

NOTICE INVITING TENDER

Indian Institute of Science Education and Research (IISER) Berhampur, is an autonomous Institute established under Ministry of Education, Department of Higher Education, Government of India.

Electronic Tenders are invited only from the Indian manufacturers or authorized dealers/ distributors of Indian origin for supply of **Optics and Opt mechanics** items for use in the IISER Berhampur as per the quantities indicated in the section IV – Schedule of Requirement. The bidder/manufacturer/supplier/authorized dealer/distributor should be an Indian and has to adhere to the specification, quality, make in India policy of Government of India and other terms & conditions mentioned herein in this NIT document. The potential bidders are required to visit the website <https://www.qerpegov.com/IISERBP> for submission of tender **Section - I: Invitation for Bid**

NIT No. & Date	IISERBpr/S&P/2024-25/06 Dt. May 22, 2024		
Brief Description of the item to be procured	<i>Optics, optomechanics, light safety equipment, optics lab consumables, tip-tilt mirror, CCD camera, light sources and lenslet arrays</i>		
Quantity	As per tender		
Bid Estimate	Rs. 1,04,54,779/-		
Tender Category:	Goods		
Tender Type:	OPEN (ADVT.)		
Number of Covers:	TWO BID		
Covers Information / Submission of Bids			
Covers No.	Cover Type	Description	Document Type
1.	Technical	Technical Specification, Tender Document duly signed and stamped on each page, EMD, Schedule of Requirement and Compliance, Bidders Information/ Indian Agent Information, Integrity Pact for more than Rs. 1 Crores, Purchase order copies, and all other formats available in tender documents duly completed in all respects.	To be filled online and Scanned copies to be uploaded for verification.
2.	Financial	Financial Bid	To be filled online
<p>Two Bid System:</p> <p style="margin-left: 40px;">Part - I: Techno-Commercial Bid.</p> <p style="margin-left: 40px;">Part - II: Price Bid.</p> <p>The prices should be shown against each item for the purpose of Insurance claims / replacements if any in a separate sheet and price should be quoted in price bid for whole equipment as specified in Annexure 1A of the tender document.</p> <p>In case of any discrepancy in the rates indicated in the Price bid either in figures or words, the rates in words will be considered for evaluation.</p> <p>Note: The technical offer should not contain any price information. If the price quoted is submitted in technical bid the tender will be rejected at the sole discretion of IISER Berhampur.</p> <p>Initially Technical Bids will be opened and evaluated by the purchase committee. Commercial bids of only Technically qualified bidders will be opened later.</p> <p>Contract/ Purchase Order will be awarded to the lowest bidder(L1) among them.</p>			
Form of Contract:	SUPPLY, installation and commissioning		

EMD Fee Details	Rs. 250000/- should be deposited through SBI I-Collect only, through the web link : https://www.onlinesbi.com/prelogin/collecthome.htm?corpID=644974 https://www.onlinesbi.com/prelogin/collecthome.htm?corpID=644974
Bid validity (Days):	90 days
Period of Work/ Delivery Period (Days):	6 months after the release of purchase order.
Contract Type:	Tender
Pre-Bid meeting	May 28, 2024 at 11:00Hrs (Through on line)
Delivery Location:	IISER Berhampur, Permanent Campus
Submission End Date & Time of submission	June 18, 2024, 1100 Hrs
Place of Submission of Bid	Through Online, https://www.gerpegov.com/IISERBP
Bid Opening Date & Time:	June 18, 2024, 11:45 Hrs
Bid Opening Place:	Store & Purchase Section, IISER Berhampur, Transit Campus, Govt. ITI, Engineering School Road, Berhampur, Odisha - 760010
For technical Clarifications please contact:	Dr. Vyas Akondi E-mail: vakondi@iiserbpr.ac.in
Tender Inviting Authority:	Store & Purchase Officer on behalf of Director, IISER Berhampur Tel. No.0680 2227-728/709 E-mail: purchase@iiserbpr.ac.in

Other Terms and Conditions (Warranty):

Pre-Qualification criteria: -` Bidders must have supplied identical items (or similar) to other IISERs/IITs/Central Universities/research institutes etc., of national repute in the last three years. Copies of Purchase orders have to be submitted as evidence of supply. The bidders also have to submit certificates from the Institute authorities showing successful functioning of the identical equipment supplied to them for the last three years

Warranty: The warranty of the equipment will be as per the OEM product catalogue and the warranty clause indicated at Section IV of NIT, whichever is beneficial to the buyer (IISER Berhampur). Bidder shall note this requirement while quoting their rate.

1. A complete specification is required to be provided along with the technical bid.
2. Vendor must quote for all items. Partial quotations cannot be entertained.

Signing Authority:

Store & Purchase Officer

Section II: Instructions to Bidders

1. Preparation and Submission of offers.

- a) The tender shall be accepted only through online e-tendering process and all details pertaining to the tender and guidelines for e-tendering are available on the website <https://www.gerpegov.com/IISERBP>
- b) Intending contractors needs to register themselves on the e-tendering website <https://www.gerpegov.com/IISERBP> to get the USER ID and PASSWORD by paying required registration fee (Annual & Non-Refundable) through e-payment only and completing the steps specified on above referred website.
- c) Bid submission through any other mode will not be accepted. EXCEPT In case of Foreign Bidders without having Indian Agents can submit their e-bids without EMD by duly enclosing an undertaking to this effect on or before the date & time of submission of tender.
- d) All pages of the tender document shall be invariably signed by the authorized Personnel and Company's rubber stamp affixed. Photocopies of all certificates shall be self-attested by the authorized personnel. There shall be no corrections or overwriting in the tender document. Corrections, if any, should be made clearly and countersigned.
- e) Bidders must upload soft copies/scanned copies of all documents while uploading e-tender on the website. Submit hard copies of Challan generated on deposit of EMD through SBI I collect, Certificate and Declaration on non-judicial stamp paper, Security Deposit/ Performance Bank Guaranty.
- f) In a tender, either the Indian agent on behalf of the Principal / OEM or Principal / OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.
- g) If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.
- h) IISER Berhampur discourages High Sea Sale purchase. All tenders with High Sea Sale will be rejected.
- i) It is mandatory for all Indian Agents to submit copy of Indian Agent Agreement / Authorization letter from OEM / OEMs along with **tender specific authorization from OEM.**
- j) It is mandatory for Indian Agents, Indian subsidiaries and Indigenous bidders to have GSTN Registration No. and should submit duly filled Bidders Information along with the tender document.

2. Validity of the Bid. 90 Days from the last date of submission of bid

- 3. Cost of Bidding.** The Bidder shall bear all costs associated with the preparation and submission of its Bid and the Purchaser shall not be held responsible or liable for those costs incurred regardless of the conduct or outcome of the bidding process.

4. Amendments to Tender Document.

- a) At any time prior to the deadline for submission of bids, IISER Berhampur may, for any justified reason, whether on its own initiative or in response to the clarification sought by a prospective BIDDER may modify the bid document by issuing necessary corrigendum.
- b) All prospective BIDDERS who have downloaded the tender document are requested to visit IISER Berhampur website for any amendments / modifications and make a note of the same, which will be binding on them.

