

Invitation to Quote (ITQ) on behalf of UK Research and Innovation-

Science and Technology Facilities Council

Subject: UKRI Phosphate Laser Rod and Coating

Sourcing Reference Number: RE19058



UK Shared Business Services Ltd (UK SBS)

www.uksbs.co.uk

Registered in England and Wales as a limited company. Company Number 6330639. Registered Office Polaris House, North Star Avenue, Swindon, Wiltshire SN2 1FF VAT registration GB618 3673 25 Copyright (c) UK Shared Business Services Ltd. 2014

Table of Contents

Section	Content
1	About UK Shared Business Services Ltd.
2	About the Contracting Authority
3	Working with the Contracting Authority.
4	Specification
5	Evaluation model
6	Evaluation questionnaire
7	General Information
Appendix A	Phosphate Laser Rod Drawing – SL-2200-008-00-D

Section 1 – About UK Shared Business Services

Putting the business into shared services

UK Shared Business Services Ltd (UK SBS) brings a commercial attitude to the public sector; helping our Contracting Authorities improve efficiency, generate savings and modernise.

It is our vision to become the leading service provider for the Contracting Authorities of shared business services in the UK public sector, continuously reducing cost and improving quality of business services for Government and the public sector.

Our broad range of expert services is shared by our Contracting Authorities. This allows Contracting Authorities the freedom to focus resources on core activities; innovating and transforming their own organisations.

Core services include Procurement, Finance, Grants Admissions, Human Resources, Payroll, ISS, and Property Asset Management all underpinned by our Service Delivery and Contact Centre teams.

UK SBS is a people rather than task focused business. It's what makes us different to the traditional transactional shared services centre. What is more, being a not-for-profit organisation owned by the Department for Business, Energy & Industrial Strategy (BEIS), UK SBS' goals are aligned with the public sector and delivering best value for the UK taxpayer.

UK Shared Business Services Ltd changed its name from RCUK Shared Services Centre Ltd in March 2013.

Our Customers

Growing from a foundation of supporting the Research Councils, 2012/13 saw Business, Energy and Industrial Strategy (BEIS) transition their procurement to UK SBS and Crown Commercial Services (CCS – previously Government Procurement Service) agree a Memorandum of Understanding with UK SBS to deliver two major procurement categories (construction and research) across Government.

UK SBS currently manages £700m expenditure for its Contracting Authorities.

Our Contracting Authorities who have access to our services and Contracts are detailed here.

Privacy Statement

At UK Shared Business Services (UK SBS) we recognise and understand that your privacy is extremely important and we want you to know exactly what kind of information we collect about you and how we use it.

This privacy notice link below details what you can expect from UK SBS when we collect your personal information.

- We will keep your data safe and private.
- We will not sell your data to anyone.
- We will only share your data with those you give us permission to share with and only for legitimate service delivery reasons.

https://www.uksbs.co.uk/use/pages/privacy.aspx

For details on how the Contracting Authority protect and process your personal data please follow the link below:

https://www.ukri.org/privacy-notice/

Section 2 – About the Contracting Authority

Operating across the whole of the UK and with a combined budget of more than £6 billion, UK Research and Innovation represents the largest reform of the research and innovation funding landscape in the last 50 years.

As an independent non-departmental public body UK Research and Innovation brings together the seven Research Councils (AHRC, BBSRC, EPSRC, ESRC, MRC, NERC, STFC) plus Innovate UK and a new organisation, Research England.

UK Research and Innovation ensures the UK maintains its world-leading position in research and innovation. This is done by creating the best environment for research and innovation to flourish.

For more information, please visit: www.ukri.org

Section 3 - Working with the Contracting Authority.

In this section you will find details of your Procurement contact point and the timescales relating to this opportunity.

