

This public tender is conducted according to Public Procurement Law of January 29, 2004 (position 177 in Polish Journal of Acts No 19 of February 9, 2004 with later changes).

INSTYTUT TECHNOLOGII ELEKTRONOWEJ  
Al. Lotników 32/46, 02-668 Warsaw, Poland

TERMS OF REFERENCE  
for:

X-RAY DIFFRACTOMETER  
CPV 33261300-0

Proceedings are conducted according to open procedure for assessed value above EUR  
206.000,00

**1. Name (company name) and address of the Awarding entity.**

This proceedings are conducted by Tender Committee of Instytut Technologii Elektronowej,  
Al. Lotników 32/46, 02-668 Warsaw, Poland.  
fax +48 22 847 06 31  
Web page: <http://www.ite.waw.pl>

**2. Procedure for awarding the contract.**

These proceedings are conducted in mode of open procedure according to Article 39 of Public Procurement Law of January 29, 2004 position 177 in Polish Journal of Acts no 19 of February 9, 2004.

The tenders submitted will be opened and evaluated by the Tender Committee according to the evaluation criteria.

From all tenders which have not been rejected, the one will be selected which receives the highest number of points calculated according to the evaluation criteria.

**3. Description of the object of contract.**

The object of the order is a delivery, installation and start up of the brand new **X-ray diffractometer for studies of epitaxial and multilayer structures made of A<sup>III</sup>B<sup>V</sup> semiconductor compounds. Diffractometer dedicated for studies of nanometer thick epitaxial layers, superlattices, Bragg reflectors, quantum cascade laser structures consisted of up to 1000 thin layers**, hereinafter called "device".

Requirements and technical parameters of the object of the order are indicated in appendix No 1 of this Terms of Reference.

**4. Partial and variant tenders are not allowed.**

**5. Time limit for contract performance.**

Deadline for completion of the tender including installation, start up and testing – maximally to 16 weeks after signing the Contract.

**6. Description of the conditions for participation in the procedure and the description of the method used for the evaluation of the fulfilment of those conditions:**

- 6.1. Fulfill conditions defined in article 22 paragraph 1 and are not being excluded from the proceedings pursuant to Article 24 paragraph 1 and 2 "Public Procurement Law".
- 6.2. Prove, that within the period of the last three years, or if being active in the business for shorter period – in this period, have completed at least 5 deliveries of the **X-ray diffractometers**, of similar specification and value to the offered one, pointing the buying company together with documents confirmatory that these deliveries became duly perform (references from receivers, acceptance protocols etc.),
- 6.3. Prove that they are in the possession of a insurance policy or other insurance document, proving that they are insured for the civil liability in the area of their business activity.

Evaluation of the above requirements will be performed according to the rule: "fulfil - not fulfil", on the basis of documents mentioned in point 7 of this Terms of Reference.

**7. Information concerning declarations and documents to be provided by the contractor to confirm the fulfilment of the conditions for participation in the procedure:**

- 7.1. Signed statement, which is enclosed to this Terms of Reference, about fulfillment of conditions defined in article 22 paragraph 1 Public Procurement Law [Appendix No. 2].
- 7.2. Excerpt from the appropriate register or current certificate from commercial entities' evidence, issued not earlier than 6 months prior to deadline for submission of the offers (certified for conformity with original).
- 7.3. Certificate of no delay with tax and social security payments, or has obtained a immunity or postponement of such overdue payments issued by appropriate authority, issued not earlier than 3 months prior to deadline for submission of the offers (certified for conformity with original).
- 7.4. Current information from National Penal Register or equivalent certification of proper judicial or administrative organ, which will confirm that they are not being excluded from the proceedings pursuant to Article 24 paragraph 1 items 4,5,6,7,8 "Public Procurement Law" issued not earlier than 6 months prior to deadline for submission of the offers (certified for conformity with original).
- 7.5. Current information from National Penal Register which will confirm that they are not being excluded from the proceedings pursuant to Article 24 paragraph 1 items 9 "Public Procurement Law" issued not earlier than 6 months prior to deadline for submission of the offers (certified for conformity with original).
- 7.6. The contractor which has its site outside the territory of Poland should submit the following documents:
  - a) Certificate of not being subject to any liquidation, bankruptcy or similar proceedings,
  - b) Certificate of no delay with tax and social security payments, or has obtained a immunity or postponement of such overdue payments issued by appropriate authority,
  - c) Statement that Contractor has not been precluded from participation in public procurement proceedings,

instead of documents mentioned in points 7.2, 7.3 and 7.5.

