For every industrial need

Tangerine

Femtosecond laser for research & development in micro processing and scientific applications

Highest pulse energy

Tangerine is a powerful femtosecond laser combining both high repetition rate (going up to 40 MHz and adjustable according to your needs) and high energy per pulse going up to 250 µJ.

Versatile and full-featured, Tangerine femtosecond laser is equipped with: the customization function FemtoBurst™ (choose the number of pulses, their rhythms, time between each pulse between 25 to 100 ns, etc.), the trigger on demand for selecting individual pulses, SuperSync Control for getting more precise synchronization with a high speed scanning system, and Short Pulse (< 150 fs pulsewidth).

This laser can also be associated with a large range of add-ons such as industrial frequency conversions down to deep UV, tunable Mango OPA platform and Non-Linear Compression to achieve pulse duration from < 100 fs down to the few cycle regime, ideally suited to generate high flux XUV radiations and attosecond pulses.

The industrial Tangerine femtosecond laser is the ideal solution for research & development in micro processing and scientific applications.

Tangerine is part of Amplitude's femtosecond lasers range, internationally recognized as reliable and stable. Their very short pulse widths lead to both the lowest heating effect on the market and the best ablation efficiency, reaching an unparalleled process quality.

Applications

Industry:
> Microelectronics
> Micromachining

Science:
> Ultrafast Spectroscopy
> High Harmonic Generation / Attoscience

Key Features

> Short Pulse option < 150 fs
> **FemtoBurst™**
> Trigger on demand - **FemtoTrig™**
> SuperSync Control
> Frequency conversion from Soft X-ray to THz

Amplitude

Specifications

	Tangerine	Tangerine HP	Tangerine HP²	Tangerine SP
Average Power	> 20 W	> 35 W	> 50 W	Up to 50 W
Energy Per Pulse	> 100 µJ	> 200 µJ	> 250 µJ	Up to 200 µJ
Pulse Width	< 350 fs to > 10 ps			< 150 fs
Repetition Rate	From single shot to 40 MHz			
Central Wavelength	1030 nm +/- 5 nm			
Beam Quality	TEM00, M^2<1.3			
Beam Circularity	> 87 %			
Long Term Mean Power Stability	< 1 % rms over 100 hours			
Warm-up Time	< 30 min			

Dimensions

All models	120 x 42 x 15 cm

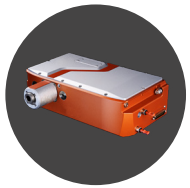
Weight

Laser Head	93 kg
Power Supply 1	15 kg
Power Supply 2	12 kg

Cooling

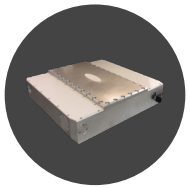
All Models	Water-cooled

Options



SHG / THG

Mango OPA



Non Linear Compression

GLASS

Synchrolock