5. **Deadline for Submission of Bids.** Bids must be submitted only through e-tendering mode on <https://www.qerpegov.com/IISERBP> before the due date and time.
6. **Bid Opening Process.**
- a) In case of one bid system, e-technical & e-financial bid will be opened simultaneously in the presence of representatives of the bidders at IISER Berhampur.
 - b) In case of two bid system, The Technical Bid will be opened in the first instance in the presence of Dept. Technical Evaluation Committee(TEC), representatives of the bidders at IISER Berhampur.
 - c) Financial bids of only those bidders, whose bids are found technically qualified, by the Technical Evaluation Committee, will be opened in the presence of the Dept. Technical Evaluation Committee(TEC) vendor's representatives subsequently at a later date for further evaluation. Date and Time of financial bid opening shall be intimated to technically qualified bidders only.
 - d) One authorized representative of each of the bidder would be permitted to be present at the time of opening of the bids.
 - e) The authorized representative of bidders, present at the time of opening of the bids shall be required to sign an attendance register as a proof of having attended the Technical/Commercial bid opening session.
7. **Supplementary Offer / Modification of Original Bid.** desirous to modify their offer/terms may submit their revised / supplementary offer (s) within the extended Tender Opening Date (TOD) by clearly stating to the extent of updation done to the original offer. The purchaser reserves the right to open the original offer along with the revised offer.
8. **Confidentiality**
- a) Information relating to the evaluation of bids, and recommendation of Contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until information on Contract award is communicated to all Bidders. On completion of Technical Evaluation by the Committee, Vendors whose offer do not meet with the users Technical Specification will be restricted to participate in commercial bid opening process.
 - b) Any attempt by a Bidder to influence the Purchaser in the evaluation of the Bids or Contract award decisions may result in the rejection of its Bid.
 - c) Notwithstanding, from the time of Bid opening to the time of Contract award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it shall do so in writing.
9. **Deviation, Reservations and Omissions.** During the evaluation of Bids, the following definitions apply: -
- a) **"Deviation"** is a departure from the requirement specified in the Tender Documents;
 - b) **"Reservation"** is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Tender Documents; and
 - c) **"Omission"** is the failure to submit part or all of the information or documentation required in the Tender Documents.
10. **Correction of Arithmetical Errors.** Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis: -

- a) If there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;
- b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.
- d) Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with the same, shall result in the rejection of the Bid.

11. **Evaluation of Bid.**

- a) IISER Berhampur will evaluate technical and commercial acceptable offers on landed net Price basis.
- b) In case any BIDDER is silent on any clauses mentioned in this tender documents, IISER Berhampur shall construe that the BIDDER had accepted the clauses as per the invitation to tender no further claim will be entertained.
- c) No revision in the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.
- d) The prices of the equipment (including indigenous items) and comprehensive warranty of four years all together shall be considered in determining L1.

EMD : All bidders except those specifically exempted shall furnish Bid Security Declaration as per our format in lieu of Earnest Money Deposit, failing which such offers will be rejected. Submission of Bid Security Declaration will be exempted for Govt. Depts and firms/public sector units/ MSE units registered under MSMED Act (subject to Declaration of Udyog Aadhar Memorandum number by the vendors on CPP Portal/Gerpegov) / firms registered under NSIC and Khadi Board as per applicable govt. directions, and on submission of valid documents/certificates in proof of the same.

If any bidder retracts from or without request of IISER Berhampur revises or amends his bid during its validity period or fails to submit Security Deposit within the stipulated time or fails to execute the required agreement when the contract is awarded or fails to commence the execution of the work on the stipulated date, they will be disqualified from bidding for any contract with IISER Berhampur for a period of Three years from the date of notification, without prejudice to IISER Berhampur right to claim damages and/or other legal recourse. Under taking for bid security should be submitted as per the attached format.

12. **Price Bid (For Import Supplies).**

- a) Quoting of Price (s): **It is mandatory to quote price in FOB/FCA basis only.**
- b) If the bidder wishes to quote in CIP/DDP, then may be provided the details separately with cost breakup at given format.
- c) If the price is not quoted in Price Bid Form provided in the tender document then, IISER Berhampur will reject bid.
- d) If the bidder wishes to give pricing details, may be filled in in a separate sheet. It is mandatory to quote optional items in separate sheet otherwise your quote will be rejected.

- e) In case of Multiple options of same product, bidders are requested to quote only one best option and not multiple options.
- f) It is mandatory to quote optional items in separate sheet otherwise your quote will be rejected.

13. Price Bid (For Indigenous Supplies).

- a) Quoting of Price (s): **Price quoted should be in Indian Rupees, free delivery at IISER Berhampur Campus at site.**
- b) PRICE BID must be submitted in enclosed Price Bid Form only.
- c) All the taxes including GST and other duties/levies should be shown separately.
- d) If the price is not quoted in Price Bid Form only provided in tender document then, IISER Berhampur will reject bid. If bidder wish to give pricing details, may be attached in separate sheet.
- e) In case of Multiple options of same product, bidders are requested to quote only one best option and not multiple options.
- f) It is mandatory to quote optional items on a separate sheet otherwise your quote will be rejected.

14. Corrupt & Fraudulent Practices.

- a) IISER Berhampur requires that bidders, suppliers, contractors and consultants, if any, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy.
- b) The terms set forth below are defined as follows: -
 - i) **“Corrupt practice”** means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of in kind/value to influence the action of a public official in the procurement process or in contract execution;
 - ii) **“Fraudulent practice”** means a misrepresentation or omission of facts in order to influence a procurement.

Process or the execution of a contract.

- iii) **“Collusive practice”** means a scheme or arrangement between two or more bidders, designed to establish bid prices at artificial, non- competitive levels; and
- iv) **“Coercive practice”** means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
- v) IISER Berhampur will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question.

15. Cancellation of Tender.

- a) Not withstanding anything specified in this tender document, Purchaser / IISER Berhampur in his sole discretion, unconditionally and without assigning any reasons, reserves the rights: -
 - i) To accept OR reject lowest tender or any other tender or all the tenders.
 - ii) To accept any tender in full or in part.
 - iii) To reject the tender offer not confirming to the tender terms.

- b) IISER Berhampur will give purchase preference to Public Sector undertakings when applicable as per Govt. Policy/ Guidelines.
- c) Offer which deviates from the vital conditions (as illustrates below) of the tender shall be rejected: -
- i) Non-submission of complete offers as mentioned in the tender document,
 - ii) Receipt of offers after due date and time and or by email / fax (unless specified otherwise).
 - iii) Receipt of offers in open condition.
 - iv) Conditional Tenders and Unsigned Tenders will also be rejected.

16. Delivery: The successful BIDDER should deliver the material as per tender document/purchase order. **The successful bidder should emboss stickers of purchase order number on the material to be delivered.**

Special Note: The price bid and other documents have to be Submitted separately online at <https://www.gerpegov.com/IISERBP>. The date of Submission of online Technical and Financial will be as per tender notice.

