

Information Notice

Reference: WS2640025684 Plasma Set-up 2 - InP ICP etch

Introduction

- This Information Notice forms part of the European open Tender procedure for Plasma Set-up 2, published on 27-10-2025. under TNO reference number WS2640025684.
- This Information Notice provides a record of the questions submitted by the Tenderers up to and including [date] and the answers provided by TNO.
- The Information Notice serves to provide any additions/changes to the Tender Documents and to communicate announcements from TNO.
- If Tenderers have asked questions of similar nature, all such questions have nevertheless been included in this Information Notice and answered separately. This may result in repetition of information.
- Where a company name was mentioned in a question, it has been replaced by another word or term to anonymize the questions.
- TNO advises you to read the entire Information Notice.
- All information in the Information Notice is classified as Confidential and may only be used for the purpose of submitting a Tender for this procurement.
- The Information Notice has been made available on TenderNed through publication at www.tenderned.nl and added as a document.

Nr	Subject	Question	Answer
1	Annex A04c	General question for all processes included in the chamber: Are the specification included need to be demonstrated in a single process?	No. Please provide the best known process for each target etch
2	Annex A04c	General question for all processes included in the chamber: How the uniformity listed in tender calculated?	Uniformity is 1 sigma (σ) over the wafer with 5 mm edge exclusion
3	Annex A04c	For section R_5000_05 and 10: what's the minimum trench size for shallow and deep waveguide?	Typical trench width is 10 μm , but in some devices waveguides locally come closer together (< 200 nm). In these cases a higher etch lag/lower aspect ratio is acceptable
4	Annex A04c	For section R_5000_05 and _10: is the footing 10-12% of etching depth acceptable	No, the maximum footing should be < 5%
5	Annex A04c	For section R_5000_05 and 10: is Aspect ratio>7:1 acceptable	No, 10:1 is the minimum TNO need for openings down to 0.2 μm
6	Annex A04c	For section R_5000_15: will laser endpoint be acceptable, because the optical end point cannot be used to end point this process? The laser endpoint will not automatically stop the process.	The grating layer is typically a 50 nm thick InGaAsP layer with InP underneath. If this is not possible with optical endpoint detection then laser endpoint is acceptable, as long as there is sufficient accuracy
7	Annex A04c	For section R_5000_20: what is the surface roughness requirements for this application?	The bottom surface roughness is not a critical parameter in this etch
8	Annex A04c	R-5000-041: Is it acceptable that the showerhead temperature is fixed?	yes this is acceptable
9	Annex A04c	R-5000-041: Is it acceptable that the showerhead and wall temperatures are fixed?	yes this is acceptable
10	Annex A04c	R-5000-05: What is the feature size?	Typical waveguide width is 2.0 μm , with 10 μm trenches. In some cases tapers to narrower waveguides are possible < 400 nm.

11	Annex C02	Incoterms (Paragraph 5). This states that the Incoterm will be DDP. Would you agree to CIP? The risk is transferred from the Supplier to TNO in accordance with the CIP Incoterms 2020 clause. The risk would then pass to the TNO from the first carrier, but this risk would be mitigated by insurance taken out by the Supplier.	TNO firmly decline this proposal. Changing to CIP would transfer risk to TNO at the point the goods are handed over to the first carrier, which is unacceptable. While CIP includes insurance, the coverage is limited and does not eliminate the operational and financial exposure created by early risk transfer. Accepting CIP would introduce unnecessary complexity in claims handling and reduce the level of assurance we require. For these reasons, DDP remains the only acceptable Incoterm for this Contract.
12	Annex C02	Delivery. TNO are required to arrange unloading and bringing the goods into the cleanroom. The "hook up", i.e. the connection of all media, is to be carried out by TNO. Is that acceptable?	Correct, TNO shall be responsible for arranging unloading and transporting the goods into the facility. The Supplier is requested to include all relevant hook-up requirements and specifications in its tender to ensure proper planning and installation.
13	Annex C02	Bank Guarantee (Paragraph 6). For the bank guarantee that required for the 30% advance payment, the original would have to be returned to the Supplier after physical delivery of the goods. Is that acceptable?	It is acceptable that the bank guarantee for the 30% advance payment is returned to the Supplier after delivery of the goods, provided that a visual inspection confirms the goods are delivered without visible damage or discrepancies.
14	Annex C02	Regarding Incoterm, could you accept the use of Delivery At Place (DAP) term at the specified delivery address ? Can you also accept a clause allowing us to renegotiate or share any additional tariff costs if they rise above levels currently in place at the time of the bid submission?	TNO cannot accept DAP. The agreed terms remains DDP at the specified address. TNO cannot accept any clause that allows renegotiation or sharing of additional tariff costs after tender submission.

