

**Legal Grounds**

This public tender is conducted according to Public Procurement Law of January 29, 2004 (position 759 in Polish Journal of Acts No 113 of 2010, with later changes).

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

**TERMS OF REFERENCE**  
for:

**DELIVERY OF THE DEVICE FOR STRUCTURE ASSEMBLY MICROSYSTEMS (DIE BONDER)**

**CPV 31700000-3**

**Proceedings are conducted according to open procedure for assessed value below  
EUR 193 000,00**

**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.  
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.

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 the Contract.**

The object of the order is a delivery, installation, start up and testing of the brand new **device for structure assembly microsystems (die bonder)**, 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 the Contract performance.**

Deadline for completion of the tender – maximally to 14 weeks after signing the Contract.

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

**Eligible to compete for the Contract shall be economic operators who fulfil conditions defined in Article 22 paragraph 1 of Public Procurement Law of January 29, 2004 (with later changes):**

- 1) authorizations to perform specific activities or actions, if such authorizations are required by the law;
- 2) knowledge and experience;
- 3) appropriate technical potential and personnel capable of performing a contract;
- 4) economic and financial standing.

The Contractor may rely on knowledge and experience, technical potential, personnel capable of performing the Contract or financial abilities of other entities, regardless of the legal nature of its relations with such entities. In such case, the Contractor is required to prove to the Awarding Entity that it will have at its disposal the resources necessary to performing the Contract, in particular by presenting to this end a written commitment of those entities whereby they undertake to put the necessary resources at the Contractor's disposal for the time of their use in performance of the Contract.

**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 confirming fulfilment of the conditions defined in Article 22 paragraph 1 "Public Procurement Law" – in form of "STATEMENT" [Appendix No. 2].

7.2. The list of the completed deliveries – prove, that within the period of the last three years before deadline of tender submission or if being active in the business for shorter period – in this period, have completed at least 2 deliveries of the devices for structure assembly microsystems (die bonder), with the indication of their prices, objects of deliveries, dates of performing, buyers and with enclosed documents confirming that these deliveries were performed by the Contractor with due diligence.

**The Awarding Entity recommends to fill in Appendix No. 3 to this Terms of Reference.**

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

**8. Other documents required from the Economic operators:**

In case of subcontracting, the Awarding Entity requests the Contractor to indicate in its tender the parts of the Contract which the Contractor intends to subcontract.

The lack of any information in subcontracting matter, the Awarding Entity recognize as the Contractor's intention to perform the Contract by itself.

**9. 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.**

All the statements and applications are provided only in writing form, but notifications and information the Awarding Entity and the Contractor can provide in writing form or by fax or by e-mail.

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 tended proceedings, to:

Instytut Technologii Elektronowej

Al. Lotników 32/46

02-668 Warsaw, Poland.

building No VI, room 216

Fax: + 48 22 548 78 46.

**10. Deposit requirements: we do not require.**

**11. Tender validation time – 30 days from the date of submission of the tenders.**

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

The tender should be presented in writing form.

The tender must 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 presented in EUR, GBP or USD is allowed. In the case of submission of the tenders in EUR, GBP or USD, the price will be exchanged to Polish zlotys PLN according to selling exchange rate of the National Bank of Poland dated on the day before of opening of the tenders).

The tender has to be signed by the 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.**

**The Awarding Entity recommends to fill in the tender form – Appendix No. 4 to this Terms of Reference.**

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 Contractor 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 tender, regardless of the results of the tender, shall be covered by the Contractor.*

### **13. 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 216, **by 10<sup>00</sup> am, on 23<sup>th</sup> of August 2011** (in working days from 9 am till 2 pm). The tenders submitted after this deadline will not be considered.

Opening of the tenders will take place on 23<sup>th</sup> of August 2011 at 10<sup>15</sup> am at the site of the Awarding Entity: Warsaw, Al. Lotników 32/46 in the building No. VI, room 216.

