



Purchase Contract

(hereafter the "**Contract**")

1. CONTRACTUAL PARTIES

1.1 Fyzikální ústav AV ČR, v. v. i.,

with seat: Na Slovance 1999/2, 182 21 Praha 8,
represented by: RNDr. Michael Prouza, Ph.D., Director,
registered in the Register of public research institutions of the Ministry of Education, Youth and
Sports of the Czech Republic.

Bank: [REDACTED]
Account No. IBAN: [REDACTED]; SWIFT (BIC): [REDACTED]
ID No.: 68378271
Tax ID No.: CZ68378271

(hereinafter the "**Buyer**")

and

1.2 OptiXs, s.r.o.,

with seat: Křivoklátská 37/3, 199 00 Praha 9,
represented by: Ing. Martin Klečka, CEO,
registered at Municipal court in Prague, C212818.

Bank: [REDACTED]
Account No. IBAN: [REDACTED]; SWIFT (BIC): [REDACTED]
ID No.: 02016770
Tax ID No.: CZ02016770

(hereinafter the "**Seller**"),

(the Buyer and the Seller are hereinafter jointly referred to as the "**Parties**" and each of them
individually as a "**Party**").



2. FUNDAMENTAL PROVISIONS

- 2.1 The Buyer is a public research institution whose primary activity is scientific research in the area of physics, especially elementary particles physics, condensed systems, plasma and optics.
- 2.2 The Buyer wishes to acquire the subject of performance hereof in order to perform experiments in which single molecules will be excited by intense short pulses of light with energy of up to 3 eV, to initiate their chemical or electronic transitions and to study any occurring phenomena with time resolution in the picosecond range.
- 2.3 The Seller was selected as the winner of a public procurement procedure for the public contract called "**Pulsed UV-vis-IR tunable laser system**" (hereinafter the "**Procurement Procedure**").
- 2.4 The documentation necessary for the execution of the subject of performance hereof consist of
- 2.4.1 Technical specifications of the subject of performance hereof attached as **Annex No. 1** hereto.
- 2.4.2 The Seller's bid submitted within the Procurement Procedure in its parts which describe the subject of performance in technical detail (hereinafter the "**Sellers' Bid**"); the Sellers' Bid forms **Annex No. 2** to this Contract and is an integral part hereof.
- In the event of a conflict between the Contract's Annexes the technical specification / requirement of the higher level / quality shall prevail.
- 2.5 The Seller declares that he has all the professional prerequisites required for the supply of the subject of performance under this Contract, is authorised to supply the subject of performance and there exist no obstacles on the part of the Seller that would prevent him from supplying the subject of this Contract to the Buyer.
- 2.6 The Seller acknowledges that the Buyer considers him capable of providing performance under the Contract with such knowledge, diligence and care that is associated and expected of the Seller's profession, and that the Seller's potential performance lacking such professional care would give rise to corresponding liability on the Seller's part. The Seller is prohibited from misusing his qualities as the expert or his economic position in order to create or exploit dependency of the weaker Party or to establish an unjustified imbalance in the mutual rights and obligation of the Parties.
- 2.7 The Seller acknowledges that the Buyer is not in connection to the subject of this Contract an entrepreneur and also that the subject of this Contract is not related to any business activities of the Buyer.
- 2.8 The Seller acknowledges that the production and delivery of the subject of performance within the specified time and of the specified quality, as shown in Annexes No. 1 and 2 of this Contract (including invoicing), is essential for the Buyer.



2.9 The Parties declare that they shall maintain confidentiality with respect to all facts and information, which they learn in connection herewith and / or during performance hereunder, and whose disclosure could cause damage to either Party. Confidentiality provisions do not prejudice obligations arising from valid legislation.

3. SUBJECT-MATTER OF THE CONTRACT

3.1 The subject of this Contract is the obligation on the part of the Seller to deliver and transfer into the Buyer's ownership:

the Pulsed UV-vis-IR tunable laser system

(hereafter the "**Equipment**")

and the Buyer undertakes to take delivery of the Equipment and to pay to the Seller the agreed upon price.