15	Annex C03	Warranty (Clause 6.2). The clause includes a 24 month warranty. Our standard warranty period is 12 months from acceptance. Is that acceptable? Alternatively we could offer a warranty extension of 12 months.	<p>Not accepted. TNO requires the warranty period to remain at 24 months as stated in Clause 6.2.</p> <p>In general: With a 24-month warranty, Supplier demonstrate confidence that the product meets high quality standards and is designed for durability. In addition, TNO operational processes require continuity, and this significantly reduces the risk of unexpected costs and downtime within the first two years. TNO believes that when suppliers offers a 24-month warranty, it shows trust in their own product, which strengthens the foundation for a long-term partnership.</p>
16	Annex C03	Performance Guarantee (Clause 6.4). It is unusual to provide a bank guarantee for the warranty period. Please provide confirmation that a bank guarantee is not required as security for the Supplier's warranty.	Clause 6.4 Not Applicable.

17	Annex C03	<p>Acceptance (Clause 8.8) Does TNO accept that the acceptance criteria are defined in the Supplier's documentation? We would like to add the following :</p> <p>If the start of installation or commissioning of the Goods is delayed for more than sixty (60) days beyond the date provided for or agreed in the contract (or, if no such date is provided for or agreed, after the Goods have been dispatched or made ready for dispatch by the Supplier) through the fault of TNO and/or for reasons for which TNO is responsible, the Goods shall be deemed to have been accepted by TNO.</p> <p>An installation and/or acceptance certificate must be definitive proof of the contractual conformity of the Performance and final acceptance by TNO.</p>	<p>TNO cannot agree to define the acceptance criteria solely based on the Supplier's documentation. The acceptance process will follow the guidelines set out in the Tender documentation and includes multiple validation stages. These steps are essential for TNO to confirm that the delivered performance meets the agreed requirements.</p> <p>The earliest possible delivery date for the equipment is 20 November 2026. However, acceptance testing will not commence immediately upon delivery. These tests may only begin once the facility reaches mechanical completion, which is currently scheduled for early March 2027. Further details regarding the testing timeline and facility readiness will be communicated as they become available. TNO expects to obtain more clarity on this at contract award. In the event of a contract award, TNO will coordinate these aspects in further detail with the Supplier.</p> <p>Following contract award and throughout the preparation and execution phases, open and transparent communication will be maintained between TNO and the Supplier. This is to ensure alignment of plans and, where necessary, the implementation of appropriate measures.</p> <p>The Supplier is expected to adhere to the proposed schedule. In the event of delays in the facility's readiness, the Supplier must arrange for temporary storage of the equipment - either at their own premises or in suitable external storage - until installation is feasible. This must be done without incurring additional costs for TNO.</p>
18	Annex C03	<p>Responsibility on Site (Clause 9.1). If the Supplier's employees are on TNO's premises, they shall endeavour to comply with TNO's internal procedures and regulations, which shall be communicated to the Supplier's employees by TNO prior to the commencement of work on site. The Supplier shall only be liable for damage to property caused by its employees in the event of wilful intent or gross negligence.</p>	<p>Clause 9.1 remains unchanged.</p>