Section	Section 3 – Contact details				
3.1	Contracting Authority Name and address	UK Research and Innovation Polaris House North Star Avenue Swindon SN2 1FL			
3.2	Buyer name	Thomas Ellis			
3.3	Buyer contact details	Research.tenders@uksbs.co.uk			
3.4	Estimated value of the Opportunity	£75,000 GBP excluding VAT			
3.5	Process for the submission of clarifications and Bids	All correspondence shall be submitted within the Emptoris e-sourcing tool. Guidance Notes to support the use of Emptoris is available here . Please note submission of a Bid to any email address including the Buyer			

Section	on 3 - Timescales		
3.6	Date of Issue of Contract Advert and location of original Advert	Tuesday 05 th February 2019	
3.7	Latest date/time ITQ clarification questions shall be received through Emptoris messaging system	Friday 08 th February 2019 14:00	
3.8	Latest date/time ITQ clarification answers should be sent to all Bidders by the Buyer through Emptoris	Monday 11 th February 2019 14:00	
3.9	Latest date/time ITQ Bid shall be submitted through Emptoris	Tuesday 12 th February 2019 14:00	
3.10	Anticipated notification date of successful and unsuccessful Bids	Friday 15 th February 2019	
3.11	Anticipated Award date	Friday 15 th February 2019	
3.12	Anticipated Contract Start date	Monday 18th February 2019	
3.13	Anticipated Contract End date	Thursday 31st March 2022	
3.14	Bid Validity Period 60 Days		

Section 4 – Specification

Mandatory Requirements

Central Laser Facility Central Laser Facility Vulcan Laser System Glass Laser Cleanrooms		stem	
Specification written by	TB Winstone	Specification issued by	SEJ Chapman
Date of issue	4 th Feb 2019	Checklist complete	Yes
Description	Phosphate Glass Laser Rod Specification		
Specification Number	ROD-19-1		

This specification should be used in conjunction with RAL drawing SL-2200-008-00-D.

Material Properties

Material should be Nd:doped Phosphate Glass, of type Schott LG-760 or equivalent, with the following properties:

Bubbles/Inclusions None over 100 μm in size

Bulk and surface > 20 Joules/cm² for 1 ns at 1053 nm

damage threshold

Barrel Finish Ra 0.8 to 1.25 micron

Barrel surface Not to degrade under normal use - cooled by

water/glycol

Dimensions

				End Faces	
Item	Diameter (mm)	Axial Length (mm)	Nd doping (%)	End A	End B
Α	9.45±0.1	230±1.0	3.0(+/-0.5)	3 deg	2 deg
В	15.80±0.1	250±1.0	2.5(+/-0.5)	6 deg	6 deg
С	25.40±0.1	250±1.0	2.0(+/-0.5)	6 deg	6 deg
D	44.80-44.95	250±1.0	1.0(+0.5/-0.2)	6 deg	6 deg

End face angles As specified in table. Tolerance +/- 30 arc seconds

Parallelism of end faces Same plane and +/- 30 arc seconds (items B-D)

Edges Rough polished 1 mm x 450 chamfer around

circumference.

Edge chips < 0.25 mm diameter and ≤ 3 chips per edge. Stress

points should be properly relieved to withstand normal

flashlamp pumping.

Operational Information

Operational wavelength 1053 nm

Clear Aperture diameter of D-3.0 mm, or 0.90D whichever is the largest

(where D = finished rod diameter in mm) centred on the rod axis. All specifications apply over this clear aperture.

Operating Environment Rod barrels must be compatible with being cooled by a

50% water/50% Glycol mixture, with the ends being open to an air environment. 'O' rings will form a water tight

seal towards the ends of the rod barrel.

Surface finish

No iron compounds to be used in grinding or polishing, unless using Magneto Rheological Finishing (MRF). All rods shall be unclad and uncoated.

Surface finish very best laser quality
Scratch/dig better than 20/10
Surface defects < 0.02 mm² / cm²

Transmissive Specification

Transmitted < λ/10 P-V at operational wavelength

Wavefront

TWF gradients < λ/10 cm⁻¹ at operational wavelength

Lasing properties

Doping Percentage Nd-ion (by weight) +/-0.50%

(see table above)

Stimulated cross 4.5 (+/- 0.3) x 10⁻²⁰ cm²

section emission

Wavelength of 1053.0 (+2.0, -2.0) nm

fluorescence peak

Fluorescence ≥ 323 µs measured on a 5 mm thick melt sample, or an

lifetime absorption coefficient of ≤ 0.08 cm⁻¹ at 2200 nm.

(Equivalent to 0.035 optical density units/cm).

Optical Properties

Glass must not solarize when pumped indefinitely with standard Xenon filled fused silica flashlamps.