The Contractor should submit such documents, in accordance with the legal provisions of the country where they are established signed by authorised person.

If, due to the Contractor's jurisdiction, no official documents are available to confirm any of the requirements listed in items 7.4 and 7.6 above, the Contractor should submit a statement, signed in front of the notary, court or a relevant administrative body, as applicable in contractor's jurisdiction, confirming that the Contractor meets these requirements.

This statement must carry a date, which cannot be more than 6 months in relation to the deadline for the submission of the tender.

- 7.7. The list of the completed deliveries – mentioned in point 6.2 of the Terms of Reference.
- 7.8. The insurance policy - for both employer's liability risks and public liability risks.

These documents can be presented in the form of originals or photocopies and should be signed by Contractor or his authorised representative.

**The lack of any of the above documents will cause the tender being rejected from further proceedings.**

**8. Information on the manner of communication between the awarding entity and the contractor as well as of delivery of declarations and documents, indication of persons authorised to communicate with the contractor.**

The contact person in matters concerning the tender are:  
Michał Urbański MSc., e-mail: [urbanski@ite.waw.pl](mailto:urbanski@ite.waw.pl)

Please address all written correspondence, related to this tendered proceedings, to:

Instytut Technologii Elektronowej  
Al. Lotników 32/46  
02-668 Warsaw, Poland.  
building No VI, room 207

Fax: + 48 22 548 78 46.

**9. Deposit requirements:**

The value of guarantees is 15 000,00 PLN (say: fifteen thousand PLN) and can be introduced in:

- Cash
- Bank guarantee
- Insurance guarantee

Other forms of security are defined in article 6b paragraph 5 item 2 . **Act of 9 November 2000 on the establishment of the Polish Agency for Enterprise Development (position 1158 in Polish Journal of Acts No 109).**

The guarantees introduced in cash should be transferred to the bank account : BRE Bank S.A. O/Warszawa 47 1140 1977 0000 5580 4500 1001.

The guarantee introduced in any other forms should be submitted at ITE cash office which is located at Instytut Technologii Elektronowej, Al. Lotników 32/46, 02 – 668 Warsaw, Poland, building VI room 218 ( business hours: 9:00÷14:00).

**The guarantee has to be provided before submitting the tender.**

The Awarding Entity will withhold guarantee within interests in cases defined in article 46 paragraph 5 Public Procurement Law.

**10. Tender validation time – 60 days.**

**11. Description of the manner of the tender preparation.**

**The tender should include:**

- a) Name and address of the Contractor,
- b) Date of preparation of the tender,
- c) Filled in Appendix No 1 to this Terms of Reference.
- d) Net price in PLN (The price in EUR or USD is allowed. In the case of submission of the tenders in EUR or USD, the price will be exchanged to polish zlotych PLN according to selling exchange rate of the National Bank of Poland dated on the day before of opening of the tenders).
- e) Time of delivery,
- f) Conditions of warranty,
- g) Indication of the component tasks of the order that will be assigned to subcontractors [Appendix No 3],

**The tender should be signed by Contractor or his authorised representative.**

**Together with the offer the contractor is allowed to submit required documents defined at point 7 of this Terms of Reference, to confirm the fulfilment of the conditions for participation in the procedure.**

**In the case the contractor company is located outside Poland, it is approved to submit the tender as well as the documents required from the contractors as specified under point 7 of this Terms of Reference either in Polish or in English language.**

The contractor is allowed to submit only one offer.

All costs of preparation of the tenders, regardless of the results of the tender, shall be covered by the Contractor.

## **12. Date and place of submission and opening of tenders.**

The tenders should be submitted at the site of the Awarding Entity in Warsaw at Al. Lotników 32/46, building No VI, room 207, by 10<sup>00</sup> am, on 23<sup>rd</sup> July 2008. (into working days in the hour 9:00÷14:00) **The tenders submitted after this deadline will not be considered.**

Opening of the tenders will take place on 23<sup>rd</sup> July 2008 at 10<sup>15</sup> am. in the building No VI, room 120.

The Awarding Entity will open the tenders in accordance with its internal procedures but on occasion may hold a public opening which your representatives may attend.