19	Annex C03	<p>Warranty (clause 21). The Goods will be adjusted, repaired or replaced at the discretion of the Supplier within the applicable warranty period, provided that the following conditions are met:</p> <p>a) TNO gives written notice of the defect (with reasonable relevant information) to the Supplier as soon as reasonably practicable and within the applicable warranty period;</p> <p>b) The Goods are used solely for their proper purpose and in accordance with the operating instructions;</p> <p>c) The defect is not been caused by fire, accident, misuse, neglect, incorrect installation by TNO or its customers, agents or servants, unauthorised alteration, repair or maintenance or the use of sub-standard consumables and has not arisen from fair wear and tear;</p> <p>d) The defect has not arisen from any design, specification, component or material supplied by or on behalf of TNO;</p> <p>e) No part of the goods is replaced with a part not supplied or approved by the Supplier;</p> <p>f) TNO shall accord the Supplier sufficient access to the goods to enable its staff to inspect and adjust, repair, remove or replace the goods; and</p> <p>g) the costs of all consumables shall be paid by TNO.</p>	<p>Response to a): Clause 22.1 will be modified as follows: During the warranty period (as described in clause 6.2), the Supplier shall respond to TNO's request for support or repair within 5 working days and provide an initial assessment and proposed timeline for remedying the Defect. The Supplier shall remedy the Defect within a reasonable period, considering its nature and complexity, but no later than 90 calendar days, unless otherwise agreed in writing. If the Supplier reasonably expects that resolution within this period is not feasible, Supplier shall promptly notify TNO in writing, providing justification and a revised timeline. All remedies for non-compliance shall be exclusively as set forth in this Agreement.</p> <p>Response to b): Accepted with the understanding that the system shall be suitable for the specified purpose, as defined by TNO in its Tender.</p> <p>Response to c) and d): Not accepted. It is essential that the Supplier remains responsible for defects arising from design, specification, or material choices, as otherwise TNO would bear disproportionate risks. Accepting these clauses would expose TNO to potential high repair costs, operational downtime, and disputes over liability. TNO therefore kindly request that your company adhere to the original provisions.</p> <p>Response to e): Accepted.</p> <p>Response to f): Accepted, provided that access for inspection and repair should be coordinated with TNO to minimize operational disruption.</p> <p>Response to g): Not accepted. These should be covered by the Supplier when related to defect correction.</p>
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20	Annex C03	<p>Force Majeure (Clause 20.4, 21.3). We request the following addition:</p> <p>If, for reasons for which the Supplier is not responsible, the Supplier does not receive a delivery or service from its suppliers or subcontractors, or does not receive it correctly or on time despite proper and sufficient coverage, or if force majeure events occur, the Supplier shall notify TNO in writing in good time.</p> <p>In this case, the Supplier shall be entitled to postpone the delivery or service for the duration of the hindrance or to withdraw from the contract in whole or in part due to the part not yet fulfilled if the Supplier has fulfilled the above information obligation and has not assumed any procurement risk.</p> <p>Events of force majeure are strikes or industrial action (regardless of whether they occur at the Supplier, TNO or a third party), natural disasters, terrorist attacks, civil war, riots or unrest, war, sanctions or embargoes, any labour or trade disputes, epidemics or pandemics, refusal or delay in the granting or revocation, suspension or withdrawal of necessary licences, permits, approvals or authorisations, lockouts, official intervention, energy and raw material shortages, transport bottlenecks through no fault of our own, operational hindrances through no fault of our own, e.g. fire, water and damage to property. fire, water and damage to the plant and machinery and other hindrances which, from an objective point of view, were not caused by the Supplier's fault.