3.2 The following activities form an integral part of the performance to be provided by the Seller:

3.2.1 Transport of the Equipment incl. all accessories specified in Annexes 1 and 2 of the Contract to the place of delivery, un-packaging and control thereof;

3.2.2 Installation of the Equipment including connection to installation infrastructure at the site;

3.2.3 Execution of the acceptance tests of the Equipment in order to verify its functionality - ie.

a. general demonstration of the laser functionality, review of safety checklist,

b. characterization (non-calibrated) of the full spectrum 200-1100 nm and monochromated output at 420, 500, 600, 800 nm at 10 nm bandwidth;

3.2.4 Delivery of detailed instructions and manuals for operation and maintenance, including list of spare parts, vacuum, gas and electrical connection schemes - all in Czech or English language, in electronic or hardcopy (printed) versions;

3.2.5 Free-of-charge warranty service including service inspections;

3.2.6 Provision of technical support in the form of consultations.

3.3 The subject of performance (Equipment) is specified in detail in Annexes No. 1 and No. 2 hereto.

3.4 The Seller shall be liable for the Equipment and related services to be in full compliance with this Contract, its Annexes and all valid legal regulation, technical and quality standards and that the Buyer will be able to use the Equipment for the defined purpose. In case of any conflict between applicable standards it is understood that the more strict standard or its part shall always apply.



3.5 The delivered Equipment and all its parts and accessories must be brand new and unused.

4. PERFORMANCE PERIOD

4.1 The Seller undertakes to manufacture, deliver, install and handover the Equipment to the Buyer within **14 (fourteen) weeks** of the conclusion of this Contract.

4.2 The Seller shall notify the Buyer of the delivery and installation of the Equipment at least 3 working days in advance.

4.3 The performance period shall be extended for a period during which the Seller could not perform due to obstacles on the part of the Buyer.

5. PURCHASE PRICE, INVOICING, PAYMENTS

5.1 The purchase price is based on the Seller's submitted bid and amounts to **1 983 028,- CZK** (in words: one million nine hundred and eighty three thousand twenty eight Czech Crowns) excluding VAT (hereinafter the "**Price**"). VAT shall be paid by the Buyer and settled in accordance with the valid Czech regulation.

5.2 The Price represents the maximum binding offer by the Seller and includes any and all performance provided by the Seller in connection with meeting the Buyer's requirements for the proper and complete delivery of the Equipment hereunder, as well as all costs that the Seller may incur in connection with the delivery, and including all other costs of expenses that may arise in connection with creation of an intellectual property and its protection.

5.3 The Seller is entitled to invoice the Price after the handover protocol in accordance with Section 9.4 will have been signed. In case the Equipment will be delivered with minor defects and / or unfinished work, the Price shall be invoiced after removal of these minor defects and / or unfinished work.

5.4 All invoices issued by the Seller must contain all information required by the applicable laws of the Czech Republic. Invoices issued by the Seller in accordance with this Contract shall contain in particular following information:

5.4.1 name and registered office of the Buyer,

5.4.2 tax identification number of the Buyer,

5.4.3 name and registered office of the Seller,

5.4.4 tax identification number of the Seller,

5.4.5 registration number of the tax document (invoice),

5.4.6 scope of the performance (including the reference to this Contract),



- 5.4.7 the date of the issue of the tax document (invoice),
- 5.4.8 the date of the fulfilment of the Contract,
- 5.4.9 purchase Price,
- 5.4.10 registration number of this Contract, which the Buyer shall communicate to the Seller based on Seller's request before the issuance of the invoice

and must comply with the double taxation agreements, if applicable.

- 5.5 The Buyer prefers electronic invoicing, with the invoices being delivered to efaktury@fzu.cz. All issued invoices shall comply with any international double taxation agreements, if applicable.
- 5.6 Invoices shall be payable within thirty (30) days of the date of their delivery to the Buyer. Payment of the invoiced amount means the date of its remittance to the Seller's account.
- 5.7 If an invoice is not issued in conformity with the payment terms stipulated by the Contract or if it does not comply with the requirements stipulated by law, the Buyer shall be entitled to return the invoice to the Seller as incomplete, or incorrectly issued, for correction or issue of a new invoice, as appropriate, within five (5) business days of the date of its delivery to the Buyer. In such a case, the Buyer shall not be in delay with the payment of the Price or part thereof and the Seller shall issue a corrected invoice with a new and identical maturity period commencing on the date of delivery of the corrected or newly issued invoice to the Buyer.
- 5.8 The Buyer shall be entitled to unilaterally set off any of his payments against any receivables claimed by the Seller due to:
 - 5.8.1 damages caused by the Seller,
 - 5.8.2 contractual penalties.
- 5.9 The Seller shall not be entitled to set off any of his receivables against any part of the Buyer's receivable hereunder.