Attenuation coefficient < 0.0015 cm⁻¹ at 1053 nm

Absorption coefficient < 0.20 cm⁻¹ at 400 nm (Equivalent to 0.22 optical density

units/cm)

Birefringence < 5.0 nm/cm

Striations Not visible using either near field shadowgraphy or the

Schlieren knife-edge test method at 632.8 nm

Internal Defects < 0.03 mm² per 100 mm³ (cross sectional area)

Longest dimension of any defect < 0.10 mm

Documentation

Each rod should have a unique serial number CNC engraved on to the barrel at a central position well clear of any 'O' ring seal.

Interferograms must be provided showing the transmitted wavefront error in two orthogonal orientations (or phase shifted Optical Path Difference-OPD) and the maximum P-V and gradient values calculated at operational wavelength.

A record should be provided of the wedge angle in arc seconds and the overall axial length.

End surfaces should be characterised and a record provided showing sizes and positions of edge chips, scratches and digs. Location of defects should be referenced from the position of the rod serial number.

Packing

Minimum Packaging Requirements: Each rod shall be individually immobilised in a unit container that provides adequate protection during handling and shipment. Shipping containers shall be marked with the words "DELICATE OPTICAL COMPONENTS REQUIRING SPECIAL HANDLING. ONLY TO BE OPENED BY TECHNICAL PERSONNEL FAMILIAR WITH THE NATURE OF THE CONTENTS" or similar.

Under no circumstances should any chemical protective coating be placed upon any of the surfaces of the rod.

The outer packing to be marked "To be opened only in a clean room" and "FRAGILE - GLASS".

Desirable Requirements

Science & Technology Facilities Council Central Laser Facility Vulcan Laser System Glass Laser Cleanrooms			stem
Specification written by	TB Winstone	Specification issued by	SEJ Chapman
Date of issue	18 th August 2009	Checklist complete	Yes
Description	Antireflection coating specification		
Specification Number	AR-09-1		

The anti-reflection coating is to be applied to both sides of the optical components.

Coating type Multilayer dielectrics which are ultra-hard, vacuum

compatible

Coating finish Best laser quality finish

Scatter Minimal

Cleaning Able to withstand multiple and vigorous cleanings.

Operational angle Incidence shall be 0(+/-10) degrees.

Reflectivity < 0.3% per surface at specified wavelength (either 1053 nm or

527 nm).

Damage threshold > 10 J per cm² at 1 ns and > 5 J per cm² at 100 ps at the

specified wavelength.

Defects Shall be free of defects > 100 μm.

Area of defects <0.02 mm²/cm²

Crazing No evidence of crazing

Note: This optic may be used in a vacuum and should be capable of withstanding frequent vacuum/nitrogen/air cycles.

Markings

All optics to be marked with reflectivity and wavelength around ground edge in soft pencil.

Documentation

All optics will be supplied with reflectivity/transmission spectra covering the appropriate wavelength range.

Packing

Each optic shall be individually wrapped in chemically inert paper that will not scratch, leave a residue or corrode the polished surface. The wrapped optic shall be immobilised in a unit container that provides adequate protection during handling and shipment.

The outer packing to be marked "To be opened only in a clean room by a technician familiar with the contents" and "FRAGILE - GLASS".

All goods will have a minimum 12 month warranty valid from delivery of the goods.

The Contracting Authority wish to retain the option to contract for and purchase **up to** £75,000.00 excluding VAT worth of Glass Laser Rods and coating, as specified above, either at time of contract award or within 3 years of that date. Any additional order is not guaranteed, and at the sole discretion of the Contracting Authority.

Terms and Conditions

Bidders are to note that any requested modifications to the Contracting Authority Terms and Conditions on the grounds of statutory and legal matters only, shall be raised as a formal clarification during the permitted clarification period.

Section 5 - Evaluation model

The evaluation model belowshall be used for this ITQ, which will be determined to two decimal places.

Where a question is 'for information only' it will not be scored.