</p> <p>If a delivery or performance date or a delivery or performance period has been bindingly agreed and if the agreed delivery or performance date or the agreed delivery or performance period is exceeded by more than four (4) weeks due to the above events, the parties shall be entitled to withdraw from the part of the contract that has not yet been fulfilled. In this case, TNO shall not be entitled to any further rights, in particular claims for damages.</p>	<p>The responsibility for managing your company's own supply chain remains with the Supplier and cannot be shifted to TNO. Force Majeure should cover only external, unforeseeable events beyond reasonable control, such as natural disasters, war, pandemics, or government actions, not internal operational issues or delays with subcontractors.</p> <p>If your company seeks relief based on non-delivery by suppliers of your company, clear evidence of proper contractual arrangements and mitigation measures will be required.</p> <p>TNO expects timely written notice and a concrete mitigation plan in case of any disruption</p>
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21	Annex C03	<p>Termination (Clause 20.4, clause 24). TNO may only terminate for the reasons set out in clause 24.1, or for material breach. TNO may not terminate due to failure to perform / late delivery. Is that acceptable?</p>	<p>If Supplier fails to fulfill its obligations or does so improperly, Supplier is in default under Dutch Civil Law. TNO expressly reserves all rights and remedies available under law and contract, including termination, compensation for damages, and additional measures.</p> <p>For late delivery, TNO applies Article 8.4 of the Purchasing Conditions, including notice of default and a reasonable period for performance. If TNO does not wish to accept delivery within a reasonable period after notice of default, the same applies as in cases of non-performance: TNO may terminate the agreement and exercise all associated rights. Limiting termination rights solely to “material breach” or clause 24.1 is contrary to these principles and unacceptable. Legal reservation: this response does not constitute a waiver of any rights; TNO reserves all rights under law, contract, and general terms and conditions.</p>
22	Annex C03	<p>Liability (Clause 22). The Supplier needs some limitations of liability in the contract. Is the following ok? The Supplier's total liability is limited to 1.5 times the total net order value. The Supplier shall not be liable for loss of profit, revenue, benefit, anticipated savings, business interruption and/or business interruption, loss of data, or for special, indirect or consequential damages.</p> <p>This limitation or exclusion of liability does not apply in cases of mandatory statutory liability, in particular:</p> <ul style="list-style-type: none"> a) <input type="checkbox"/> the event of intent and gross negligence; b) <input type="checkbox"/> the event of a breach of material contractual obligations (material contractual obligations are those whose fulfilment is essential for the proper performance of the contract and on whose compliance the customer may regularly rely and whose breach jeopardises the achievement of the purpose of the contract); c) <input type="checkbox"/> the event of non-fulfilment of a guarantee of quality; d) <input type="checkbox"/> the event of injury to life, limb or health; or e) <input type="checkbox"/> the event of liability under the Product Liability Act. <p>Any further liability is excluded.</p>	<p>Clause 22.1</p> <p>If your company fail to fulfill your obligations towards TNO, your company shall be liable to TNO for all damages suffered or to be suffered by TNO that are the direct result of an attributable breach of your obligations under the Agreement, and is limited to an amount equal to twice (2x) the total contract value.</p> <p>TNO agrees to exclude liability for indirect damages, including but not limited to consequential damages. For the purposes of this clause, “indirect damages” shall be strictly defined as reputational damage, loss of profit, missed savings, business interruption, and similar consequential losses.</p>