The offers must be submitted in non-transparent and closed envelopes or packages. The envelope or package must be addressed as follows:

**Instytut Technologii Elektronowej  
Al. Lotników 32/46  
02-668 Warsaw  
Building No VI, room 207  
Do not open before 10<sup>15</sup> am, on 23<sup>rd</sup> July 2008.**

**OFFER FOR:  
DELIVERY OF THE X-RAY DIFFRACTOMETER**

The envelope or package must include full name and address of the Contractor.

The Awarding Entity does not accept responsibility for consequence of contractors failure to keep the above requirements.

## **13. Description of the method of the price calculation**

**The net price in PLN (EUR or USD) must include:**

- a) The device according with requirements indicated in Appendix No 1 of this Terms of Reference,
- b) transport, unloading and positioning
- c) delivery conditions DDP Warszawa
- d) insurance,
- e) installation,
- f) start up and acceptance tests
- g) training for 2 persons held at the place of installation of the device.

## **14. Description of criteria which the awarding entity will apply in selecting a tender, specifying also the importance of particular criteria and method of evaluation of tenders.**

The Awarding Entity will evaluate whether the tender meets requirements introduced in this Terms of Reference. If the tender is valid (meets requirements introduced in this Terms of Reference), it will be taken into consideration in choice of the best one.

**Offer evaluation criteria:**

- Price - 50%
- Quality of the device - 40%
- Warranty - 10%

Within each of the criteria, the evaluation will take place according to the following rules:

**14.1 For the price:** number of points in the price criteria will be calculated according to the following formula:

$$P_n = C_{\min} / C_n * 100 * W$$

- where:  $P_n$  – points in price criteria  
 $C_{\min}$  – the lowest price from all the offers  
 $C_n$  – the price from the offer of n-th bidder  
 $W$  – weight of the “Price” criteria

Maximum number of points to be gained within the price criteria is 50.

**14.2 For the quality of the device:** number of points in the price criteria will be calculated according to filled table (appendix No 1 to the Terms of Reference) and the following formula:

$$Q_n = \left( \sum_p (10,30,60)_p \right)_n / \max \left( \sum_p (10,30,60)_p \right)_n * 100 * W$$

- where:  $Q_n$  - points in quality criteria  
 $(10,30,60)_p$  - values of points admitted by the Tender Committee for the evaluation of the p-th parameter  
 $p$  - number of evaluated parameters  
 $n$  - number of the offer  
 $W$  - weight of the “Quality” criteria.

Maximum number of points to be gained within the price criteria is 40.

**14.3 For the warranty period:** number of points in warranty criteria will be calculated to the following way:

$$G = \begin{cases} \frac{G_n - 12}{G_{\max} - 12} * 100 * W & \text{dla } G_{\max} > 12 \\ 0 & \text{dla } G_{\max} = 12 \end{cases}$$

- where:  $G$  – points in warranty criteria  
 $G_n$  – the warranty period from the offer of n-th bidder (in months)  
 $G_{\max}$  – the maximum warranty period (in months) from all the offers  
 $W$  – weight of the “Warranty period” criteria.

Maximum number of points to be gained within the quality criteria is 10.

**The sum of points received in all criteria makes aggregate evaluation of the tender.**

**15. Information concerning formalities which should be met following the selection of a tender in order to conclude a public procurement contract.**

Contract with the winning Contractor will be signed within the deadline not shorter than 7 days from publication of the tender results, but not later than the date of tender validation.

## **16. Other important statements which will be included in the contract.**

The following statements will be included in the contract:

### **16.1. Indemnity**

- 1) In case of delay, caused by negligence, or poor performance of the Seller, in delivery longer than 30 working days, the Seller will pay to the Buyer an indemnity of 0,1% of the value of the equipment delayed for each working day of delay up to 10% of it's value.
- 2) In case of delay in payment longer then 30 days, the Buyer will pay to the Seller indemnity of 0,1% of the value of delayed payment for each day of delay up to 10% of it's value.
- 3) In case the Seller will cancel the Contract without reason caused by the Buyer, the Seller will pay to the Buyer penalty of the 10% of the total Contract value and the Seller will transfer back all the received payments for the subject of this contract to the Buyer account.
- 4) In case the Buyer will cancel the Contract without reason caused by the Seller, the Buyer will pay to the Seller penalty of the 10% of the total Contract value plus documentary evidence costs of materials and labour based on the following schedule:
  - a) in period shorter than 30 days from order placement - 20% of the contract value
  - b) in period shorter than 30 days before delivery and acceptance – 100% of the contract value
  - c) in period between mentioned in points a and b – percentage approximated by linear function.
- 5) In case of delay, caused by the Seller, in delivery longer than 3 months, the Buyer can cancel the Contract and the Seller will pay to the Buyer penalty of the 10% of the total Contract value and the Seller will transfer back all the received payments for the subject of this contract to the Buyer account.