6. OWNERSHIP TITLE

- 6.1 The ownership right to the Equipment shall pass to the Buyer by handover. Handover shall be understood as delivery and acceptance of the Equipment duly confirmed by Parties on the Handover Protocol in accordance with Section 9.4.

7. PLACE OF DELIVERY AND HANDOVER OF THE EQUIPMENT

- 7.1 The place of delivery and handover of the Equipment shall be the room No. C204.2 in the building C of the Fyzikální ústav AV ČR, v. v. i. at Cukrovarnická 112/10, 162 00 Praha 6, Czech Republic.



8. COOPERATION OF THE PARTIES

- 8.1 The Seller undertakes to notify the Buyer of any obstacles on his part, which may negatively influence proper and timely delivery of the Equipment.
- 8.2 The Seller is obliged to notify the Buyer of the unsuitable condition of the place of delivery and installation.

9. DELIVERY, INSTALLATION, HANDOVER AND ACCEPTANCE

- 9.1 The Seller shall transport the Equipment at his own cost to the place of delivery and handover. If the shipment is intact, the Buyer shall issue delivery note for the Seller.
- 9.2 The Seller shall perform and document the installation of the Equipment at the place of delivery and handover and then launch experimental tests in order to verify whether the Equipment is functional and meets the technical requirements of Annexes No. 1 and 2 hereof.
- 9.3 Handover procedure includes handover of any and all technical documentation pertaining to the Equipment, user manuals and certificate of compliance of the Equipment and all its parts and accessories with approved standards.
- 9.4 The handover procedure shall be completed by handover of the Equipment confirmed by the Handover Protocol containing specifications of all performed tests. The Handover Protocol shall contain the following mandatory information:
 - 9.4.1 Information about the Seller, the Buyer and any subcontractors;
 - 9.4.2 Description of the Equipment including description of all components and their serial numbers;
 - 9.4.3 Description of executed tests according to Section 3.2.3 of the Contract: type of test, duration and achieved parameters;
 - 9.4.4 List of technical documentation including the manuals;
 - 9.4.5 Eventually reservation of the Buyer regarding minor defects and unfinished work including the manner and deadline for their removal and
 - 9.4.6 Date of signature of the Equipment Handover Protocol.
- 9.5 Handover of the Equipment does not release the Seller from liability for damage caused by its defects.
- 9.6 The Buyer shall not be obliged to accept Equipment, which would show defects or unfinished work and which would otherwise not form a barrier, on their own or in connection with other defects, to using the Equipment. In this case, the Buyer shall issue a record containing the reason for his



refusal to accept the Equipment.

- 9.7 Should the Buyer not exercise his right not to accept the Equipment with defects or unfinished work, the Seller and the Buyer shall list these defects or unfinished work in the Handover Protocol, including the manner and deadline for their removal. Should the Parties not be able to agree in the Handover Protocol on the deadline for removal of the defects, it shall be understood that any defects shall be removed / rectified within 10 days from the handover of the Equipment.

10. TECHNICAL ASSISTANCE - CONSULTATIONS

- 10.1 The Seller shall be obliged to provide to the Buyer free-of-charge technical assistance by phone or e-mail relating to the subject-matter hereof during the entire term of the warranty period. The Seller undertakes to provide to the Buyer paid consultations and technical assistance relating to the subject-matter hereof also after the warranty period expires.

11. REPRESENTATIVES, NOTICES

- 11.1 The Seller authorized the following representatives to communicate with the Buyer in all matters relating to the Equipment delivery:

[REDACTED]

- 11.2 The Buyer authorized the following representatives to communicate with the Seller in all matters relating to the Equipment delivery:

[REDACTED]

- 11.3 The above-mentioned contact persons may be changed by an unilateral written declaration of the Party delivered to the other Party.

