

Portugal-Braga: Laboratory, optical and precision equipments (excl. glasses)
OJ S 114/2019 17/06/2019
Contract award notice
Supplies

Legal Basis:

Directive 2014/24/EU

Section I: Contracting authority

I.1. Name and addresses

Official name: INL — International Iberian Nanotechnology Laboratory

National registration number: PT508633346

Postal address: Avenida Mestre José Veiga S/N

Town: Braga

NUTS code: PT112 Cávado

Postal code: 4715-330

Country: Portugal

Contact person: André Teixeira

E-mail: andre.teixeira@inl.int

Telephone: +351 253140112

Internet address(es):

Main address: www.inl.int

Address of the buyer profile: <https://in-tendhost.co.uk/inl/aspx/Home>

I.4. Type of the contracting authority

European institution/agency or international organisation

I.5. Main activity

Other activity: Nanotechnology Research Laboratory

Section II: Object

II.1. Scope of the procurement

II.1.1. Title

Standard Specifications to Govern the Contracts for the Supply and Installation of Nanofabrication and Microscopy Equipment and the Upgrades to Existing Nanofabrication Systems for the International I

II.1.2. Main CPV code

38000000 Laboratory, optical and precision equipments (excl. glasses)

II.1.3. Type of contract

Supplies

II.1.4. Short description

The subject matter of this contract is the supply and installation of nanofabrication and microscopy equipment and the upgrade to existing INL nanofabrication systems listed below and detailed in Schedule V attached to these standard specifications (from now on referred to as 'specifications'). the equipment and upgrades to existing equipment listed in Schedule V

are the lots that the tender comprises. Tenderers may bid for one or more lots. The subject matter of the contract, in all cases, does not include so-called refurbished scientific instruments and equipment.

The 2 lots comprising the tender are as follows:

- (a) reactive ion beam module;
- (b) mask aligner for 200 mm diameter wafers.

This purchase is funded by Micro&NanoFabs@PT: Rede de Infraestruturas de Investigação de Micro e Nanofabricação em Portugal, code: NORTE-01-0145-FEDER-022090.

II.1.6. Information about lots

This contract is divided into lots: yes

II.1.7. Total value of the procurement

Value excluding VAT: 900 000,00 EUR

II.2. Description

II.2.1. Title

Reactive Ion Beam Module

Lot No: 1

II.2.2. Additional CPV code(s)

38000000 Laboratory, optical and precision equipments (excl. glasses)

II.2.3. Place of performance

NUTS code: PT112 Cávado

Main site or place of performance: Braga, PORTUGAL.

II.2.4. Description of the procurement

General requirements:

This tender concerns a reactive ion beam module to be added to the existing Nordiko 7 500 Ion Milling tool. The new module must be attached to the existing tool, with the wafers being transferred from the existing cassette into the module and freely exchanged between the different modules in the tool. Furthermore, the module must have a control system compatible with the existing tool and commanded together with the existing module and platform from the same software interface. A recipe editor capable of automatically process wafers in all the installed modules must also be provided.

Technical requirements.

The new module must have:

The capability of handling and etching 200 mm wafers handled by the existing platform in the N7500 tool.

Components compatible with reactive gases including NH₃, CO, Methanol, Halogens and halogenated hydrocarbons.

The module must be provided with at least 2 independent gas lines with mass flow controllers up to 100sccm. But it must be ready to be upgraded to up to 6 independent gas lines with the future installation of additional mass flow controllers.

A magnetically levitated turbomolecular pump capable of ensuring a base pressure of 5E-8 Torr.

An ion source and molybdenum grids capable of delivering ion beams with currents up to 1 000mA subjected to acceleration voltages of up to 1 000 V and extraction voltages up to 5 000V.

A cooled substrate table capable of keeping the temperature of the wafers below 80°C with ion beam powers of at least 350W.

The capability of controlling the angle of the ion beam with respect to the substrate from 0 deg (wafer plane) up to 90 deg (normal incidence).