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 216  
Do not open before 10<sup>15</sup> am, on 23<sup>th</sup> of August 2011.  
OFFER FOR:**

**DELIVERY OF THE DEVICE FOR STRUCTURE ASSEMBLY MICROSYSTEMS (DIE BONDER)**

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.

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

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

- a) the device according to the requirements indicated in Appendix No. 1 of this Terms of Reference,
- b) installation,
- c) start up,
- d) testing,
- e) transport, unloading and positioning,

- f) delivery conditions: DDP Warsaw,
- g) insurance,
- h) training of persons according to Appendix No. 1 point 22 of this Terms of Reference.

**15. Description of the 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                      Weight:                      - 100%

Number of points in the price criteria will be calculated according to the following formula:

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

- 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

Maximum number of points to be gained within the price criteria is 100.

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

The Contract with the winning Contractor will be signed pursuant to Article 94 "Public Procurement Law".

The Contract is concluded under procedure according to Title IV of Public Procurement Law of January 29, 2004.

**NOTICE! Before concluding the Contract the winning Contractor shall submit to the Awarding Entity current document confirming that the person signing the Contract is authorised representative of the Contractor.**

**This document should be presented in the form of original or authorised photocopy.**

**17. Other important statements which will be included in the Contract.**

The following statements will be included in the Contract:

**17.1. Indemnity**

- 1) In case of delay, caused by negligence, or poor performance of the Seller, 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, 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.

#### **17.2. Warranty**

- 1) The Seller undertakes a warranty of correct operation and technical quality of the delivered equipment for “warranty period included in the offer” months, calculated from the date of the final acceptance protocol, but no longer than “warranty period included in the offer + 3 months from the date of delivery”.
- 2) The Seller within warranty period covers costs of the repair or replacement of the defective goods and costs of their transport to the Buyer site after repair.
- 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 7 weeks after the date of the written claim.
- 4) The warranty period will be increased by the time needed for the repair.
- 5) The replaced or repaired parts of equipment will be included a warranty of the Seller or the Producer.
- 6) During the warranty period, the Seller undertakes a maximal service response time within 3 working days after the date of the written claim.

#### **17.3. 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  
  02-668 Warsaw, Poland
- 2) The Seller advises to the Buyer about the dispatch by fax (No.+48 22 54-87-803).
- 3) The Seller will deliver CE certificate together with subject of the Contract.

#### **17.4. Terms of payments**

Payment will be effected in the following way:

1. 80% of the contract value – (the value from the offer) – payable at delivery by the bank transfer to the Seller's account on the basis of an original invoice and shipment documents within 14 days after shipment of the subject of the Contract,
2. 20% 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 14 days after signing the acceptance protocol by both parties of the Contract.

The Buyer shall pay to the Seller 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.

#### **17.5. Acceptance of the subject of the Contract**

Start-up of the device includes technical lunch and performing of the functional tests confirming technical parameters of the device according to technical specification and requirements indicated in this Terms of Reference. Acceptance of the subject of the contract will be done by signing by the Seller and by the Buyer final acceptance test protocol.

## **17.6. Force Majeure**

1. The parties shall be free of responsibilities for non-fulfilment of their obligations due to Force Majeure or these obligations will be change according to the point 4. Force Majeure shall be considered as an event, unforeseeable by either of the parties at the date of signature of this Contract, arisen after such date and being unavoidable and beyond the control of both parties.
2. Cases of Force Majeure are e.g. accidents, flood, earthquake, fire, explosion, war, mobilisation, strikes, blockades, general shortage of transport, materials or labour.
3. The party wishing to claim Force Majeure shall notify the other party in writing without delay on the intervention and on the cessation therefore.
4. Such party must certify the case of Force Majeure to the other party by documentation issued by the competent official authority of this country. The dates and periods for fulfilment of these obligations will be postponed or extended by the period of existence of the state of Force Majeure.

