopy, and quantum applications.

The 1040 laser is ultra-stable across temperature and time, offering repeatable pulse power, pulse-to-pulse and over extended periods of operation. The laser is designed to be installed remotely and does not require specialist expertise to operate.

The Chromacity 1040 laser comes with a laser head and a separate external power supply unit (PSU) providing flexible placement options.

The Chromacity 1040 is controlled using an intuitive web browser user interface, or via an RS-232 serial port, providing easy integration into OEM equipment, or remote operation on the bench in a typical laboratory environment.

FEATURES

- 1040nm centre wavelength
- Pulse duration <100fs typ.
- Average output power 4W typ.
- Repetition rate 100MHz (80MHz option)
- Peak power 353kW typ. (100MHz, 100fs, 4W)
- Pulse energy 40nJ (100MHz, 100fs, 4W)
- Beam diameter 1.2mm

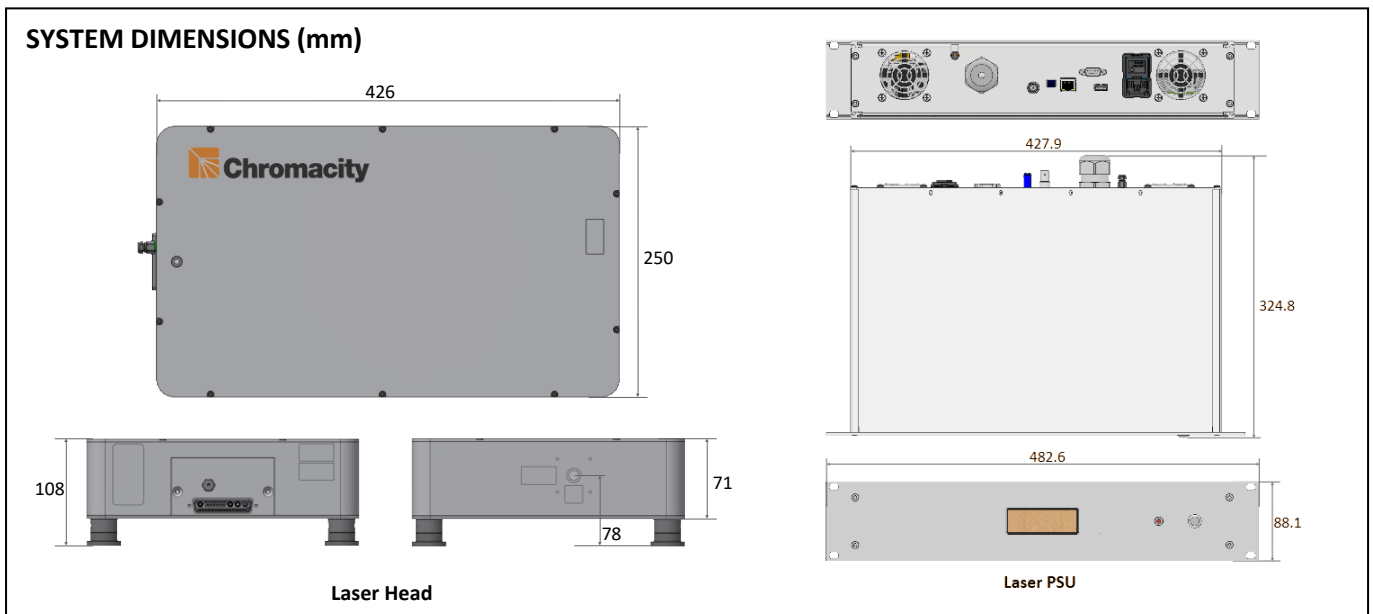
APPLICATIONS

- Multi-photon imaging
- SHG microscopy
- Light sheet microscopy
- THz generation
- Non-linear optics
- Super-continuum generation



SPECIFICATIONS

Parameter	Specification
Central Wavelength	1040nm, FWHM ~35nm
Pulse Width	<100fs typ. (<150fs max.)
Repetition Rate	100MHz (80MHz, 200MHz factory set options)
Average Power (Factory Option)	High Power: Typ. 4W, 3.5W min. Low Power: Typ. 400mW, 300mW min.
Spatial Beam Profile	Single mode
Pulse Energy	>40nJ (100MHz, 100fs, 4W)
Output Polarisation	Linear
Beam Quality (M ²)	<1.1, <1.2 max.
Beam Divergence	<0.8mrad typ.
Beam Diameter	1.2mm, ±0.2mm (at exit of laser)
Beam Ellipticity	>0.9 typ.
Beam Pointing Stability	<20µrad/°C
Relative Intensity Noise (r.m.s. 6Hz – 3MHz)	<0.15% typ.
Long Term Power Stability	<0.5% (100h)
Laser Settings and Functions	Web browser via Wi-Fi, Ethernet or RS-232
Laser Diagnostics	Available from PC
Operating Temperature for Specified Performance	21°C, ±3°C
System Options	Group Delay Dispersion (GDD) Pre-Compensation



CONTACT

Web: www.chromacitylasers.com
 Email: sales@chromacitylasers.com
 Tel: +44 (0) 131 449 4308

CHROMACITY LIMITED

43C Research Avenue North
 Riccarton
 Edinburgh
 United Kingdom
 EH14 4AP