

MTW Specifications Overview

Chamber/Table	Mode	Beam size (collimated)	Focal spot size	Wavelength λ	Bandwidth $\Delta\lambda$	Pulse duration τ	Energy E	Chirp sign	Current application
STC	Broadband	70 mm × 70 mm	5 μm × 6 μm	1054 nm	6 nm	500 fs to 200 ps	18 to 36.8 J	Either negative or positive chirp	High-energy-density physics (HEDP), x-ray and neutron diagnostics
STC	Broadband	70 mm × 70 mm	5 μm × 6 μm	527 nm	3 nm	500 fs to 10 ps	14 to 26 J	Either negative or positive chirp	HEDP, x-ray and neutron diagnostics
STC	Narrowband	70 mm × 70 mm	5 μm × 6 μm	1054 nm	33 pm	2.8 ns	36.8 J	No chirp	Faraday diagnostics of plasma
STC	Narrowband	70 mm × 70 mm	5 μm × 6 μm	527 nm	No data	2.8 ns	26 J	No chirp	Faraday diagnostics of plasma
CTC	Narrowband	70 mm × 70 mm	0.5 mm × 0.5 mm	1054 nm	33 pm	0.5 to 1.5 ns	20 to 30 J	No chirp	Laser-plasma damage
UDP	Broadband	∅ 55 mm	∅ 22 μm	1054 nm	6 nm	500 fs to 200 ps	8.6 to 17.6 J	Either negative or positive chirp	Raman plasma amplification
OPAL	Ultra-broadband	90 mm × 90 mm	Not focused yet	850 to 1020 nm	170 nm	19 fs	10 J	Zero (best compression)	Ultrahigh-intensity physics
NOPA5 pump	Narrowband	47 mm × 47 mm	NA	527 nm	No data	1.2 to 1.6 ns	60 J	No chirp	Pump for all OPCPA laser
GCC	Broadband	70 mm × 70 mm	NA	1054 nm	6 nm	2.8 ns	120 J	Positive chirp	Large-area damage tests
GCC	Broadband	70 mm × 70 mm	NA	527 nm	3 nm	2.8 ns	80 J	Positive chirp	Large-area damage tests
GCC	Broadband	60 mm × 60 mm	NA	264 nm	No data	2.8 ns	40 J (est.)	Positive chirp	Large-area damage tests
SHG Table	Narrowband	52 mm × 52 mm	NA	1054 nm	33 pm	1.2 to 1.6 ns	120 J	No chirp	Large-area damage tests
SHG Table	Narrowband	52 mm × 52 mm	NA	527 nm	No data	1.2 to 1.6 ns	80 J	No chirp	Large-area damage tests
SHG Table	Narrowband	52 mm × 52 mm	NA	264 nm	No data	1.2 to 1.6 ns	40 J (est.)	No chirp	Large-area damage tests
GCC	Broadband	60 mm × 60 mm	NA	264 nm	No data	500 fs	7 J (est.)	Either negative or positive chirp	HEDP, x-ray and neutron diagnostics
GCC or STC	Broadband	60 mm × 60 mm	NA	264 nm	No data	0.5 to 100 ps	10 mJ (5 Hz)	Either negative or positive chirp	Ultrafast streak-camera development
5 ω table	Narrowband	12 mm × 12 mm	NA	1054 nm	33 pm	1 to 2.8 ns	1.2 J (5 Hz)	No chirp	5 ω generation development
5 ω table	Narrowband	12 mm × 12 mm	NA	211 nm	No data	1 to 2.8 ns	0.350 J (0.1 Hz)	No chirp	5 ω generation development

This table summarizes the specifications of the Multi-Terawatt laser under nominal conditions while all subsystems are working properly.

The MTW laser is described in the article I. A. Begishev *et al.*, “Advanced Laser Development and Plasma-Physics Studies on the Multi-Terawatt Laser,” *Appl. Opt.* **60** (36), 11,104–11,124 (2021.)