## **17.7. 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.

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

## **19. Procedure for additional explanations.**

Contractor is authorized to address the Awarding Entity only in written form, fax or e-mail is also allowed with request for additional information regarding the content of Terms of Reference - in this proceeding till 16<sup>th</sup> of August 2011. The Awarding Entity will respond all the inquiries according to the article 38 of the Act – “Public Procurement Law”.

The questions and the answers will be published on web site of the Awarding Entity.

## **20. 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)

## **21. Other matters.**

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

Michał Urbański

Vice-Director for Administrative and Technical Affairs

*This order has been founded by the EU: project No. POIG.02.01.00-14-081/09-00 Mikrosystemy i NanoTechnologie Elektroniczne dla Innowacyjnej Gospodarki „MINTE” (MEMS and Electronic NanoTechnologies for Innovative Economy).*

**Appendix No. 1**

**Requirements and technical parameters for device for structure assembly (die bonder).**

<b>No.</b>	<b>Parameter name</b>	<b>Requirement</b>	<b>To be filled in by the offerer*</b>
1	2	3	4
1.	Device type		specify
2.	Production year	2011	confirm
3.	Producer origin country		specify
4.	Device producer		specify
5.	Device	Brand new, never used in any laboratory, not shown at any conference or event.	confirm
6.	General requirements	<p>Device designed for programmable, controlled and repeatable pick and place, and epoxy die bonding, soldering, Flip Chip termocompression bonding with ultrasonic support</p> <p>Device dedicated for bonding semiconductor dies photodetectors, components etc. with substrate.</p> <p>Placement accuracy 5 µm or better.</p> <p>Process control: Windows PC, XP or Win 7</p> <p>Dimensions and weight: Enable placement on the laboratory table.</p>	confirm
7.	Types of processing	<p>Die bonding, epoxy dispensing from dispenser, stamping</p> <p>Die soldering on the heated table with additional heating by hot gas stream.</p> <p>FLIPCHIP – ultrasonically enhanced termocompression chip bonding to substrate.</p> <p>PICK and PLACE - picking chips from diced 6" wafer to the containers (GelPack, WafflePack)</p>	confirm
8.	Device parameters	<p>Equipment allows to extract, move and place components on the substrate.</p> <p>Minimum components dimension: 150x150µm , max. 40x40mm.</p> <p>Max. substrate dimension: 200x300mm.</p>	confirm
		<p>Accuracy X-Y PICK AND PLACE better than 5 µm</p> <p>Accuracy X-Y Flip-Chip better than 3 µm</p>	confirm and specify
		<p>X-Y drive resolution better than 0,3 µm.</p>	confirm and specify

9.	Glue handling methods	Using dispenser with volume controller system (air pressure and pulse duration regulation) Dispenser computer controlled, with dedicated dispenser software for Windows system (XP or Win7)	confirm and specify
		Stamping method, pneumatic actuators	confirm
10.	Solder workholder	Minimum continuous temperature: 300°C Operation in protective atmosphere	confirm and specify
		Vacuum sample mounting	confirm
		Maximum sample size : 50x50mm	confirm
		Height adjustable min.10mm	confirm
11.	WafflePack, GelPack Workholder	Support for Wafflepack 4"x4"	confirm
		Manual XY axis adjustment. Theta adjustment rotation	confirm and specify
		Height adjustable min.10mm	confirm and specify
12.	Wafer chip ejector (min. wafer 6" on the tape)	Maximum wafer diameter 6"	confirm and specify
		Die ejection using single-needle pick up or multi-needle pick up for large die.	confirm and specify
13.	Additional bond force system	System to increase the maximum bond force to 50N	confirm and specify
14.	Heating by hot air stream	Gas jet to heat small components. Max nozzle diameter: 10mm.	confirm
		Temperature up to 500°C	confirm and specify
15.	Ultrasonic generator	Ultrasonic generator PLL, ultrasonic transducer.	confirm
16.	Stamping unit	Ensured	confirm
17.	Side view camera. Magnification 280x or better	Ensured	confirm and specify
18.	Illumination	LED ring illuminator, independently adjustable for camera	confirm
		Co-axial light	confirm
		Light source on flexible arm	confirm
19.	Control metod	Manually, using control board and joystick. Manual workholder alignment.	confirm
20.		A - Test on standard substrate and die supplied by the contractor at contractors	