17. Requirement for Vendors for uploading online tender.

P.C. Connected with internet

Registration with portal <https://www.gerpegov.com/IISERBP>

Class-III Digital signature certificate in the name of the company of the vendor is mandatory (in the name of the company who will be submitting the EMD & general information). This may be obtained by calling our helpdesk (09073677150 and 9674758726). Bids will not be recorded without Digital signature Certificate.

Bidders will have to pay Tender Processing fee (**Amount as per work order including GST**) (Non-Refundable) through e-payment in favour of M/s BECIL Ltd.

Note: Please check the Digital Signature Certificate. For more details, bidders may visit e-tendering portal and download the help manuals uploaded in the website.

Contact Person: -

Mr. Rishi Shankar Chatterjee Mob: 09674758726

Email: helpdeskgerpegov@gmail.com

Help Desk No: 09073677150/09073677151/09073677152

Section III: Conditions of Contract

1. Award of Contract.

- a) IISER Berhampur shall award the contract to the technically qualified eligible BIDDER whose bid has been determined as the lowest evaluated commercial bid.
- b) If more than one BIDDER happens to quote the same lowest price, IISER Berhampur reserves the right to award the contract to more than one BIDDER or any BIDDER.

1(A). Purchase preference to Local Manufacturers.

Implementation of Make in India policy of Govt. of India, DIPP Order dated June 15th, 2017, the order is issued in pursuant to Rule 153(iii) of the GFR 2017.

As per instructions of the above order purchase preference shall be given to local suppliers in the following manner: -

where the quantity is divisible

Among all qualified bids, the lowest bid will be termed as L1, if L1 is from a local supplier (Indigenous) the full quantity will be awarded to L1.

If L1 bid is not from a local supplier, 50% of the order quantity shall be awarded to L1. Thereafter, the Lowest bidder among the local suppliers, will be invited to match the L1 price for the remaining 50% quantity subject to the local supplier's quoted price falling within the margin of purchase preference i.e. 20%.

Where the quantity is not divisible

If the L1 bidder is local supplier then the contract will be awarded to L1.

If L1 is not from local supplier, the lowest bidder among the local suppliers, will be invited to match the L1 price subject to local supplier's quoted price falling within the margin of purchase preference (20%), and the contract shall be awarded to such local supplier subject to matching the L1 price.

***Here local supplier definition is not explained in the referred letter, however local supplier in the context of Make in India policy is Indigenously produced /processed goods and services.

2. Prices.

- a) The supplier shall pay and bear all other liabilities, taxes and duties not specifically agreed by the Purchaser in the contract.
- b) **For Indigenous Supplies** - The supplier shall pay and bear all other liabilities, taxes and duties not specifically agreed by the Purchaser in the contract.

3. Pre-installation.

- a) Please also mention the pre-installation requirements for the equipment like ambient temperature, humidity, civil work, weather specifications, power specifications, etc. When items are provided full performance satisfaction should be demonstrated.

4. Installation.

- a) BIDDER shall be responsible for installation / demonstration wherever applicable and for after sales service during the warranty period and thereafter as mentioned in the contract.



b) Installation demonstration to be arranged by the supplier free of cost and the same is to be done within 15 days of the arrival of the equipment at site.

5. **Training.**

a) The BIDDER shall submit training proposal for the operation and maintenance to the personnel of IISER Berhampur on the offered equipment/machinery.

b) Wherever needed, our technical persons should be trained by the supplier at the project site free of cost. In case the person is to be trained at supplier's site abroad or in India it should be mentioned in the quotation clearly. The supplier should bear all the expenses for such training including 'to & fro' fares and lodging & boarding charges.

6. **Terms of Payment.**

(a) For Indigenous items. 100% payment shall be made against satisfactory, delivery and successful installation & commissioning of the equipment subject to submission/ extension of S.D. of 5% of Purchase order value in form of D.D. / B.G valid till 60 (sixty) days beyond the Warranty period.

(b) For imported items.

(i) 100% payment shall be made by wire/telegraphic transfer after delivery and acceptance after successful installation subject to submission of SD of 5% in form of DD/BG up to 60 (sixty) days beyond the Warranty period.

OR

(ii) 100% payment shall be made by Irrevocable Letter of Credit. Out of which 80% will be paid against submission of following documents: -

Air way Bills	- 2 copies
Packing List	- 2 copies
Invoice for shipping	- 4 copies

(c) Balance 20% shall be released after successful installation and commissioning of the equipment subject to submission/ extension of S.D. of 5% of Purchase order value in form of D.D. / B.G valid till 60 (sixty) days beyond the Warranty period.

(d) Warranty payment. Payment shall be released year wise on completion of each year's AMC subject to satisfactory services and submission of tax invoice.

Note. I. All bank charges outside India shall be borne by the supplier.

II. LC will be opened on receipt of unconditional acceptance of purchase order.

III. Accepted term of payment shall be clearly indicated in Tender / Offer document

7. **Legal Matters.** All Domestic and International disputes are subject to Berhampur, Odisha, jurisdiction only.

8. **Transfer and Subletting.** The seller shall not sublet, transfer, assign or otherwise part with the acceptance to the tender or any part thereof, either directly or indirectly, without the prior written permission of the Purchaser.

9. **Force Majeure.** Force Majeure will be accepted on adequate proof thereof.

10. **Penalty/ Liquidated Damages.**

a) Timely delivery is the essence of the contract and hence if any consignment is delayed, liquidated damages at the rate 0.5% of the price of the delayed consignment, for each week or part whereof shall be levied and recovered subject to a maximum of 10% of total purchase order value.

- b) IISER Berhampur reserves the right to cancel the order in case the delay is more than 10 weeks. Penalties if any will be recovered by forfeiting PBG at vendor's cost and risks.
- c) **Specification and Samples.** The suppliers shall supply the stores in accordance with the specifications/ descriptions of stores given in the acceptance of tender. The Purchaser reserved the rights to alter the description of stores including drawings given in the acceptance of tender. In the event any such alteration result in any implication to the deliver and price, such implication shall be mutually agreed between the Purchaser and supplier. In case certified sample has been issued by the Purchaser and the Specifications / Drawings also exist in the acceptance of tender then the certified sample will govern the supply to the extent of material, workmanship and finished product.
11. **Supervision of Erection and Commissioning.** Successful BIDDER shall depute concerned specialist, for supervision of erection & commissioning of the machine to be carried out. The successful BIDDER shall make necessary arrangement at their own expenses for stay, transport and other expenses of their specialist during their stay in which also includes imparting free of cost training to IISER Berhampur personnel.
12. **EARNEST MONEY DEPOSIT (GFR 2017 Rule 170).** The Techno-commercial Bids must accompany details of EMD. EMD should be in the form of bank transfer (I-Collect) / Challan at any branch of SBI. If any assistance required:-Bidders may visit by copying the URL (<http://www.iiserbpr.ac.in/pdf-doc/SBI%20Collect%20Guide.pdf>) to download SBI Collect Guide. The Techno-commercial Bids must accompany details of EMD payment. No interest shall be paid on earnest money deposited. Bidders having valid registration with NSIC/MSE for tendered item and value will be considered for exemption from EMD amount as per extant rules. Please submit bank account details for refund of EMD, in the RTGS IISER Berhampur format available on this link http://www.iiserbpr.ac.in/pdf-doc/RTGS%20NEFT%20Form_IISER%20Berhampur.pdf for getting the refund of EMD/Payment. The editable format of RTGS form is also available in <http://www.iiserbpr.ac.in/download-forms.php> in S&P tab.
13. **Performance Guarantee (GFR 2017 Rule 171).**
- (i) Performance Guarantee Bond is mandatory.
 - (ii) Successful tenderer/ bidder should submit performance guarantee as prescribed above to be sent to Acting Stores & Purchase Officer, IISER Berhampur on or before 15 days from the due date of issue of order acknowledgment. The PGB to be furnished in the form of bank guarantee as per attached proforma with the tender documents, for an amount covering 5% of the purchase order value.
 - (iii) The Performance Guarantee should be established in favour of "The Director, IISER Berhampur".
 - (iv) PBG to be established through any of the National Banks (whether situated at Berhampur or outstation) with a clause to enforced the same on their local branch of Berhampur or any scheduled bank (other than national bank) situated at Berhampur. Bonds issued by co-operative banks will not be accepted.
 - (v) Performance Guarantee Bond shall be for the due and faithfully performance of the contract and shall remain binding, notwithstanding such variations, alterations for extensions of time as may be made, given, conceded or agreed to between the successful tenderer and the purchaser under the terms & conditions of acceptance to the tender.
 - (vi) The successful tenderer is entirely responsible for due performance of the contract in letter and spirit and all other documents referred to in the acceptance of tenders.