- 11.4 All notifications to be made between the Parties hereunder must be made out in writing and delivered to the other Party by hand (with confirmed receipt) or by registered post (to the Buyer's or Seller's address), or in some other form of registered post or electronic delivery incorporating electronic signature (qualified certificate) to epodatelna@fzu.cz in case of the Buyer and to info@optixs.cz in case of the Seller.

- 11.5 In all technical and expert matters (discussions on the Equipment testing and demonstration, notification of the need to provide warranty or post-warranty service, technical assistance etc.) electronic communication between technical representatives of the Parties will be acceptable using e-mail addresses defined in Sections 11.1 and 11.2.



12. TERMINATION

- 12.1 This Contract may be terminated early by agreement of the Parties or withdrawal from the Contract on the grounds stipulated by law or in the Contract.
- 12.2 The Buyer is entitled to withdraw from the Contract without any penalty from the Seller in any of the following events:
- 12.2.1 The Seller is in delay with the delivery of the Equipment longer than 2 weeks after the date pursuant to Section 4.1 hereof.
 - 12.2.2 Technical parameters or other conditions required in the technical specification defined in Annexes No. 1 and 2 hereto and in the relevant valid technical standards will not be achieved by the Equipment at acceptance.
 - 12.2.3 The Seller fails to remove the defects or unfinished work in time, pursuant to Section 9.7.
 - 12.2.4 Facts emerge bearing evidence that the Seller will not be able to deliver the Equipment.
- 12.3 The Seller is entitled to withdraw from the Contract in the event of the Buyer being in default with the payment for more than 2 months with the exception of the cases when the Buyer refused an invoice due to defect on the delivered Equipment or due to breach of the Contract by the Seller.
- 12.4 Withdrawal from the Contract becomes effective on the day the written notification to that effect is delivered to the other Party. The Party which had received performance from the other Party prior to such withdrawal shall duly return such performance.
- 12.5 In case of an early termination of the Contract, the Seller shall ensure the removal of the Equipment from the place of performance within 30 days from the date on which the withdrawal from the Contract became effective. The Buyer shall provide the Seller with the necessary cooperation similar to the cooperation within the installation of the Equipment. The costs of removal shall be borne by the Contracting Party which caused the early termination by breach of the Contract.

13. INSURANCE

- 13.1 The Seller undertakes to insure the Equipment against all risks, in the amount of the Price of the Equipment for the entire period commencing when transport of the Equipment starts until duly handed over to the Buyer. In case of breach of this obligation, the Seller shall be liable to the Buyer for any damage that may arise.
- 13.2 The Seller is liable for the damage that he has caused. The Seller is also liable for damage caused by third parties undertaken to carry out performance or its part under this Contract.

14. WARRANTY TERMS

- 14.1 The Seller shall provide warranty for the quality of the Equipment



- 14.1.1 for a period of **24 months** in case of the Laser system itself and
- 14.1.2 for a period of **12 months** in case of the Monochromator module and all other accessories.
- 14.2 The warranty term shall commence on the day following the date of signing of the Handover Protocol pursuant to Section 9.4 hereof. The warranty does not cover consumable things.
- 14.3 The Seller undertakes to provide free service through authorized technicians at the place of performance to the extent specified by the manufacturer for the entire warranty period under this Contract, including repairs, delivery of spare parts, transport and work of an authorized service technician.
- 14.4 Should the Buyer discover a defect, he shall notify the Seller to rectify such defect using the e-mail address: servis@optixs.cz. The Seller is obliged to notify the Buyer without delay about any change of this email address. The Seller shall be obliged to review any warranty claim within 3 business days from its receipt and to propose solution, unless agreed otherwise by the Parties.
- 14.5 During the warranty period the Seller shall be obliged to rectify any claimed defects within 30 days from receipt of the Buyer's notification. In cases of unusual defects, the Seller shall be obliged to rectify the defect in the period corresponding to the nature of the defect and to define the deadline for the handover of the rectified Equipment.
- 14.6 During the warranty period, any and all costs associated with defect rectification / repair including transport and travel expenses of the Seller shall be always borne by the Seller.
- 14.7 The repaired Equipment shall be handed over by the Seller to the Buyer on the basis of a protocol confirming removal of the defect (hereinafter the "**Repair Protocol**") containing confirmations of both Parties that the Equipment was duly repaired and is defect-free.
- 14.8 The repaired portion of the Equipment shall be subject to a new warranty term in accordance with Section 14.1 which commences to run on the day following the date when the Repair Protocol was executed. However, the aggregate warranty period shall not exceed 48 months.
- 14.9 If the Equipment show defects for which it cannot be demonstrably used in full for more than 60 days (defect period) within six or less consecutive months of the warranty period, the Seller is obliged to remove the defect by delivering new Equipment without defect within 30 days from the date of dispatch of the invitation to deliver, unless the Parties agree otherwise.
- 14.10 The Seller declares that he shall ensure paid post-warranty [out-of-warranty] service for the period of 10 years after the expiration of the warranty; the service terms shall be identical to those of Sections 14.4 and 14.5.

