

AFS - Active Fiber Systems GmbH | Ernst-Ruska-Ring 17 | 07745 Jena

Karls-Universität Prag, Mathematisch-Physikalische
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12116 PRAHA 2
CZECH REPUBLIC

Document
22230C149

Customer
10081

Contact person


Date
22-Aug-2022

Project number
873

Your reference
n.n.

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ORDER CONFIRMATION

Description	Quantity	Unit	Price	VAT %	Total CZK
001 High-repetition-rate fiber-based ultrashort-pulse laser system Platform: Ytterbium-60 Itemcode: 0100641 Key specs: 60W, 400μJ, 1030nm, 250fs	1,00	Stk	3.149.248,00	0,00	3.149.248,00

Consisting of:

- Fiber-based femtosecond oscillator
- Fiber-based pulse stretcher
- Pulse picker
- Pulse-shaping device
- Diode-pumped fiber-based pre- and main amplifier
- Pulse compressor
- Temperature-stabilized and dust-sealed housing with temperature and humidity sensors
- Control unit 19", 5m connection cables between rack and laser, 5m power cable for external power supply, water-air chiller (closed-cycle)
- Monitor signals of oscillator pulses and picked pulses
- Laser lamp
- Control Tablet-PC incl. control software with extended remote-monitoring options
- Laser manual in English

Specifications:

- Software-controlled parameters: average power, repetition rate (and therewith pulse energy), pulse duration
- Center wavelength: approx. 1030nm
- Pulse duration: <250fs ... 5ps (dispersively tunable, measured via AC assuming sech² pulse shape)
- Repetition rate: adjustable between 50kHz and approx. 32MHz (integer dividers of oscillator repetition rate)
- Average power: up to 60W (60W for repetition rates ≥150kHz)
- Pulse energy: up to 400μJ (400μJ for repetition rates ≤150kHz)
- Beam quality: close to diffraction limited (TEM₀₀, M²<1.25)
- Average-power stability: RIN < 0.5% RMS [1/(8hours) ... 1Hz]
- Pulse-to-pulse energy stability: RIN < 0.5% RMS [1Hz ... frep/2]

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Description	Quantity	Unit	Price	VAT %	Total CZK
<ul style="list-style-type: none">Beam-pointing stability: <math><25\mu\text{rad}/^\circ\text{C}</math>Polarization: linear					
Dimensions:					
<ul style="list-style-type: none">Laser head approx. 1120mm × 410mm × 250mmControl unit: 19"-rack approx. 12 HU					

Subtotal (net): 3.149.248,00 CZK

Total (net): 3.149.248,00 CZK

Tax: 0,00 CZK

Total (gross): 3.149.248,00 CZK

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Laser safety: The laser system as assembly part conforms to laser safety class 4 according to DIN EN 60825-1 and contains no means for laser safety. The integrator or end user, respectively, is responsible for suitable means to comply with laser safety. The device is designed according to German and EU standards. If different regulations apply in your country for the safety and commissioning of Class 4 laser devices, these are not taken into account here. However, they can be integrated or made available after prior consultation.

Delivery conditions: DAP Incoterms 2020 (Prague, Czech Republic). The price includes packaging, shipment and installation of the laser system and an on-site training.

Place of delivery: Charles University, Faculty of Mathematics and Physics, Ke Karlovu 3, 12116 Prague 2, Czech Republic.

Installation: The laser will be installed once (unless otherwise expressly agreed) by an AFS GmbH service engineer. The following preconditions are requested:

- Space according to the specified dimensions of the laser system
- Conditioned and clean room ($18^{\circ}\text{C} < \text{room temperature} < 25^{\circ}\text{C}$, temperature stability $\pm 0.5\text{K}$, $20\% < \text{relative humidity} < 80\%$)
- 1 \times house-water connection (2bar... 6bar, $12^{\circ}\text{C}..25^{\circ}\text{C}$, $>15 \text{ l/min}$ flow rate)
- 1 \times 400V/16A/50-60Hz (3 phases, neutral pin, earth pin) power connection, connector type: Red 3P+N+E, 6h – according to IEC60309 (can be adapted to comparable Czech standard connector)


Lead time: Approx. 6 months after receipt of order.

Payment terms: 50% with placing the order, 50% after the signing of the site-acceptance (SAT) protocol payable at 30 days date.

Warranty: 12 months after delivery.

End-use declaration: The sale, resale, and the disposal of AFS products and services including any associated technology or documentation may be subject to German, EU or other export control regulations. Any resale of our products to embargoed countries or to denied persons or persons that use those products for military purposes, ABC weapons or nuclear technology is subject to authorization (so called dual-use goods).

Terms and Conditions: Please take notice of our General Terms and Conditions, which this purchase order is based on.

Please do not hesitate to contact us for questions or feedback at any time under 

Shipping address
Corresponds to billing
address

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Est. delivery date: 22-Feb-2023
Terms of delivery: DAP Incoterms 2020
Terms of payment: See text

Kind regards