	<p>Two step acceptance test:</p> <p>a) Preliminary acceptance test at the Contractor facility</p> <p>b) Final acceptance test at the Awarding Entitie's site after installation and start up of the system</p>	<p>facilities, die bonding, die soldering:</p> <ul style="list-style-type: none"> <li>- on metal and ceramic packages</li> <li>- metalized laminate substrates (FR4)</li> </ul> <p>Checking automatic temperature control and measurement</p> <p>Checking accuracy of die alignment</p> <p>Minimum 10 epoxy bonding and soldering processes in every above-specified case.</p> <p>B – Tests at ITE facilities, epoxy bonding of:</p> <p>silicon dies dimension 14,0x14,0 mm on metallised FR4 laminate substrates diameter 24.0mm,</p> <p>silicon dies dimension 11,3x11,3 mm on ceramic substrates dimension 11,4x17,0mm,</p> <p>0,25x0,25mm up to 0,29x0,29 mm LED dies epoxy bonding on metallised FR4 laminate,</p> <p>Checking accuracy of die alignment</p> <p>Minimum 10 epoxy bonding processes in every above-specified case.</p>	confirm
21.	Deadline for order realization	Maximally to 14 weeks after the date of signing the Contract	confirm and specify
22.	Training for 3 persons at the Awarding Entitie's site	Ensured	confirm
23.	Manual and technical documentation in Polish or English	Ensured	confirm and specify
24.	Replacement part availability - 10 years after the date of signing acceptance protocol	Ensured	confirm
25.	Post-warranty period service available for 10 years after the date of signing acceptance protocol	Ensured	confirm
26.	Technical support period – 10 years after the date of signing acceptance protocol	Ensured	confirm
27.	Warranty period – minimum 12 months the date of signing acceptance protocol	Ensured	specify

**\* Imprecise or inaccurate fulfilment of the table in the column 4 will result in rejection of the offer.**

.....  
/address stamp of the Contractor/

.....  
/date/

**S T A T E M E N T**

Acting in accordance with the contract award procedure, we certify that we fulfil all the requirements.

.....  
/signature of the Contractor or his Authorised Representative/

### Appendix No.3

.....  
/address stamp of the Contractor/

.....  
/date/

#### THE LIST OF THE COMPLETED DELIVERIES

Submitting the tender in the proceeding conducted in the open procedure for **delivery of the device for structure assembly microsystems (die bonder)** we certify that within the period of the last three years before deadline of tender submission or if being active in the business for shorter period – in this period, we have completed following deliveries:

No.	Object of the delivery	Price	Date of performing	Buyer
1	2	3	4	5
1.				
2.				

**Notice! To each delivery presented in this list should be enclosed documents confirming that this delivery was performed by the Contractor with due diligence .**

.....  
/signature of the Contractor or his Authorised Representative/

.....  
/address stamp of the Contractor/

### TENDER FORM

for Institute of Electron Technology

The object of the order		<b>Delivery of the device for structure assembly microsystems (die bonder).</b>
1.	Name and address of the Contractor	
2.	VAT identification number	
3.	Phone number: Fax: e-mail:	
4.	Net price of the tender	..... PLN (EUR/ USD/ GBP/ ) ( say: ..... .....)
5.	Time limit for the Contract performance: to 14 weeks after signing the Contract	specify in number of weeks: .....
6.	The persons authorised to represent the Contractor	.....
7.	Acting in accordance with the contract award procedure for <b>delivery of the device for structure assembly microsystems (die bonder)</b> , we offer performance of the Contract according to the Terms of Reference.	
8.	The list of documents enclosed to the tender:	1. . .
9.	Place:  Date of preparation of the tender:	..... .....

.....  
/signature of the Contractor or his Authorised Representative