### **16.2. Warranty**

- 1) The Seller undertakes a warranty of correct operation and technical quality of the delivered device for "warranty period included in the offer" months, calculated from the date of the final acceptance protocol.
- 2) The Seller within warranty period covers costs of the repair or replacement of the defective goods and costs of their transport and all arising travel and lodging costs for Seller's support personnel.
- 3) During the warranty period, in case of the necessity of the repair outside the Buyer site, the Seller has the obligation to make the repair or replacement within not longer than eight weeks after the date of the written claim.
- 4) The warranty period will be increased by the time needed for the repair.
- 5) For the replaced or repaired parts of equipment the warranty period will be "warranty period included in the offer" months from the date of the acceptance protocol of realized replacement or repair.

### **16.3. Terms of payments**

Payment will be effected in the following way:

1. 10% of the contract value – (the value from the offer) – payable by the bank transfer to the Seller's account on the basis of an original proforma invoice within 30 days after signing the Contract by both parties of the Contract.
2. 90% of the contract value – (the value from the offer) – payable by the bank transfer to the Seller's account on the basis of an original invoice within 21 days after signing the final acceptance protocol by both parties of the Contract.

The Buyer shall pay to the Seller any due amount for the subject of this contract by transfer to the Seller's account in:

.....  
.....  
.....

All bank charges in Poland are at the Buyer's account and bank charges outside Poland are at the Seller's account.

#### **16.4. Delivery instruction**

- 1) Subject of the Contract is to be shipped to the address below and placed at the disposal of the Buyer.  
Shipping address: Instytut Technologii Elektronowej  
Al. Lotników 32/46, building V  
02-668 Warsaw, Poland
- 2) The Seller advises to the Buyer about the dispatch by fax (No.+48 22 54-87-803).

#### **16.5. Acceptance of the subject of the contract**

Start-up of the device will be done within 30 days after delivery. Start-up of the device includes technical lunch and performing of the functional tests confirming technical parameters of the system according to technical specification. Acceptance of the subject of the contract will be done by signing by the Seller and by the Buyer final acceptance protocol.

#### **16.6. Setting of disputes**

All disputes arising from the present Contract, failing amicable settlement shall be resolved by the Arbitration Court of the Polish Chamber of Commerce in Warsaw in accordance with the rules of this Court.

#### **17. Requirements concerning the security on due performance of the contract: we do not require**

#### **18. Procedure for additional explanations**

Contractor is authorised to address only in written form the Awarding Entity (e-mail is also allowed) with request for additional information regarding the content of this Terms of Reference. The Awarding Entity will respond all the inquiries promptly, provided that such inquiries are submitted no later than 6 days prior to the deadline for submission of the tenders. The questions and the answers will be published on web site of the Awarding Entity.

#### **19. Information on legal protection measures available to an the contractor during the contract award procedure.**

Contractor's legal protection laws are included in Chapter VI of the Public Procurement Law of January 29, 2004 which is available on the Public Procurement Office (PPO) web site: [www.uzp.gov.pl](http://www.uzp.gov.pl)

#### **20. Other matters.**

For all matters not regulated in this Terms of Reference, the provisions of Public Procurement Law of January 29, 2004 will apply.