The evaluation team may comprise staff from UK SBS and the Contracting Authority and any specific external stakeholders the Contracting Authority deems required. After evaluation the scores will be finalised by performing a calculation to identify (at question level) the mean average of all evaluators (Example – a question is scored by three evaluators and judged as scoring 5, 5 and 6. These scores will be added together and divided by the number of evaluators to produce the final score of 5.33 ($5+5+6=16\div 3=5.33$)

Pass / fail criter	ia	
Questionnaire	Q No.	Question subject
Commercial	SEL1.2	Employment breaches/ Equality
Commercial	FOI1.1	Freedom of Information Exemptions
Commercial	AW1.1	Form of Bid
Commercial	AW1.3	Certificate of Bona Fide Bid
Commercial	AW3.1	Validation check
Commercial	SEL3.11	Compliance to Section 54 of the Modern Slavery Act
Commercial	AW4.1	Contract Terms Part 1
Commercial	AW4.2	Contract Terms Part 2
Price	AW5.5	E Invoicing
Price	AW5.6	Implementation of E-Invoicing
Quality	AW6.1	Compliance to the Specification
Quality	AW6.2	Variable Bids

Scoring criteria

Evaluation Justification Statement

In consideration of this particular requirement the Contracting Authority has decided to evaluate Potential Providers by adopting the weightings/scoring mechanism detailed within this ITQ. The Contracting Authority considers these weightings to be in line with existing best practice for a requirement of this type.

Questionnaire	Q No.	Question subject	Maximum Marks
Price	AW5.2	Price	100%

Evaluation of criteria

Non-Price elements

Each question will be judged on a score from 0 to 100, which shall be subjected to a multiplier to reflect the percentage of the evaluation criteria allocated to that question.

Where an evaluation criterion is worth 20% then the 0-100 score achieved will be multiplied by 20%

Example if a Bidder scores 60 from the available 100 points this will equate to 12% by using the following calculation:

Score = {weighting percentage} x {bidder's score} = 20% x 60 = 12

The same logic will be applied to groups of questions which equate to a single evaluation criterion.

The 0-100 score shall be based on (unless otherwise stated within the question):

0	The Question is not answered, or the response is completely unacceptable.
10	Extremely poor response – they have completely missed the point of the question.
20	Very poor response and not wholly acceptable. Requires major revision to the response to make it acceptable. Only partially answers the requirement, with major deficiencies and little relevant detail proposed.
40	Poor response only partially satisfying the selection question requirements with deficiencies apparent. Some useful evidence provided but response falls well short of expectations. Low probability of being a capable supplier.
60	Response is acceptable but remains basic and could have been expanded upon. Response is sufficient but does not inspire.
80	Good response which describes their capabilities in detail which provides high levels of assurance consistent with a quality provider. The response includes a full description of techniques and measurements currently employed.
100	Response is exceptional and clearly demonstrates they are capable of meeting the requirement. No significant weaknesses noted. The response is compelling in its description of techniques and measurements currently employed, providing full assurance consistent with a quality provider.

All questions will be scored based on the above mechanism. Please be aware that the final score returned may be different as there may be multiple evaluators and their individual scores will be averaged (mean) to determine your final score.

Example

Evaluator 1 scored your bid as 60

Evaluator 2 scored your bid as 60

Evaluator 3 scored your bid as 40

Evaluator 4 scored your bid as 40

Your final score will $(60+60+40+40) \div 4 = 50$

Price elements will be judged on the following criteria.

The lowest price for a response which meets the pass criteria shall score 100. All other bids shall be scored on a pro rata basis in relation to the lowest price. The score is then subject to a multiplier to reflect the percentage value of the price criterion.

For example - Bid 1 £100,000 scores 100.

Bid 2 £120,000 differential of £20,000 or 20% remove 20% from price scores 80

Bid 3 £150,000 differential £50,000 remove 50% from price scores 50.

Bid 4 £175,000 differential £75,000 remove 75% from price scores 25.

Bid 5 £200,000 differential £100,000 remove 100% from price scores 0.

Bid 6 £300,000 differential £200,000 remove 100% from price scores 0.

Where the scoring criterion is worth 50% then the 0-100 score achieved will be multiplied by 50.

In the example if a supplier scores 80 from the available 100 points this will equate to 40% by using the following calculation: Score/Total Points multiplied by $50 (80/100 \times 50 = 40)$

The lowest score possible is 0 even if the price submitted is more than 100% greater than the lowest price.

Section 6 – Evaluation questionnaire

Bidders should note that the evaluation questionnaire is located within the **e-sourcing questionnaire**.