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- (vii) The PBG shall be kept valid during the period of contract and shall continue to be enforceable for a period of 60 days beyond warranty period (i.e. Warranty period + 60 days) from the date of order acknowledgement. In case PBG needs extensions up to 60 days beyond warranty period then supplier shall initiate extensions to PBG one month prior to expiry of PBG.
- (viii) For successful suppliers, if PBG is not submitted within **15 days** from the date of Order Acknowledgement, then the Purchase Order will be cancelled with forfeiting of EMD.
- (ix) **No interest shall be payable by the buyer to the Bidder on PBG.**

Store & Purchase Officer

Section IV

Schedule of Requirements and Compliance

SI No.	Description	No. of Units
1	<i>Optics, optomechanics, light safety equipment, optics lab consumables, tip-tilt mirror, CCD camera, light sources and lenslet arrays</i>	As per tender

Annexure I

Serial No	Item	Quantity
1	Cage Assembly Rod, 6" Long, Ø6 mm, 4 Pack <ul style="list-style-type: none"> • Ø6 mm Precision-Ground Stainless Steel • 4-40 Removable Setscrew at Both Ends 	6
2	Cage Assembly Rod, 12" Long, Ø6 mm <ul style="list-style-type: none"> • Ø6 mm Precision-Ground Stainless Steel • 4-40 Removable Setscrew at Both Ends 	6
3	Cage Assembly Rod, 1/2" Long, Ø6 mm, 4 Pack <ul style="list-style-type: none"> • Ø6 mm Precision-Ground Stainless Steel • 4-40 Removable Setscrew at Both Ends 	4
4	Cage Assembly Rod, 2" Long, Ø6 mm, 4 Pack <ul style="list-style-type: none"> • Ø6 mm Precision-Ground Stainless Steel • 4-40 Removable Setscrew at Both Ends 	4
5	Cage Assembly Rod, 8" Long, Ø6 mm, 4 Pack <ul style="list-style-type: none"> • Ø6 mm Precision-Ground Stainless Steel • 4-40 Removable Setscrew at Both Ends 	4
6	Cage Assembly Rod, 1/4" Long, Ø6 mm <ul style="list-style-type: none"> • Ø6 mm Precision-Ground Stainless Steel • 4-40 Removable Setscrew at Both Ends 	12
7	Cage Assembly Rod, 4" Long, Ø6 mm, 4 Pack <ul style="list-style-type: none"> • Ø6 mm Precision-Ground Stainless Steel • 4-40 Removable Setscrew at Both Ends 	3

8	Cage Assembly Rod, 1" Long, Ø6 mm, 4 Pack <ul style="list-style-type: none"> • Ø6 mm Precision-Ground Stainless Steel • 4-40 Removable Setscrew at Both Ends 	4
9	30 mm Cage Mounting Bracket <ul style="list-style-type: none"> • Compatible with 30 mm Cage Systems • Brackets Offer Clearance for SM1 Lens Tubes 	12
10	SM1-Threaded 30 mm Cage Plate, 0.35" Thick, 2 Retaining Rings, 8-32 Tap <ul style="list-style-type: none"> • Post Mountable via 8-32 (M4) Tapped Hole • 0.35" Thick • Directly Mounts Optical Components Within a 30 mm Cage • System Assembly 	18
11	Internally SM1-Threaded End Cap <ul style="list-style-type: none"> • black-anodized aluminum end caps used to seal off a Ø1" lens tube • It has internal SM1 (1.035"-40) threads to seal the end of an externally SM1-threaded lens tube 	6
12	Ø1" Slip-On Post Clamp, 1/4"-20 Tap, 1/4" Counterbore <ul style="list-style-type: none"> • Clamping Feature Setscrew w/ 5/64" (2.0 mm) Hex • Tapped Hole 1/4"-20 	4
13	5/64" (2 mm) Hex Key Thumbscrew, 4 Pack <ul style="list-style-type: none"> • Red Anodized Adjustment Knob with Engraved Hex Size 	1
14	Ø1" Slip-On Post Clamp, 8-32 Tap, 8-32 Threaded Stud <ul style="list-style-type: none"> • Clamping Feature Setscrew w/ 5/64" (2.0 mm) Hex • Tapped Hole 8-32 	2
15	Ø1" Unthreaded Adapter for Ø11 mm Cylindrical Components <ul style="list-style-type: none"> • Length 0.48" • Smooth 1" (25.4 mm) Outer Diameter • Two Setscrews Secure Collimator in Adapter 	6
16	5 VDC, 2 A Regulated Power Supply with USB Type-A Port, 100/240 VAC <ul style="list-style-type: none"> • 5 VDC Regulated Power Supply • USB Type-A Port 	2