Zbigniew Poznański  
Deputy Director ITE

## Requirements and technical parameters of the X-ray diffractometer

	Name	Requirement	Offer	Points
1.	Diffractometer type		specify	-
2.	Production year	2008	confirm	-
3.	Manufacturer		specify	-
4.	Country of origin		specify	-
5.	The device	New	confirm	-
<hr/>				
1.	Type of measurements	rocking curves, reciprocal space mapping, reflectometry	confirm	-
2.	Radiation safety compliance	European certificates	attach	-
3.	Voltage generator	Power minimum 3kW	specify	-
4.	Ceramic X-ray source	a) Power minimum 1,5kW b) For use with hybrid monochromator (Goebel mirror and monochromator)	specify confirm	- -
5.	X-ray goniometer	a) Horizontal theta/2 theta configuration b) Resolution minimum 0,0001°	confirm specify	- <b>10,30,60</b>
6.	Eulerian cradle	Radius minimum 300mm	specify	<b>10,30,60</b>
	- Chi circle	a) -90°-+90°	confirm	-
	- Phi circle	b) Step maximum 0,01°	specify	<b>10,30,60</b>
	- X i Y adjustments	c) Precision minimum 0,01°	specify	<b>10,30,60</b>
6.	- Z adjustments	a) 2x360°	confirm	-
		b) Step maximum 0,02°	specify	<b>10,30,60</b>
		c) Precision minimum 0,01°	specify	<b>10,30,60</b>
7.	Primary beam optics	equipped with 4-bounce hybrid Ge(400) monochromator, symmetrical with Goebel mirror	confirm	-
8.	Primary and secondary beam optics for reflectometry	equipped with beam knife for primary beam	confirm	-
9.	Diffracted beam optics	1. Double axis configuration-detector+slits to control 2 theta resolution	confirm	-
		2. Triple axis configuration-analyzer+proportional detector	confirm	-
		a) proportional detector linear up to 1Mcps	specify	<b>10,30,60</b>
		b) semiconductor detector for high speed rocking curves and reciprocal space mapping studies, dynamic and static modes	specify	<b>10,30,60</b>
		• raster 256x256 pixel (2D)		
		• linear up to 20 Mcps		
		• resolution minimum 60µm		
10.	Low noise cooling system	Cooling system installed in diffractometer room	confirm	-
11.	Reference sample for rocking curves and reflectometry studies	-	confirm	-

12.	Software	a) data collecting program	confirm	-
		b) rocking curve simulations based on dynamic diffraction theory	confirm	-
		c) procedure of fitting experimental results to theoretical simulations	confirm	-
13.	The PC Computer for diffractometer control and results analysis	CPU: Intel Core 2 Duo, min. 2.33GHz, 4 MB cache RAM: min. 2 GB Graphic card: Ge Force 512 MB HDD: min 250 GB (SATA, 7200 rpm) Optical drive: DVD ± RW (SATA) OS: MS Windows LCD monitor min. 19" , keyboard, mouse PRINTER- type: Laser color, RESOLUTION: 600x600 dpi, CPU min. 450 MHz, RAM min. 96 MB	specify	10,30,60
14.	Modular device development	guaranteed	describe	10,30,60
15.	Operation and maintenance training for two persons at the Purchaser's site	guaranteed	confirm	-
16.	Operating manual, programming instruction and technical documentation in Polish or English	supplied	confirm	-
17.	CE certificate	guaranteed	attach	-
18.	Delivery of consumable spare parts for 12 months	guaranteed	list	-
19.	Start up of the device and acceptance tests at the Purchaser's site	guaranteed	confirm	-
20.	Delivery time	maximum 16 weeks	specify	-
21.	Warranty period	minimum 12 months	specify	
22.	Software upgrades free of charge within the minimum 5-year period after the date of installation	guaranteed	confirm	-
23.	Post warranty service within 10 years after the date of installation	performed by the company with site on the territory of Poland	confirm	-
24.	Technical support during within 10 years after the date of installation	guaranteed	confirm	-

The evaluation: **satisfactory** - 10 points  
**good** - 30 points  
**very good** - 60 points

## Statement

**DELIVERY OF THE X-RAY DIFFRACTOMETER**  
for Instytut Technologii Elektronowej  
Al. Lotników 32/46, 02-668 Warsaw, Poland

We state that:

1. We are authorised to perform specific activities or actions, if such authorisations are required by the law;
2. We have the necessary knowledge, experience and have at their disposal the technical potential and personnel capable of performing the contract;
3. We are in a financial and economic situation ensuring the performance of the contract;
4. We are not liable to exclusion from the award procedure.

.....  
/date/

.....  
/signature of authorised representative/

**DELIVERY OF THE X-RAY DIFFRACTOMETER**  
for Instytut Technologii Elektronowej,  
Al. Lotników 32/46, 02-668 Warsaw, Poland

**List of the component tasks of the order that the Tender intends to assign to subcontractors**

(in case no such tasks please fill in with dashes)

No.	The scope of contract, which the Tender intends to assign to subcontractors.
1.	
2.	
3.	
4.	
5.	

.....  
/signature of authorised representative/