15. CONTRACTUAL PENALTIES

- 15.1 The Buyer shall have the right to a penalty in the amount of 0.1 % of the Price for each commenced



day of delay with the performance pursuant to Sections 4.1 and 14.9 hereof.

- 15.2 The Buyer shall have the right to a penalty in the amount of 1.500,- CZK for each commenced day of delay with rectifying of defects claimed within the warranty period.
- 15.3 In the event of the Seller's delay in performing the out-of-warranty repair, the Buyer shall be entitled to impose a contractual penalty of 1.000,- CZK for the Seller for each commenced day of delay.
- 15.4 In case of default in payment of any due receivables (monetary debt) under the Contract, the defaulting Buyer or Seller (the debtor) shall be obliged to pay a contractual penalty in the amount of 0.1 % of the owed amount for each commenced day of delay with the payment.
- 15.5 The Buyer shall be entitled to claim a contractual penalty against the Seller in the amount of 30 % of the Price, in case it will subsequently take advantage of the opportunity to withdraw from the Contract pursuant to Section 12.2.1 and 12.2.2.
- 15.6 Contractual penalties are payable within 30 days of notification demanding payment thereof.
- 15.7 Payment of the contractual penalty does not prejudice the rights of the Parties to claim damages.

16. DISPUTES

- 16.1 Any and all disputes arising out of this Contract or the legal relationships connected with the Contract shall be resolved by the Parties by mutual negotiations. In the event that any dispute cannot be resolved by negotiations within sixty (60) days, the dispute shall be resolved by the competent court in the Czech Republic based on application of any of the Parties; the court having jurisdiction will be the court where the seat of the Buyer is located. Disputes shall be resolved exclusively by the law of the Czech Republic.

17. FINAL PROVISIONS

- 17.1 This Contract represents the entire agreement between the Buyer and the Seller. The relationships between the Parties not regulated in this Contract shall be governed by the Act No. 89/2012 Coll., the Civil Code, as amended (hereinafter the "**Civil Code**").
- 17.2 In the event that any of the provisions of this Contract shall later be shown or determined to be invalid, ineffective or unenforceable, then such invalidity, ineffectiveness or unenforceability shall not cause invalidity, ineffectiveness or unenforceability of the Contract as a whole. In such event the Parties undertake without undue delay to subsequently clarify any such provision or replace after mutual agreement such invalid, ineffective or unenforceable provision of the Contract by a new provision, that in the extent permitted by the laws and regulations of the Czech Republic, relates as closely as possible to the intentions of the Parties to the Contract at the time of creation hereof.
- 17.3 This Contract may be changed or supplemented solely by means of numbered amendments in



writing, furnished with the details of time and place and signed by duly authorised representatives of the Parties. The Parties expressly reject modifications to the Contract in any other manner.

- 17.4 The Parties expressly agree that the Contract as a whole, including all attachments and data on the Parties, subject-matter of the Contract, numerical designation of this Contract, the Price and the date of the Contract conclusion, will be published in accordance with Act No. 340/2015 Coll. on special conditions for the effectiveness of some contracts, publication of these contracts and Contract Register, as amended (hereinafter the "**CRA**"). The Parties hereby declare that all information contained in the Contract and its Annexes are not considered trade secrets under § 504 of the Civil Code and grant permission for their use and disclosure without setting any additional conditions.
- 17.5 The Parties agree that the Buyer shall ensure the publication of the Contract in the Contract Register in accordance with CRA.
- 17.6 This Contract becomes effective as of the day of its publication in the Contract Register.
- 17.7 The following Annexes form an integral part of the Contract:
- Annex No. 1: Technical specification on the subject of performance
- Annex No. 2: Technical description of the Equipment as presented in Seller's bid
- 17.8 The Parties, manifesting their consent with the entire contents of this Contract, attach their signature hereunder.