17	SM1-Threaded Adapter for Ø11 mm, ≥0.35" (8.9 mm) Long Cylindrical Components <ul style="list-style-type: none"> • External SM1 (1.035"-40) Threads • Setscrews Secure Component in Adapter • Length 0.59" 	6
18	SM1 Lens Tube, 0.30" Thread Depth, SM1RR Retaining Ring, 5 Pack <ul style="list-style-type: none"> • Stackable Design Enables Multi-Element Optical Systems • SM1-Threaded (1.035"-40) Bore Accepts Ø1" (Ø25.4 mm) Optics • Internal Thread Depth 0.30" (7.6 mm) 	3
19	Ø1/2" Optical Post, SS, 8-32 Setscrew, 1/4"-20 Tap, L = 4", 5 Pack <ul style="list-style-type: none"> • One 8-32 Tapped Hole on Top and One 1/4"-20 Tapped Hole at Base • Removable Double-Ended 8-32 Setscrew 	1
20	SM1 Lens Tube, 2.00" Thread Depth, SM1RR Retaining Ring, 5 Pack <ul style="list-style-type: none"> • Stackable Design Enables Multi-Element Optical Systems • SM1-Threaded (1.035"-40) Bore Accepts Ø1" (Ø25.4 mm) Optics • Internal Thread Depth 2.00" (50.8 mm) 	1
21	30 mm Cage Plate, Ø1.2" Double Bore for SM1 and C- Mount Lens Tubes <ul style="list-style-type: none"> • Ø1.2" Bore Supports Outside Diameter of SM1 Lens Tubes and C-Mount Extension Tubes • Compatible with 30 mm Cage Systems • Nylon-Tipped Setscrew and Double Bore Securely Hold Lens Tubes • Not Post Mountable 	5

22	<p>Externally SM1-Threaded End Cap</p> <ul style="list-style-type: none"> ● Black-anodized aluminum end caps used to seal off a Ø1" lens tube. ● It has external SM1 threads to seal the end of an internally SM1-threaded lens tube 	3
23	<p>Extension Tube, Internal SM1 Threading of 3" Depth, External C-Mount Threading, One Retaining Ring</p> <p>Included</p> <ul style="list-style-type: none"> ● SM1 Thread Depth 3.00" (76.2 mm) ● One Retaining Ring Included 	9
24	<p>Kinematic Mount with Vertical Drive, Ø1" Optics, 8-32</p> <p>Taps</p> <ul style="list-style-type: none"> ● Mounts Ø1" Optics ● Minimum Optic Thickness: 0.11" ● Total Angular Range of ±3° ● 0.25° per Revolution Adjustment ● Graduated Knobs with 50 Divisions per Revolution ● 8-32 Mounting Holes 	2
25	<p>Complete 1" x 1" Kinematic Base, Top and Bottom Plates, #8 Counterbores</p> <ul style="list-style-type: none"> ● Ball and V-Groove Design Allows High-Precision Positioning ● Bottom Plate has a #8 Counterbore 	3

26	<p>4-40 Cap Screw and Hardware Kit for Mini-Series</p> <ul style="list-style-type: none"> • 4-40 SS Cap Screw, Thread Length: 3/16" Approx. Qty. 165 • 4-40 SS Nut Approx. Qty. 200 • 4-40 SS Cap Screw, Thread Length: 1/4 "Approx. Qty. 135 • #4 SS Washer, Outer Diameter: 0.313" Approx. Qty.350 • 4-40 SS Cap Screw, Thread Length: 5/16" Approx. Qty. 135 • 3/32" Hex Key for 4-40 Cap Screws Approx. Qty. 10 • 4-40 SS Cap Screw, Thread Length: 3/8" Approx. Qty. 125 • 0.050" Hex Key for 4-40 Setscrews Approx. Qty. 10 • 4-40 SS Setscrew, 1/4" Long Approx. Qty. 190 	1
27	<p>Large Goniometer, 1.75" Distance to Point of Rotation,</p> <p>±5°</p> <ul style="list-style-type: none"> • Distance to Point of Rotation from Top Surface 1.75" • Rotation ±5° • Accuracy 10 arcmin (0.167°) • Load Capacity 1.0 lb (0.45 kg) • Goniometer Dimensions (W x D x H) 1.50" x 1.50" x 0.75" • Base Plate Dimensions (W x D x H) 1.50" x 2.50" x 0.20" • Base Plate Mounting Features Two 1/4" Clearance Slots 	1
28	<p>Ø2" Manual Rotation Stage</p> <ul style="list-style-type: none"> • 360° Continuous Rotation • Laser-Engraved Graduation Marks at 2° Increments and Witness Line • Mounting Platform Height: 0.63" • Four 1/4" Clearance Holes to Mount to Optical Tables or Breadboards 	1
29	<p>SM1 (1.035"-40) Coupler, External Threads, 0.5" Long,</p> <p>Two Locking Rings</p> <ul style="list-style-type: none"> • Included Two Locking Rings • Lens Tube Separation Range 0.22" - 0.34" • Length 1.0" 	1

30	<p>30 mm Cage System, XY Translating Mount for Ø1"</p> <p>Optics with Quick Release Plate</p> <ul style="list-style-type: none"> • Accepts Ø1.00" Optics • ±1 mm Travel in X and Y via 3/16"-100 Adjusters • Drive 100 Threads per Inch (TPI) Adjusters • Optic Mounting SM1 (1.035"-40) Thread 	3
31	<p>30 mm Cage System, XY Translating Lens Mount for Ø1" Optics</p> <ul style="list-style-type: none"> • Accepts Ø1.00" (Ø25.4 mm) Optics up to 0.39" (10.0 mm) Thick • ±1 mm Travel in X and Y via 3/16"-100 Adjusters • Drive 100 Threads per Inch (TPI) Adjusters • Optic Mounting SM1 (1.035"-40) Thread 	1
32	<p>1/2" Travel Manual Translation Stage for 30 mm Cage Systems</p> <ul style="list-style-type: none"> • Includes 1/2" (13 mm) Travel Micrometer with 0.001" (10 µm) per Graduation • Precision Linear Ball Bearings • Lockable Design 	3
33	<p>SM1 Lens Tube, 1.00" Thread Depth, One Retaining Ring Included</p> <ul style="list-style-type: none"> • Stackable Design Enables Multi-Element Optical Systems • SM1-Threaded (1.035"-40) Bore Accepts Ø1" (Ø25.4 mm) Optics • Internal Thread Depth 1.00" (25.4 mm) 	10
34	<p>Ø1" Mounted Pinhole, 1000 ± 10 µm Pinhole Diameter, Stainless Steel</p> <ul style="list-style-type: none"> • Foil Material 300 Series Stainless Steel, • Black-Oxide Conversion Coating • Housing Material 6061-T6 Aluminum • Pinhole Diameter 1 mm • Foil Thickness 50 µm 	2

