

Integra™ -C



Integra-C, the Ti:Sapphire Ultrafast Amplifier

The Integra-C is the most compact and versatile amplifier available on the market today. Its platform includes an integrated pump laser, amplification stage(s), and a stretcher/compressor, amplifying the seed pulse energies to >3.5 mJ. The seed can be provided by an integrated fiber oscillator. The amplifier system is designed to deliver femtosecond (130 fs) output pulses.

The Integra-C provides stable, long-term performance for the most demanding experiments. The Integra-C implements regenerative and multi-pass amplification technologies to provide high energy pulses and a clean beam profile ($M^2 < 1.3$). Our advanced Pockels cell design provides high contrast of both pre- and post-pulses, eliminating misleading results in experiments. Active thermal stabilization of the system and engineered "zero-drift" mounts ensure operational energy and pointing stability over a wide range of ambient temperatures, allowing you to focus on your research and not the laser.

The Integra-C is an excellent source of near infrared femtosecond pulses. When tunability is needed, it is an ideal pump source for OPAs. Apart from OPA Pumping, the Integra-C is used for Transient Absorption Spectroscopy and Ultrafast Micromachining.

Flexible, compact ultrafast system

Pulse energies > 3.5 mJ

130 fs

Exceptional beam pointing and power stability

Superior beam quality & stability

Wide thermal operation > 10° C

Proven highest uptimes for industrial and laboratory environments

Integra-C Specifications

Description	RGA Only	RGA & MPA	RGA Only
Model	Integra C-1.0	Integra C-3.5	Integra-C.X
Pulse Energy at 0.1-1 kHz (mJ) ¹	>1.0	>3.5	>0.1
Pulse Duration (FWHM)	130 fs with integrated fiber oscillator		
Pulse Repetition Rate (kHz)	up to 3 (user adjustable)	up to 3 (user adjustable)	10 kHz
Spatial Mode (TM ₀₀)	M ² <1.3	M ² <1.3	M ² <1.3
Contrast Ratio	>1000:1 Pre & Post Pulse	>500:1 Pre & Post Pulse	>1000:1 Pre & Post Pulse
Energy Stability ² (% RMS)	<0.5	<0.5	<1
Beam Pointing Stability (μrad)	<20	<20	<20
Transform Limit (Gaussian TBP)	<1.4 times	<1.4 times	<1.4 times
Center Wavelength (nm)	790±10	790±10	790±10
Beam Diameter (1/e ²)	6	8	6
Time Jitter (ns RMS)	<3	<3	<3
Polarization (vertical/horizontal)	V	V	V

Notes

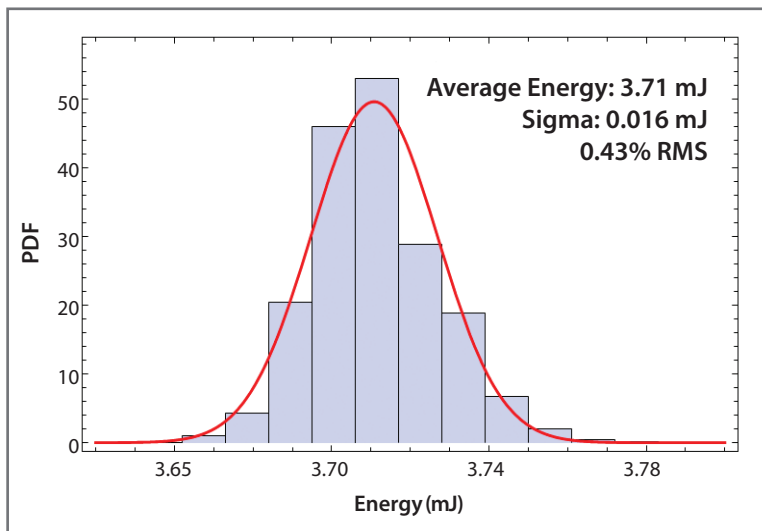
Output specified over 10°C temperature range

1. Integra-C specified at 1 kHz; Integra-C.X specified at 10 kHz.

2. Over 4°C temperature range

As a part of our continuous improvement program, all specifications are subject to change without notice.