In Prague

For the Buyer:

16. 3. 2020

RNDr. Michael Prouza, Ph.D.
Director

In Prague

For the Seller:

16. 3. 2020

Ing. Martin Klečka
CEO



Annex No. 1 - Technical specification on the subject of performance

The Equipment is a combination of a high-power, picosecond-pulse laser with tens of MHz repetition frequencies, emitting in the UV, visible and IR, and a monochromator unit, all equipped with standard and compatible fiber connectors to allow easy interconnection. It is intended primarily for excitation of samples with photons up to 3 eV with sufficient flux and for picosecond spectroscopy. It must meet the technical conditions and include components listed in this table.

No.	Description and minimum specification of the Equipment as defined by the Buyer	Description and specification of the Equipment offered by the Seller	Complies YES/NO
1	Pulsed UV-vis-IR tunable laser system		
	<ul style="list-style-type: none"> - spectral output range at least from 430 to 1600 nm - typical (average) power density in the visible range (450-850nm) 4 mW/nm - total power in the visible range (450-850nm) 1,5 W - power density >3 mW/nm in the near infrared range (500-1600nm) - tunable repetition frequency from 200 kHz to 50 MHz - beam specifications: TEM₀₀ mode $M^2 < 1,1$ at wavelengths from 430 to 1600 nm - maximum output beam diameter (FWHM): 400-530 nm: < 1.5 mm 540 -1100 nm: < 2.5 mm - beam divergence max. 5 mrad in the entire range - beam spatial stability better than 50 µrad - beam position precision <1 mrad - pulse duration: 500-640 nm: < 4.0 ps/nm 660-800nm: < 2.5 ps/nm - total pulse duration in 500-800 nm < 1ns - long-term stability of output power in the visible range ±0,5 % 	<ul style="list-style-type: none"> - spectral output range 410-2400 nm - typical (average) power density in the visible range (450-850nm) 4 mW/nm - total power in the visible range (450-850nm) 1,5 W - power density >3 mW/nm in the near infrared range (500-1600nm) - tunable repetition frequency from 150 kHz to 78 MHz - beam specifications: TEM₀₀ mode $M^2 < 1,1$ at wavelengths from 430 to 1600 nm - max. output beam diameter (FWHM): 400-530 nm: < 1.5 mm 540-1100 nm: < 2.5 mm - beam divergence < 5 mrad in the entire range - beam spatial stability better than 50 µrad - beam position precision < 1 mrad - pulse duration: 500-640 nm: < 4.0 ps/nm 660-800nm: < 2.5 ps/nm - total pulse duration in 500-800 nm < 1ns - long-term stability of output power in the visible range ±0,5 % 	



	<ul style="list-style-type: none"> - fiber-coupling efficiency to a single mode fiber > 70% in the 500-900 nm range - output fiber 1,5 m terminated with achromatic collimator - output trigger signal delay up to 8 ns, smallest increments of max. 20ps, without a delay generator. - modulation of the beam intensity up to 100 Hz - trigger signal jitter < 20 ps - LED indicator of laser power supply on at the front panel 	<ul style="list-style-type: none"> - fiber-coupling efficiency to a single mode fiber > 70% in the 500-900 nm range - output fiber 1,5 m terminated with achromatic collimator - output trigger signal delay up to 9.2 ns, smallest increments of 15 ps, without a delay generator - modulation of the beam intensity up to 100 Hz - trigger signal jitter < 20 p s - LED indicator of laser power supply on at the front panel 	
2	Monochromator module		
	<ul style="list-style-type: none"> - fully computer-controlled filtration module - compatible with the laser unit - spectral range 400 to 850 nm - bandwidth from 10 to at least 50 nm - input for the collimated laser-beam - collimated beam output - optional FC/APC - terminated fiber output - wavelength reproducibility < 0,2 nm - average transmittance at 50nm bandwidth >70% 	<ul style="list-style-type: none"> - fully computer-controlled filtration module - compatible with the laser unit - spectral range 400 to 850 nm - bandwidth from 10 to 100 nm - input for the collimated laser -beam - collimated beam output - optional FC/APC - terminated fiber output - wavelength reproducibility < 0,2 nm - average transmittance at 50nm bandwidth > 70% 	
3	Software and documentation		
	<ul style="list-style-type: none"> - Software for coordinated control of the Laser and the monochromator module - SDK modules for Labview or Python allowing full control of the laser+monochromator system - full printed and binded documentation including manuals for the laser and monochromator module - safety checklist for a correct usage - test sheets with radiometric beam characterization in the entire emission range 	<ul style="list-style-type: none"> - Software for coordinated control of the Laser and the monochromator module - SDK modules for Labview allowing full control of the laser+monochromator system - full printed and binded documentation including manuals for the laser and monochromator module - safety checklist for a correct usage - test sheets with radiometric beam characterization in the entire emission 	