35	SM1 Graduated Ring-Actuated Iris Diaphragm (Ø1.0 - Ø12.0 mm) <ul style="list-style-type: none"> • SM1 (1.035"-40) Threaded on Both Sides • Ring-Controlled, Ø12.0 mm Max Aperture • Black Spring Steel Leaves • Locking Setscrew with 0.05" (1.3 mm) Hex 	4
36	6-Axis Locking Kinematic Mount for Ø1" Optics <ul style="list-style-type: none"> • Independent X, Y, and Continuous 360° Roll Adjustment • Optic Cell Threading SM1 (1.035"-40) • Max Optic Thickness 0.57" (14.6 mm) • Pitch/Yaw Adjust (Resolution) ±4° (5 mrad/rev) • X/Y Adjust (Resolution) ±2 mm (254 µm/rev) • Z Adjust (Resolution) ±3.2 mm (318 µm/rev) 	1
37	Cage Rotation Mount for Ø1" Optics, SM1 Threaded, 8-32 Tap <ul style="list-style-type: none"> • 360° of Continuous Rotation, Lockable • 2° Graduations on Dial, Labeled Every 20° • Maximum Optic Thickness: 0.37" 	6
38	SMA Fiber Adapter Plate with External SM1 (1.035"-40) Threads <ul style="list-style-type: none"> • Threading External SM1 (1.035"-40) • Connector Type SMA 	1
39	30 mm Removable Segment Cage Plate, 0.35" Thick, 8-32 Mounting Holes <ul style="list-style-type: none"> • Build Removable Cage Segments for 30 mm Cage Systems • Accepts Ø6 mm Cage Rods • Flexure Cam Lock Design Allows Cage Segment Removal • SM1 (1.035"-40) Internal Thread • Two Retaining Rings Included 	12
40	SM1 Retaining Ring for Ø1" Lens Tubes and Mounts <ul style="list-style-type: none"> • Thread SM1 (1.035"-40) • Thickness 0.08" (2.0 mm) • Clear Aperture Ø0.90" (Ø22.9 mm) 	4
41	SM1 to M12 x 0.5 Lens Cell Adapter <ul style="list-style-type: none"> • Adapter Type Thread-to-Thread Adapter • External Threading SM1 (1.035"-40) 	4

42	Adapter with External C-Mount Threads and Internal SM1 Threads, 4.4 mm Spacer <ul style="list-style-type: none"> • External Threads C-Mount (1.00"-32) • Internal Threads SM1 (1.035"-40) 	2
43	Ø3" Precision Kinematic Mirror Mount, 2 Adjusters <ul style="list-style-type: none"> • Optics Secured in Double-Bored Hole with Nylon-Tipped Setscrew • Thick Back Plate and Heavy-Duty Springs for Stability • Fabricated from Black Anodized Aluminum • Hardened Stainless Steel Inserts at Kinematic Contacts • Reduce Wear • Minimum Optic Thickness 0.28" (7.1 mm) • Optical Axis Height 2.13" (54.1 mm) • Adjuster Thread 1/4"-80 	2
44	Compact Rotation Stage with Fine Adjustment, 8-32 and 4-40 Taps <ul style="list-style-type: none"> • Coarse Rotation Range 360°, Continuous • Fine Adjustment Range ±6° • Horizontal Load Capacity Overall: 25 lbs (11.4 kg) • Fine Adjustment: 3.75 lbs (1.7 kg) • Platform Diameter 1.00" (25.4 mm) • Platform Height 0.75" (19.1 mm) • Platform Mounting Holes 8-32 (1 Place) 4-40 (8 Places) • Base Dimensions 1.50" x 1.50" (38.1 mm x 38.1 mm) 	1
45	1.92" x 1.92" Kinematic Platform Mount <ul style="list-style-type: none"> • Tapped Holes 6-32 (5 Places) • Adjuster Thread 1/4"-80 • Angular Range ±4° 	4
46	Ø35 mm Aperture, 30 mm Cage Plate, 0.35" Thick, 8-32 Tap <ul style="list-style-type: none"> • Designed with the Largest Possible Clear Aperture (Ø35 mm) • Compatible with 30 mm Cage Systems • Nylon-Tipped Setscrew and Double Bore Securely Hold Lens Tubes • Post Mountable with an 8-32 Tapped Hole 	6

47	<p>Rotation Mount for Ø1/2" Optics to Use with above stage</p> <ul style="list-style-type: none"> • Coarse Rotation: 360° Continuously Adjustable • Graduations: 2° Increments • Mount Ø1/2" Optics up to 7.3 mm (0.29") Thick • Runout: <0.0001" (25 µm) Along Optical Axis • Max. Clear Aperture: 0.43" • Lockable Design 	6
48	<p>Compact Electronics Housing, In-Line BNC, Ø0.63" × 2.61"</p> <ul style="list-style-type: none"> • Ø0.63" × 2.61" In-Line BNC Feedthrough Housing • Compatible with Off-the-Shelf Electronic Elements • Accepts 10 mm x 15 mm PCB • Male and Female BNC Connectors • Blank Area to Label Custom Circuits 	10
49	<p>SM30 Retaining Ring for Ø30 mm Lens Tubes and Mounts</p> <ul style="list-style-type: none"> • Thread SM30 (M30.5 x 0.5) • Thickness 0.08" (2.0 mm) • Clear Aperture Ø1.10" (Ø27.9 mm) 	10
50	<p>Adapter with External SM1 Threads and Internal SM30 Threads, 0.29" Long</p> <ul style="list-style-type: none"> • External Threads SM1 (1.035"-40) • Internal Threads SM30 (M30.5 x 0.5) 	6
51	<p>FC/APC Fiber Adapter Plate with External SM05 (0.535"-40) Threads, Wide Key (2.2 mm)</p> <ul style="list-style-type: none"> • Connector Type FC/APC, 2.2 mm Wide Key • Threading External SM05 (0.535"-40) 	9
52	<p>SM30 Lens Tube, 1" Thread Depth, One Retaining Ring Included</p> <ul style="list-style-type: none"> • Internal Thread Depth 1.00" (25.4 mm) • Stackable Design Enables Construction of Multi-Element Optical Systems • SM30-Threaded (M30.5 x 0.5) Bore Accepts Ø30 mm Optics • Compatible with All SM30-Threaded Components 	6

53	<p>30 mm Rotating Cage Segment Plate, Two SM1RR</p> <p>Retaining Rings Included, Imperial</p> <ul style="list-style-type: none"> • Rotates an Entire 30 mm Cage System Subassembly • Around a Fixed SM1-Threaded Bore • Post Mountable via 8-32 Tapped Hole • Rotation Locked with Flexure Mechanism 	1
54	<p>Cage Rotation Mount for Ø1" Optics, SM1 Threaded, 8-32 Tap</p> <ul style="list-style-type: none"> • 360° of Continuous Rotation, Lockable • 2° Graduations on Dial, Labeled Every 20° • Maximum Optic Thickness: 0.37" 	3
55	<p>FC/APC Fiber Adapter Plate with External SM1 (1.035"-40) Threads, Wide Key (2.2 mm)</p> <ul style="list-style-type: none"> • Connector Type FC/APC, 2.2 mm Wide Key • Threading External SM1 (1.035"-40) 	3
56	<p>Blank 30 mm Cage Plate, 0.35" Thick, 8-32 Tap</p> <ul style="list-style-type: none"> • Ideal for Custom Machining to Mount Non-Standard Components • Designed for 30 mm Cage System • Post-Mountable via 8-32 Tapped Hole • Black-Anodized Aluminum 	2
57	<p>SM05-Threaded 30 mm Cage Plate, 0.35" Thick, Two Retaining Rings, 8-32 Tap</p> <ul style="list-style-type: none"> • Directly Mounts Ø1/2" Optical Components Within a 30 mm Cage System Assembly • 0.35" Thick • Tapped with Our Standard SM05 Thread (0.535"-40) • Post Mountable via 8-32 Tapped Hole 	3
58	<p>Ø1/2" Universal Post Holder, Spring Loaded Locking Thumbscrew, L = 2"</p> <ul style="list-style-type: none"> • Base Swivels 360° for Mounting Convenience • Post can Pass Through Base, Enabling Minimum Beam Height • Magnets in Base Provide Holding Force Prior to Fastening to an Optical Table • Spring-Loaded Hex Locking Thumbscrews for Positioning Ease 	5