23	Annex C03	<p>Indemnities (Clause 6.1, 20.2, 22.2)</p> <p>The only indemnity that the Supplier must provide to TNO is to indemnify and hold TNO harmless for any infringement of third party intellectual property rights.</p> <p>Is that ok?</p>	<p>TNO cannot accept limiting indemnity solely to intellectual property infringement. TNO standard terms require broader coverage to manage legal and operational risks.</p>
24	Annex C03	<p>Title (Clause 12) The transfer of ownership from the Supplier to TNO takes place upon receipt of payment of the entire purchase price in the Supplier's account. Is that acceptable?</p>	<p>TNO agrees to the transfer of ownership after full payment, subject to the reservation that all statutory and contractual rights of TNO remain intact. TNO expressly reserves the right to terminate the agreement and claim damages in the event of non-performance or default by Supplier. TNO anticipates that, as long as Supplier retains ownership, the Supplier will adequately insure the goods against loss, damage, and other risks, as can reasonably be expected. This reservation does not constitute a waiver of any rights; TNO retains all rights under law, contract, and general terms and conditions.</p>

25	Annex C03	<p>Contractual penalties (Clause 8.4, 17.10).</p> <p>Does TNO agree that the only contractual penalty is in relation to late deliveries (8.4) and not for clause 17.10 (which we think is intended to relate to breach of confidentiality but the clause numbering is incorrect). We would agree on the following as penalties for late delivery:</p> <p>If a delivery date agreed by both parties is exceeded, the Supplier shall be in default by means of a written reminder. In the event of a delay for which the Supplier is responsible, TNO shall be entitled to a contractual penalty of 0.5% of the total net order value for each full week of delay, but no more than 5% of the total net order value of the delayed goods, calculated from the time after expiry of the grace period.</p> <p>With the exception of intent and gross negligence, further claims for damages are excluded.</p> <p>TNO may only claim the contractual penalty in writing up to the time of acceptance of the goods. Thereafter, the contractual penalty may not be claimed.</p> <p>Is that acceptable?</p> <p>No contractual penalties are provided for delays that are not attributable to the fault of the Supplier.</p> <p>Is that acceptable></p> <p>Reaching a maximum limit for contractual penalties due to late delivery does not entitle TNO to unilaterally cancel or terminate the contract.</p> <p>Is that acceptable?</p>	<p>Clause numbering for Clause 17.4 up to 17.10 is indeed correct, but remain unchanged, but belong indeed to 'Confidentiality' and not to 'Foreground IP (Intellectual Property)!</p> <p>Clause 17.10 remains unchanged and thus applicable.</p> <p>Clause 8.4 shall remain fully applicable. The agreed delivery date is fixed and binding. If the Product is not delivered to the agreed location within the agreed timeframe, the Supplier shall be in default without any notice of default being required. However, if the Supplier becomes aware that the agreed delivery date cannot be met due to unforeseen, non-attributable circumstances, and TNO is immediately informed in writing by the Supplier, including a justification, TNO will not invoke this clause.</p> <p>Transparent, open, and honest communication with our Suppliers is of the utmost importance to us, and if any delay is anticipated, we kindly request that you notify us immediately. TNO also has obligations towards its clients.</p>
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26	Annex C03	<p>Intellectual Property Clauses 16 and 17). All intellectual property rights in inventions, designs, copyrights and processes, including Foreground IP, and all and any other intellectual / industrial property rights whether or not registered or registerable and all goodwill associated thereto relevant to the supply and all specifications, designs, programs or other material issued by or on behalf of the Supplier shall, as between the Supplier and TNO remain the absolute property of the Supplier.</p>	<p>To clarify: The intellectual property rights related to the performance of the Contract consist of Background IP and Foreground IP. Unless otherwise agreed in writing, ownership of such rights shall be allocated between the Parties as set out in clause 16 (Background IP) and clause 17 (17.1 up to 17.4) (Foreground IP).</p> <p>The Confidential Information, intellectual property, techniques, designs, data, drawings, know-how, software, materials and other information (regardless of the form or medium in which they are disclosed or stored) provided by Supplier to TNO for use under the Agreement shall remain the property of the Supplier (the "Background IP").</p> <p>Supplier grants TNO a non-exclusive, worldwide, royalty-free licence to use its Background IP.</p> <p>TNO and Supplier agree that it is very unlikely that Foreground IP will be created under this Contract. If Supplier creates Foreground IP, by making use of the knowledge brought in by TNO, Supplier and TNO will discuss in good faith the further proceedings.</p>
27	Annex C03	<p>Specification (Clause 3, 5, 6) The Supplier undertakes that the Goods will conform to the Specification but gives no further undertaking or warranty that the Goods will be fit for any particular purpose or that the Goods will be certified or conform in any way beyond that stated in the Product Specification. Is that acceptable?</p>	<p>The "Agreed Use" of the system refers to the intended application as defined and contractually acknowledged by both TNO and Supplier, based on the approved technical specifications, design documentation, and agreed operational context. The system shall be suitable for the specified purpose, as defined by TNO in its Tender and related annexes.</p>

28	Annex C03	Set Off (Clause 11.4). TNO may offset payment obligations against undisputed claims only. Is this acceptable?	TNO shall be entitled to set off outstanding payment obligations to Supplier against claims it has on Supplier, provided that the following conditions are met: (a) The claim by TNO is based on demonstrable and documented damages directly resulting from an attributable failure by Supplier; (b) TNO shall notify Supplier in writing prior to the intended setoff, including substantiation and supporting evidence of the damages; (c) If the claim is disputed by Supplier, the disputed amount shall be placed in escrow until the claim is resolved by mutual agreement or a binding decision; (d) The total amount of the setoff shall not exceed the outstanding invoice amount, unless otherwise agreed.
29	Annex C03	Confidentiality (Clause 17.4 - 17.9). We request that the confidentiality obligations are made mutual between the parties in relation to the disclosure of confidential information.	TNO cannot make the confidentiality obligations mutual. Any designation of confidentiality is subject to TNO's assessment and cannot be imposed by the supplier.
30	Annex C04	Response times The contractually agreed response times are the Supplier's standard response times. Is that acceptable?	Response times shall be executed according requirement A04, R-4000-015.