Integra C-3.5 Output Stability (24 hrs)



Control Interface

Ultrafast Commander Software Features

- Easy to use interface
- Pump laser control & monitoring
- Energy attenuation and shutters
- Compressor tuning
- Data logging
- Labview Compatible

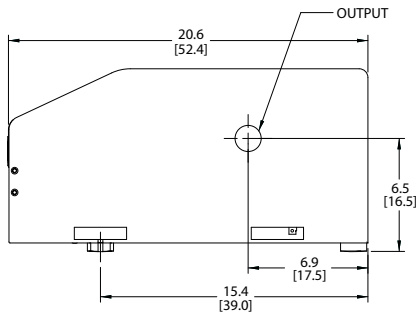
Integra-C System Requirements

Size	Optical Head (LxWxH)	813 x 524 x 267 mm (32.0 x 20.6 x 10.5 in)
	Power Supply (LxWxH) Chiller (LxWxH)	742 x 545 x 603mm (20.2 x 21.4 x 23.7 in) 699 x 483 x 411 mm (27.5 x 19.0 x 16.2 in)
Electrical Service	Power Supply	Single-phase: 200-240 VAC, 50/60 Hz Operating current: 10A, Max current: 15A
	Chiller	Single-phase: 230 ±10% VAC, 50/60 Hz Operating current: 10A, Max current: 15A
Water Service		No external cooling required for standard models External water to water cooling available as option

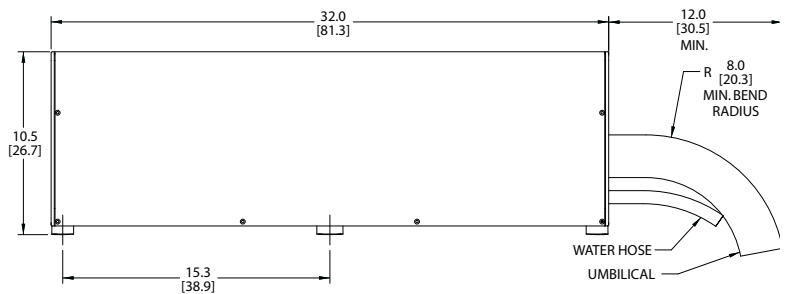
Integra-C Physical Layout

All dimensions are in inches [cm]

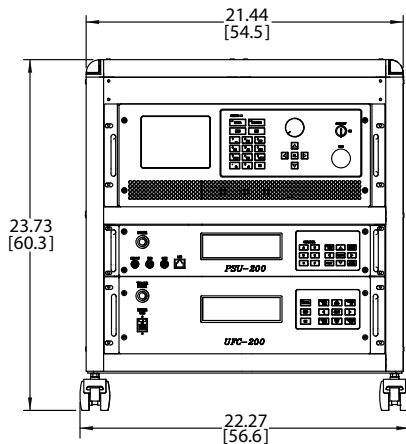
LASER HEAD
OUTPUT VIEW



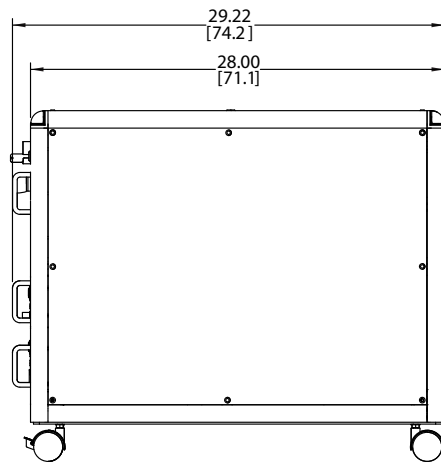
SIDE VIEW



CONTROL UNIT
FRONT VIEW



SIDE VIEW



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