Guidance on completion of the question naire is available at http://www.uksbs.co.uk/services/procure/Pages/supplier.aspx

PLEASE NOTE THE QUESTIONS ARE NOT NUMBERED SEQUENTIALLY

Section 7 – General Information

What makes a good bid - some simple do's

DO:

- 7.1 Do comply with Procurement document instructions. Failure to do so may lead to disqualification.
- 7.2 Do provide the Bid on time, and in the required format. Remember that the date/time given for a response is the last date that it can be accepted; we are legally bound to disqualify late submissions. Responses received after the date indicated in the ITQ shall not be considered by the Contracting Authority, unless the Bidder can justify that the reason for the delay, is solely attributable to the Contracting Authority
- 7.3 Do ensure you have read all the training materials to utilise e-sourcing tool prior to responding to this Bid. If you send your Bid by email or post it will be rejected.
- 7.4 Do use Microsoft Word, PowerPoint Excel 97-03 or compatible formats, or PDF unless agreed in writing by the Buyer. If you use another file format without our written permission, we may reject your Bid.
- 7.5 Do ensure you utilise the Emptoris messaging system to raise any clarifications to our ITQ. You should note that we will release the answer to the question to all Bidders and where we suspect the question contains confidential information we may modify the content of the question to protect the anonymity of the Bidder or their proposed solution
- 7.6 Do answer the question, it is not enough simply to cross-reference to a 'policy', web page or another part of your Bid, the evaluation team have limited time to assess bids and if they can't find the answer, they can't score it.
- 7.7 Do consider who the Contracting Authority is and what they want a generic answer does not necessarily meet every Contracting Authority's needs.
- 7.8 Do reference your documents correctly, specifically where supporting documentation is requested e.g. referencing the question/s they apply to.
- 7.9 Do provide clear, concise and ideally generic contact details; telephone numbers, e-mails and fax details.
- 7.10 Do complete all questions in the questionnaire or we may reject your Bid.
- 7.11 Do ensure that the Response and any documents accompanying it are in the English Language, the Contracting Authority reserve the right to disqualify any full or part responses that are not in English.
- 7.12 Do check and recheck your Bid before dispatch.

What makes a good bid - some simple do not's

DO NOT

- 7.13 Do not cut and paste from a previous document and forget to change the previous details such as the previous buyer's name.
- 7.14 Do not attach 'glossy' brochures that have not been requested, they will not be read unless we have asked for them. Only send what has been requested and only send supplementary information if we have offered the opportunity so to do.
- 7.15 Do not share the Procurement documents, they are confidential and should not be shared with anyone without the Buyers written permission.
- 7.16 Do not seek to influence the procurement process by requesting meetings or contacting UK SBS or the Contracting Authority to discuss your Bid. If your Bid requires clarification the Buyer will contact you. All information secured outside of formal Buyer communications shall have no Legal standing or worth and should not be relied upon.
- 7.17 Do not contact any UK SBS staff or the Contracting Authority staff without the Buyers written permission or we may reject your Bid.
- 7.18 Do not collude to fix or adjust the price or withdraw your Bid with another Party as we will reject your Bid.
- 7.19 Do not offer UK SBS or the Contracting Authority staff any inducement or we will reject your Bid.
- 7.20 Do not seek changes to the Bid after responses have been submitted and the deadline for Bids to be submitted has passed.
- 7.21 Do not cross reference answers to external websites or other parts of your Bid, the cross references and website links will not be considered.
- 7.22 Do not exceed word counts, the additional words will not be considered.
- 7.23 Do not make your Bid conditional on acceptance of your own Terms of Contract, as your Bid will be rejected.
- 7.24 Do not unless explicitly requested by the Contracting Authority either in the procurement documents or via a formal clarification from the Contracting Authority send your response by any way other than via e-sourcing tool. Responses received by any other method than requested will not be considered for the opportunity.