The capability of keeping the wafer under rotation during the etching (with rotation speeds up to 60 rpm).

A one sigma etching uniformity better than 3 % on 200mm, with an edge exclusion of 15mm. Etching rates of Al₂O₃ (in the purely physical regime) of at least 10nm/min.

— the control software and control systems must be ready for a future installation of an endpoint detector adequate to be used with reactive gases.

Product safety

CE mark, interlocked safety cover

Maximum price

Maximum price (PO) is 500 000,00 EUR (Five Hundred Thousand Euros) (including handling, transportation, installation, training and warranty).

Target delivery time

Target delivery time is 8 months from contract signature.

II.2.5. Award criteria

Quality criterion - Name: Specifications and technical quality of the tender / Weighting: 30

Quality criterion - Name: Warranty, maintenance and service contracts / Weighting: 15

Quality criterion - Name: Technical training / Weighting: 5

Quality criterion - Name: References / Weighting: 5

Quality criterion - Name: Delivery schedule / Weighting: 15

Quality criterion - Name: Improvements / Weighting: 5

Price - Weighting: 25

II.2.11. Information about options

Options: no

II.2.13. Information about European Union funds

The procurement is related to a project and/or programme financed by European Union funds:
yes

Identification of the project: This purchase is funded by Micro&NanoFabs@PT: Rede de Infraestruturas de Investigação de Micro e Nanofabricação em Portugal, code: NORTE-01-0145-FEDER-022090.

II.2.14. Additional information

II.2. Description

II.2.1. Title

Mask Aligner for 200 mm Diameter Wafers

Lot No: 2

II.2.2. Additional CPV code(s)

38000000 Laboratory, optical and precision equipments (excl. glasses)

II.2.3. Place of performance

NUTS code: PT112 Cávado

Main site or place of performance: Braga, PORTUGAL.

II.2.4. Description of the procurement

General requirements:

This tender concerns the supply of a mask aligner to be used with 200 mm diameter wafers.

Technical requirements:

The new mask aligner should comply with the following requirements:

- the mask aligner should be a semi-automatic (wafers loaded by the operator) or fully automatic tool (wafers loaded and unloaded from a cassette),
- the mask aligner must be able to handle 200 mm diameter Si wafers with thicknesses of 750 μ m,
- the mask aligner should be able to write on the full surface of the si wafers,
- the mask aligner should be capable of performing exposures in several different modes including hard contact, soft contact, proximity (with adjustable distance between mask and wafer in 1 μ m steps) and vacuum contact,
- the mask aligner should be able to write features with dimensions down to 2 μ m (including lines, circles, ellipses, squares and rectangles) without shape distortions on the full wafer,
- the mask aligner should be capable of automatically aligning the mask blank with respect to the wafer using alignment marks defined in previous lithography and pattern transfer steps,
- the mask aligner should be capable of aligning a mask blank with respect to alignment marks in a wafer placed either on the top side or on the bottom side of the wafer. I.e., the tool should be capable of performing both top side alignment and bottom side alignment,
- the overlay accuracy between 2 layers exposed in the same tool should be equal or better than 1 μ m on the full wafer,
- the mask aligner should be capable of using mask blanks of 9 inch x 9 inch made of quartz or soda-lime glass,
- for compatibility with the masks currently available at INL, the mask aligner should be capable of handling mask blanks of 8 inch x 8 inch made of quartz or soda-lime, even if the exposure will not be made on the full wafer surface in this case,
- the mask aligner optics should be capable of resolving features down to 1 μ m,
- besides conventional ocular lens, the mask aligner should have a screen (ideally larger than 17 inch) displaying the images captured by the optics.

The system should be capable of capturing pictures.

Improvements to the offer:

Any additional improvement to the offer, not contemplated in the previous requirements, and including additional modes of operation, experimental modes of operation or opportunities to explore additional modes of operation in collaboration with the equipment manufacturer will be positively valued.

