

Femto by fibercryst

Femtosecond Laser Series

FEMT030

FEMTO by Fibercryst is a series of powerful industrial femtosecond lasers offering output powers up to 30W and pulse energies in excess of 160 μJ , with pulses shorter than 700 fs. The Femto series is based on Taranis technology which enables high pulse energy and flexible repetition rate to meet requirements for both high throughput applications and high energy demanding applications. This unique architecture provides excellent reliability and beam quality, all in a compact packaging.

FEMTO SNAP SHOT

- Pulse width less than 700 fs
- Tunable repetition rate from 100 kHz to 1 MHz
- Excellent beam quality $M^2 < 1.3$
- Peak power up to 200 MW
- Fast warm up (10 minutes max)
- Frequency change on the fly
- Power stability 0.6% RMS (120 hours)
- Accessible frequencies from 1 MHz down to single pulse

APPLICATIONS

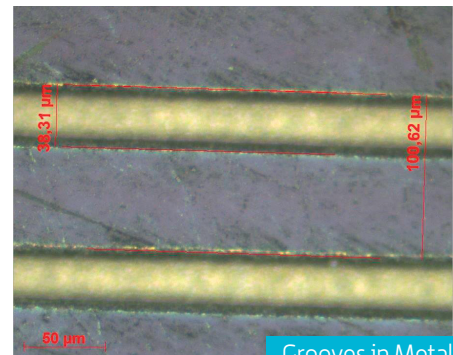
- Cutting and drilling of hard material, glass, sapphire, ceramics...
- Cold machining of polymers and composites
- Micromachining and surface structuring

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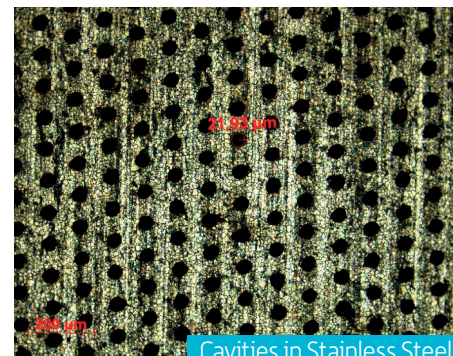
Fibercryst S.A.S.

31 rue WILSON - 69150 DECINES CHARPIEU - FRANCE - contact@fibercryst.com

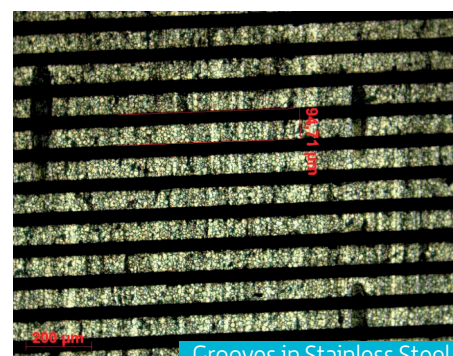
www.fibercryst.com



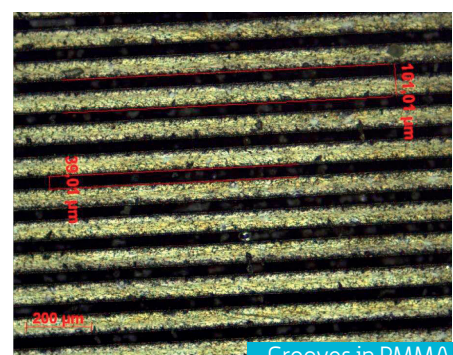
Grooves in Metal



Cavities in Stainless Steel



Grooves in Stainless Steel



Grooves in PMMA

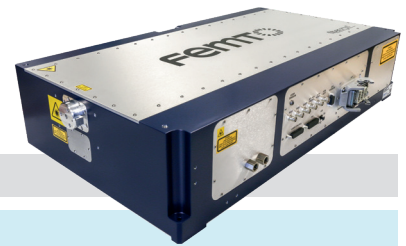
Courtesy of GIE Manutech USD

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Femtosecond Laser Series

FEMT030

FemTO 
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SPECIFICATIONS*

| | |
|---|----------------------------------|
| Wavelength | 1030 nm |
| Average Power | 30 W |
| Pulse Repetition Rate (adjustable during process) | 100 kHz to 1 MHz |
| Spatial Mode TEM ₀₀ | $M^2 < 1.3$ |
| Pulse Duration | < 700 fs |
| Pulse Energy** | > 160 μ J |
| Polarization Ratio | > 100 : 1 |
| Electric Supply | 115 to 230 VAC/50 to 60 Hz |
| Beam Diameter | 2 mm |
| Warm-Up Time | 100% of power in less than 10 mn |
| Max Outer Dimensions | 830 x 460 x 180 mm ³ |

* Custom specifications available, please contact us

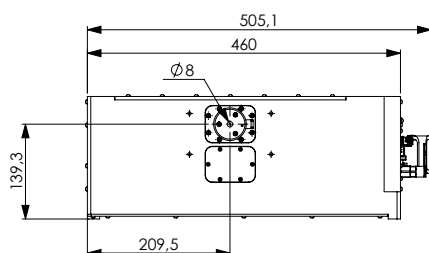
** Adjustable from 0% to 100% at each repetition rate

LASER SPECIFICATIONS AT MIN/MAX REPETITION RATES

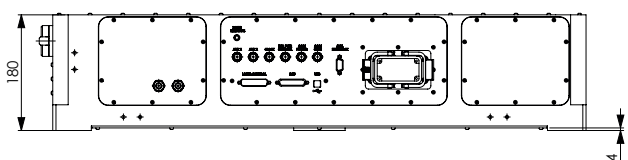
| Repetition rate (kHz) | 100 | 1000 |
|-------------------------|-----|------|
| Average Power (W) | 16 | 30 |
| Pulse Energy (μ J) | 160 | 30 |
| Peak Power (MW) | 220 | 42 |

MECHANICAL DATA

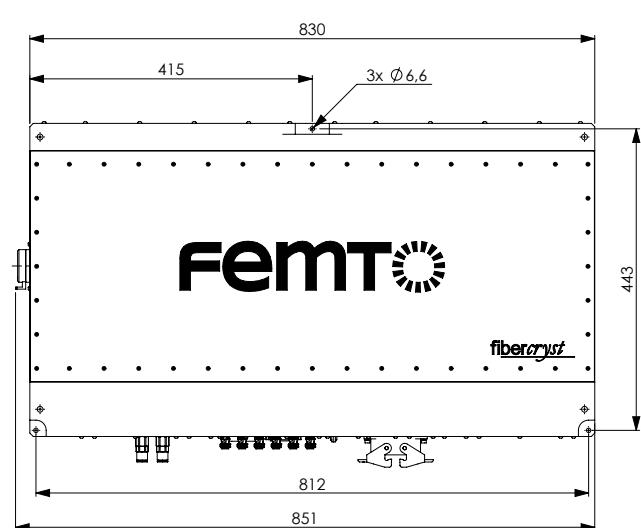
Side View



Front View



Top View



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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