	(power vs. wavelength), and time-resolved spectrum of the laser pulse (pulse duration vs. wavelength) at least in range 450-800 nm	range (power vs. wavelength), and time-resolved spectrum of the laser pulse (pulse duration vs. wavelength) in range 450-800 nm	
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Annex No. 2

The Seller's bid in the extent it describes technical parameters of the Equipment

Nabízíme tuto sestavu (výrobce NKT Photonics):

S473-155-010 ... Superkontinuální laser SuperK Fianium FIU-15 s měnitelnou opakovací frekvencí

- spektrální výstup 410-2400 nm
- kvalita svazku: TEM₀₀ mod, $M_2 < 1,1$ pro 430 - 1600 nm
- opakovací frekvence nastavitelná od 150 kHz do 78 MHz
- spektrální hustota výkonu > 3 mW/nm ve spektrální oblasti 500 - 1600 nm
- typická (průměrná) spektrální hustota výkonu v oblasti 450-850 nm ~ 4 mW/nm
- celkový výkon ve viditelné oblasti: 1,5 W
- časová šířka pulzu < 1 ns
- spouštěcí signál (*output trigger signal*) může být zpožděn až o 9,2 ns v krocích po 15 ps, bez použití generátoru zpoždění
- nejistota spínacího signálu (*trigger signal jitter*) < 20 ps
- výstupní vlákno o délce 1,5 m zakončeno achromatickým kolimátorem
- časová stabilita výstupního výkonu ve viditelné oblasti $\pm 0,5$ %, systém obsahuje funkci *power lock*, zpětnovazební smyčku pro zlepšení dlouhodobé a krátkodobé výkonové stability při 100 Hz
- průměr svazku pro 530 nm: ~ 1 mm
- průměr svazku pro 1100 nm: ~ 2 mm
- průměr svazku pro 2000 nm: ~ 3 mm
- přesnost polohy svazku < 1 mrad
- divergence svazku (poloviční úhel) < 5 mrad pro celý spektrální výstup
- prostorová stabilita svazku < 50 μ rad
- účinnost navázání do SM (*Single Mode*) vlákna > 70 % pro interval 500-900 nm
- LED indikátor na čelní ploše laseru upozorňující na napájení přístroje
- integrovaná modulační funkce umožňující modulaci superkontinua až do 100 Hz
- záruka 2 roky

A301-100-000 ... Filtrační modul Varia

- Kompatibilní, počítačem-řízený filtrační modul
- Šířka pásma měnitelná od 10 do 100 nm
- Rozsah 400 až 850 nm
- Vstup: výstup z kolimátoru superkontinuálního laser
- Výstup: kolimovaný svazek
- Opakovatelnost nastavení vlnové délky $< 0,2$ nm
- Propustnost 70-90% (průměrná hodnota při šířce pásma 50 nm)
- Záruka 1 rok



A401-200-000 ... Modul SuperK CONNECT VIS

- Příslušenství pro navázání výstupu filtračního modulu do optického vlákna
- Záruka 1 rok

A502-070-110 ... FD7 (LMA5) optické vlákno

- PM typ, zakončené FC/APC konektorem
- Záruka 1 rok

Součástí SDK knihovny