59	<p>Ø1/2" Optical Post, SS, 8-32 Setscrew, 1/4"-20 Tap, L = 2"</p> <ul style="list-style-type: none"> • One 8-32 Tapped Hole on Top and One 1/4"-20 Tapped Hole at Base • Removable Double-Ended 8-32 Setscrew 	5
60	<p>Ø3" Precision Kinematic Mirror Mount, 2 Adjusters</p> <ul style="list-style-type: none"> • Optics Secured in Double-Bored Hole with Nylon-Tipped Setscrew • Thick Back Plate and Heavy-Duty Springs for Stability • Fabricated from Black Anodized Aluminum • Hardened Stainless Steel Inserts at Kinematic Contacts • Reduce Wear • Minimum Optic Thickness 0.28" • Optical Axis Height 2.13" • Angular Adjustment ±4° • Adjuster Thread 1/4"-80 	3
61	<p>Fine Hex Adjuster, 1/4"-80, 3/4" Long</p> <ul style="list-style-type: none"> • Adjusters Manufactured from 303 Stainless Steel • 80 TPI Fine Adjustment 	1
62	<p>Small Goniometer with 1" Distance to Point of Rotation, ±10°</p> <ul style="list-style-type: none"> • Rotation ±10° • Accuracy 10 arcmin (0.167°) • Load Capacity 0.25 lbs (0.113 kg) • Goniometer Dimensions (W x D x H) 1.00" x 1.00" x 0.50" • Base Plate Dimensions (W x D x H) 1.00" x 1.85" x 0.20" • Base Plate Mounting Features Two #4 Clearance Slots and One 8-32 Threaded Hole Below the Stage 	2
63	<p>Spanner Wrench for SM1-Threaded Retaining Rings, Graduated Scale with 0.02" (0.5 mm) Increments, Length = 3.88"</p> <ul style="list-style-type: none"> • Knurled Handle for Improved Grip • Feature Engraved Scale 	2
64	<p>0.050" (1.3 mm) Hex Key Thumbscrew, 4 Pack</p> <ul style="list-style-type: none"> • Convenient Adjustment of Hex-Driven Actuators and Quick Component Assembly • Red Anodized Adjustment Knob with Engraved Hex Size 	2

65	Soft Jaw Pliers, Ø1/2" to Ø2.5" <ul style="list-style-type: none"> • Ideal for Tightening and Loosening Ø1/2", Ø1", Ø30 mm, and Ø2" Lens Tubes • Non-Marring, Smooth, Urethane Jaw Design • Four Available Adjustment Positions 	2
66	9/64" Hex Key Thumbscrew, 4 Pack <ul style="list-style-type: none"> • Convenient Adjustment of Hex-Driven Actuators and Quick Component Assembly • Red Anodized Adjustment Knob with Engraved Hex Size • Replaceable Hex Tip 	2
67	7-Piece Precision Screwdriver Set <ul style="list-style-type: none"> • Superior Design for Maximum Control, Accuracy, and Durability • Chrome-Molybdenum Vanadium Steel Blades • Fast-Turning Swivel Caps with Cavity for Precision Centering • No-Roll Handle Design 	2
68	Digital Calipers <ul style="list-style-type: none"> • Measurement Range 6.00" (150 mm) • Resolution 10 µm (0.0005") • Accuracy ±25.4 µm (±0.001") • Contact Points Carbide-Tipped 	1
69	Spanner Wrench for SM30-Threaded Retaining Rings, Length = 4.35" <ul style="list-style-type: none"> • Individual Sizes for Standard Retaining Rings • Knurled Handle for Improved Grip 	2
70	Spanner Wrench for SM05-Threaded Retaining Rings, Graduated Scale with 0.02" (0.5 mm) Increments, Length = 3.88" <ul style="list-style-type: none"> • Feature Engraved Scale • Individual Sizes for Standard Retaining Rings • Knurled Handle for Improved Grip 	2

71	<p>Spanner Wrench for SM1.5-Threaded Retaining Rings,</p> <p>Graduated Scale with 0.02" (0.5 mm) Increments,</p> <p>Length = 3.88"</p> <ul style="list-style-type: none"> • Feature Engraved Scale • Individual Sizes for Standard Retaining Rings • Knurled Handle for Improved Grip 	2
72	<p>Spanner Wrench for SM2-Threaded Retaining Rings,</p> <p>Length = 4.35"</p> <ul style="list-style-type: none"> • Length = 4.35" • Individual Sizes for Standard Retaining Rings • Knurled Handle for Improved Grip 	2
73	<p>30 mm Removable Cage Plate, Front and Back Plate,</p> <p>Internal SM1 Threading</p> <ul style="list-style-type: none"> • 30 mm Cage Compatible Back Plate • Magnetically Coupled Mounting Carriage • Accepts Ø1" (25.4 mm) Optics up to 0.20" (5.1 mm) Thick • Back Plate and Mounting Carriage Have Internal SM1 Threading • One Retaining Ring Included 	2
74	<p>SM1 Lens Tube, 3.00" Thread Depth, One Retaining</p> <p>Ring Included</p> <ul style="list-style-type: none"> • Stackable Design Enables Multi-Element Optical Systems • SM1-Threaded (1.035"-40) Bore Accepts Ø1" (Ø25.4 mm) Optics • Internal Thread Depth 3.00" (76.2 mm) 	3

75	<p>f=19 mm, Ø1/2" Achromatic Doublet, SM05-Threaded Mount, ARC: 400-700 nm</p> <ul style="list-style-type: none"> • AR Coating Range 400 - 700 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter Tolerance +0.00/-0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\lambda/4$ • Centration ≤ 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) CW 300 W/cm (532 nm, Ø1.000 mm) • Materials N-BAF10/N-SF6HT • Mounting Thread SM05 (0.535"-40) 	2
76	<p>f=19 mm, Ø1/2" Achromatic Doublet, SM05-Threaded Mount, ARC: 650-1050 nm</p> <ul style="list-style-type: none"> • AR Coating Range 650 - 1050 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter Tolerance +0.00 / -0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\lambda/4$ at 632.8 nm • Centration < 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, 0.155 mm) CW 1000 W/cm (1070 nm, Ø0.971 mm) • Materials N-BAF10/N-SF6HT • Mounting Thread SM05 (0.535"-40) 	2

77	<p>f=50 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 400-700 nm</p> <ul style="list-style-type: none"> • AR Coating Range 400 - 700 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter Tolerance +0.00/-0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\leq \lambda/4$ • Centration ≤ 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) • CW 300 W/cm (532 nm, Ø1.000 mm) • Operating Temperature -40 °C to 85 °C • Lens Diameter (mm) 25.4 • Mounting Thread SM1 (1.035"-40) • Materials N-BAF10/N-SF10 	2
78	<p>f=50 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 650-1050 nm</p> <ul style="list-style-type: none"> • AR Coating Range 650 - 1050 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter 1" • Diameter Tolerance +0.00 / -0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\leq \lambda/4$ at 632.8 nm • Centration < 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, 0.155 mm) • CW 1000 W/cm (1070 nm, Ø0.971 mm) • Operating Temperature -40 °C to +85 °C • Mounting Thread SM1 (1.035"-40) • Materials N-LAK22/N-SF6HT 	2