Some additional guidance notes 🗹

- 7.25 All enquiries with respect to access to the e-sourcing tool and problems with functionality within the tool must be submitted to Crown Commercial Service (previously Government Procurement Service), Telephone 0345 010 3503.
- 7.26 Bidders will be specifically advised where attachments are permissible to support a question response within the e-sourcing tool. Where they are not permissible any attachments submitted will not be considered as part of the evaluation process.
- 7.27 Question numbering is not sequential and all questions which require submission are included in the Section 6 Evaluation Questionnaire.
- 7.28 Any Contract offered may not guarantee any volume of work or any exclusivity of supply.
- 7.29 We do not guarantee to award any Contract as a result of this procurement
- 7.30 All documents issued or received in relation to this procurement shall be the property of the Contracting Authority. / UKSBS.
- 7.31 We can amend any part of the procurement documents at any time prior to the latest date / time Bids shall be submitted through Emptoris.
- 7.32 If you are a Consortium you must provide details of the Consortiums structure.
- 7.33 Bidders will be expected to comply with the Freedom of Information Act 2000 or your Bid will be rejected.
- 7.34 Bidders should note the Government's transparency agenda requires your Bid and any Contract entered into to be published on a designated, publicly searchable web site. By submitting a response to this ITQ Bidders are agreeing that their Bid and Contract may be made public
- 7.35 Your bid will be valid for 60 days or your Bid will be rejected.
- 7.36 Bidders may only amend the contract terms during the clarification period only, only if you can demonstrate there is a legal or statutory reason why you cannot accept them. If you request changes to the Contract terms without such grounds and the Contracting Authority fail to accept your legal or statutory reason is reasonably justified, we may reject your Bid.
- 7.37 We will let you know the outcome of your Bid evaluation and where requested will provide a written debrief of the relative strengths and weaknesses of your Bid.
- 7.38 If you fail mandatory pass / fail criteria we will reject your Bid.
- 7.39 Bidders are required to use IE8, IE9, Chrome or Firefox in order to access the functionality of the Emptoris e-sourcing tool.
- 7.40 Bidders should note that if they are successful with their proposal the Contracting Authority reserves the right to ask additional compliancy checks prior to the award of any Contract. In the event of a Bidder failing to meet one of the compliancy checks

the Contracting Authority may decline to proceed with the award of the Contract to the successful Bidder.

- 7.41 All timescales are set using a 24-hour clock and are based on British Summer Time or Greenwich Mean Time, depending on which applies at the point when Date and Time Bids shall be submitted through Emptoris.
- 7.42 All Central Government Departments and their Executive Agencies and Non-Departmental Public Bodies are subject to control and reporting within Government. In particular, they report to the Cabinet Office and HM Treasury for all expenditure. Further, the Cabinet Office has a cross-Government role delivering overall Government policy on public procurement including ensuring value for money and related aspects of good procurement practice.

For these purposes, the Contracting Authority may disclose within Government any of the Bidders documentation/information (including any that the Bidder considers to be confidential and/or commercially sensitive such as specific bid information) submitted by the Bidder to the Contracting Authority during this Procurement. The information will not be disclosed outside Government. Bidders taking part in this ITQ consent to these terms as part of the competition process.

7.43 The Government introduced its new Government Security Classifications (GSC) classification scheme on the 2nd April 2014 to replace the current Government Protective Marking System (GPMS). A key aspect of this is the reduction in the number of security classifications used. All Bidders are encouraged to make themselves aware of the changes and identify any potential impacts in their Bid, as the protective marking and applicable protection of any material passed to, or generated by, you during the procurement process or pursuant to any Contract awarded to you as a result of this tender process will be subject to the new GSC. The link below to the Gov.uk website provides information on the new GSC:

https://www.gov.uk/government/publications/government-security-classifications

The Contracting Authority reserves the right to amend any security related term or condition of the draft contract accompanying this ITQ to reflect any changes introduced by the GSC. In particular where this ITQ is accompanied by any instructions on safeguarding classified information (e.g. a Security Aspects Letter) as a result of any changes stemming from the new GSC, whether in respect of the applicable protective marking scheme, specific protective markings given, the aspects to which any protective marking applies or otherwise. This may relate to the instructions on safeguarding classified information (e.g. a Security Aspects Letter) as they apply to the procurement as they apply to the procurement process and/or any contracts awarded to you as a result of the procurement process.

USEFUL INFORMATION LINKS

- Emptoris Training Guide
- Emptoris e-sourcing tool
- Contracts Finder
- Equalities Act introduction
- Bribery Act introduction
- Freedom of information Act

Appendix A - Phosphate Laser Rod Drawing - SL-2200-008-00-D