Trade-in option:

In order to reach the target price, the bid can contemplate the possibility of a trade-in option. I. e, the bidders applying to this tender have the option of making an offer for the existing mask aligner installed at INL. If accepted, the mask aligner installed at INL will be delivered to the bidder after the installation of the new mask aligner. The interested bidder can ask INL for any details required to value the existing mask aligner.

Demonstration:

A demonstration of the mask aligner capabilities should be made. This demonstration can consist of pictures that best approach a demonstration of the capability of the mask aligner achieving an overlay error $\leq 1 \mu\text{m}$ with features approaching 2 μm . This demonstration can be made using suitable existing mask of the bidder. An example of such mask is an overlay of ellipses of 10 μm x 2 μm on top of ellipses of 12 μm x 4 μm . Other shapes (rectangles, circles, squares, etc.) and sizes approaching the limits stated in this tender are acceptable.

Product safety.

CE mark, interlocked safety cover.

Maximum price.

Maximum price (P0) is 400 000,00 EUR (Four Hundred Thousand Euros) (including handling, transportation, installation, training and warranty) after subtracting any trade-in offer made for the existing mask aligner currently installed at INL.

Target delivery time:

Target delivery time is 8 months from contract signature.

II.2.5. Award criteria

Quality criterion - Name: Specifications and technical quality of the tender / Weighting: 30

Quality criterion - Name: Warranty, maintenance and service contracts / Weighting: 15

Quality criterion - Name: Technical training / Weighting: 5

Quality criterion - Name: References / Weighting: 5

Quality criterion - Name: Delivery schedule / Weighting: 15

Quality criterion - Name: Improvements / Weighting: 5

Price - Weighting: 25

II.2.11. Information about options

Options: no

II.2.13. Information about European Union funds

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Identification of the project: This purchase is funded by Micro&NanoFabs@PT: Rede de Infraestruturas de Investigação de Micro e Nanofabricação em Portugal, code: NORTE-01-0145-FEDER-022090.

II.2.14. Additional information

Section IV: Procedure

IV.1. Description

IV.1.1. Type of procedure

Open procedure

IV.1.3. Information about a framework agreement or a dynamic purchasing system

IV.1.8. Information about the Government Procurement Agreement (GPA)

The procurement is covered by the Government Procurement Agreement: no

IV.2. Administrative information

IV.2.1. Previous publication concerning this procedure

Notice number in the OJ S: [2018/S 225-514252](#)

IV.2.8. Information about termination of dynamic purchasing system

IV.2.9. Information about termination of call for competition in the form of a prior information notice

Section V: Award of contract

Contract No: 0519/01

Lot No: 1

Title:

Reactive Ion Beam Module

A contract/lot is awarded: yes

V.2. Award of contract

V.2.1. Date of conclusion of the contract

12/06/2019

V.2.2. Information about tenders

Number of tenders received: 1

Number of tenders received from SMEs: 1

Number of tenders received from tenderers from other EU Member States: 1

Number of tenders received from tenderers from non-EU Member States: 0

Number of tenders received by electronic means: 1

The contract has been awarded to a group of economic operators: no

V.2.3. Name and address of the contractor

Official name: Nordiko Technical Services Ltd

Town: Hampshire

NUTS code: UKJ31 Portsmouth

Postal code: PO9 1QU

Country: United Kingdom

The contractor is an SME: yes

V.2.4. Information on value of the contract/lot

Initial estimated total value of the contract/lot: 500 000,00 EUR

Total value of the contract/lot: 500 000,00 EUR

V.2.5. Information about subcontracting

Section V: Award of contract

Contract No: 2

Lot No: 2

Title:

Mask Aligner for 200 mm Diameter Wafers

A contract/lot is awarded: no

V.1. Information on non-award

The contract/lot is not awarded

Other reasons (discontinuation of procedure)

Section VI: Complementary information

VI.3. Additional information

VI.4. Procedures for review

VI.4.1. Review body

Official name: Director General of INL

Town: Braga

Country: Portugal

VI.5. Date of dispatch of this notice

12/06/2019