## For every industrial need

# Tangor

## Powerful, full-featured and versatile femtosecond laser

Tangor 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 500 µJ that can be splitted in several beams according to your production need).

Versatile and full-featured, Tangor 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. Tangor femtosecond laser is available with UV output going up to 30W.

Tangor femtosecond laser is the ideal solution for both developing your production process and mass producing on several applications. Versatility combined with high energy make the laser a cost-effective investment.

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





#### **Industry**:

- > Microelectronics
- > Micromachining
- > Flat Panel Display Cutting

#### Medical:

> Medical Device Manufacturing



#### > FemtoBurst<sup>TM</sup>

- > Trigger on demand FemtoTrig™
- > SuperSync Control
- > Optional green and UV outputs (30 W)
- > Industrial design for 24/7 operations



| Specifications                 | Tangor 50                  | Tangor 100 | Tangor 300  |
|--------------------------------|----------------------------|------------|-------------|
| Average Power                  | > 50 W                     | > 100 W    | > 300 W     |
| Energy Per Pulse               | > 300 µJ                   | > 500 µJ   | > 1 mJ      |
| Pulse Width                    | < 500 fs to > 10 ps        |            |             |
| Repetition Rate                | From single shot to 40 MHz |            |             |
| Central Wavelength             | 1030 +/- 5 nm              |            |             |
| Beam Quality                   | $M^2 < 1.3$                |            | $M^2 < 1.5$ |
| Beam Circularity               | > 87 %                     |            |             |
| Beam Pointing Stability        | < 25 μrad/°C               |            |             |
| Long Term Mean Power Stability | < 1 % rms over 100 hours   |            |             |
| Warm-up Time                   | < 30 min                   |            |             |

#### Dimensions

| All Models | 68 x 48 x 16 cm   |
|------------|-------------------|
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#### Cooling

| All Models   | Water-cooled |
|--------------|--------------|
| / 111 100000 | Water cooled |

### Weight

| Laser Heads    | 75 kg |
|----------------|-------|
| Power Supply 1 | 15 kg |
| Power Supply 2 | 12 kg |

## Options



SHG/THG



Mango OPA



Non Linear Compression



GLASS



Synchrolock