79	<p>f=75 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 400-700 nm</p> <ul style="list-style-type: none"> • AR Coating Range 400 - 700 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter Tolerance +0.00/-0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\leq \lambda/4$ • Centration ≤ 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) • CW 300 W/cm (532 nm, Ø1.000 mm) • Operating Temperature -40 °C to 85 °C • Lens Diameter (mm) 25.4 • Mounting Thread SM1 (1.035"-40) • Materials N-BK7/SF5 	2
80	<ul style="list-style-type: none"> • f=75 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 650-1050 nm • AR Coating Range 650 - 1050 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter 1" • Diameter Tolerance +0.00 / -0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\lambda/4$ at 632.8 nm • Centration < 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, 0.155 mm) • CW 1000 W/cm (1070 nm, Ø0.971 mm) • Operating Temperature -40 °C to +85 °C • Mounting Thread SM1 (1.035"-40) • Materials N-BAF10/N-SF6HT 	2

81	<p>f=80 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 400-700 nm</p> <ul style="list-style-type: none"> • AR Coating Range 400 - 700 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter Tolerance +0.00/-0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\leq \lambda/4$ • Centration ≤ 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) • CW 300 W/cm (532 nm, Ø1.000 mm) • Operating Temperature -40 °C to 85 °C • Lens Diameter (mm) 25.4 • Mounting Thread SM1 (1.035"-40) • Materials N-BK7/N-SF5 	2
82	<p>f=80 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 650-1050 nm</p> <ul style="list-style-type: none"> • AR Coating Range 650 - 1050 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter 1" • Diameter Tolerance +0.00 / -0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\leq \lambda/4$ at 632.8 nm • Centration < 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, 0.155 mm) • CW 1000 W/cm (1070 nm, Ø0.971 mm) • Operating Temperature -40 °C to +85 °C • Mounting Thread SM1 (1.035"-40) • Materials N-BAF10/N-SF6HT 	2

83	<p>f=100 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 400-700 nm</p> <ul style="list-style-type: none"> • AR Coating Range 400 - 700 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter Tolerance +0.00/-0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\leq \lambda/4$ • Centration ≤ 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) • CW 300 W/cm (532 nm, Ø1.000 mm) • Operating Temperature -40 °C to 85 °C • Lens Diameter (mm) 25.4 • Mounting Thread SM1 (1.035"-40) • Materials N-BK7/SF5 	5
84	<p>f=100 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 650-1050 nm</p> <ul style="list-style-type: none"> • AR Coating Range 650 - 1050 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter 1" • Diameter Tolerance +0.00 / -0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\leq \lambda/4$ at 632.8 nm • Centration < 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, 0.155 mm) • CW 1000 W/cm (1070 nm, Ø0.971 mm) • Operating Temperature -40 °C to +85 °C • Mounting Thread SM1 (1.035"-40) • Materials N-LAK22/N-SF6HT 	5

85	<p>f=125 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 400-700 nm</p> <ul style="list-style-type: none"> • AR Coating Range 400 - 700 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter Tolerance +0.00/-0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\leq \lambda/4$ • Centration ≤ 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) • CW 300 W/cm (532 nm, Ø1.000 mm) • Operating Temperature -40 °C to 85 °C • Lens Diameter (mm) 25.4 • Mounting Thread SM1 (1.035"-40) • Materials N-BK7/N-SF5 	5
86	<p>f=125 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 650-1050 nm</p> <ul style="list-style-type: none"> • AR Coating Range 650 - 1050 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter 1" • Diameter Tolerance +0.00 / -0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\leq \lambda/4$ at 632.8 nm • Centration < 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, 0.155 mm) • CW 1000 W/cm (1070 nm, Ø0.971 mm) • Operating Temperature -40 °C to +85 °C • Mounting Thread SM1 (1.035"-40) • Materials N-BK7/N-SF8 	5

87	<p>f=150 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 400-700 nm</p> <ul style="list-style-type: none"> • AR Coating Range 400 - 700 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter Tolerance +0.00/-0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $c \lambda/4$ • Centration ≤ 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) • CW 300 W/cm (532 nm, Ø1.000 mm) • Operating Temperature -40 °C to 85 °C • Lens Diameter (mm) 25.4 • Mounting Thread SM1 (1.035"-40) • Materials N-BK7/SF5 	5
88	<p>f=150 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 650-1050 nm</p> <ul style="list-style-type: none"> • AR Coating Range 650 - 1050 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter 1" • Diameter Tolerance +0.00 / -0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\lambda/4$ at 632.8 nm • Centration < 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, 0.155 mm) • CW 1000 W/cm (1070 nm, Ø0.971 mm) • Operating Temperature -40 °C to +85 °C • Mounting Thread SM1 (1.035"-40) • Materials N-LAK22/N-SF6HT 	5

89	<p>f=200 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 400-700 nm</p> <ul style="list-style-type: none"> • AR Coating Range 400 - 700 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter Tolerance +0.00/-0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\leq \lambda/4$ • Centration ≤ 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) • CW 300 W/cm (532 nm, Ø1.000 mm) • Operating Temperature -40 °C to 85 °C • Lens Diameter (mm) 25.4 • Mounting Thread SM1 (1.035"-40) • Materials N-SSK5/LAFN7 	5
90	<p>f=200 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 650-1050 nm</p> <ul style="list-style-type: none"> • AR Coating Range 650 - 1050 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter 1" • Diameter Tolerance +0.00 / -0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\leq \lambda/4$ at 632.8 nm • Centration < 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, 0.155 mm) • CW 1000 W/cm (1070 nm, Ø0.971 mm) • Operating Temperature -40 °C to +85 °C • Mounting Thread SM1 (1.035"-40) • Materials N-LAK22/N-SF10 	5

91	<p>f=250 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 400-700 nm</p> <ul style="list-style-type: none"> • AR Coating Range 400 - 700 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter Tolerance +0.00/-0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\leq \lambda/4$ • Centration ≤ 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) • CW 300 W/cm (532 nm, Ø1.000 mm) • Operating Temperature -40 °C to 85 °C • Lens Diameter (mm) 25.4 • Mounting Thread SM1 (1.035"-40) • Materials N-BK7/SF2 	5
92	<p>f=250 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 650-1050 nm</p> <ul style="list-style-type: none"> • AR Coating Range 650 - 1050 nm • Reflectance Over AR Coating Range (0° AOI) $R_{avg} < 0.5\%$ • Diameter 1" • Diameter Tolerance +0.00 / -0.10 mm • Focal Length Tolerance $\pm 1\%$ • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\leq \lambda/4$ at 632.8 nm • Centration < 3 arcmin • Clear Aperture $>90\%$ of Diameter • Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, 0.155 mm) • CW 1000 W/cm (1070 nm, Ø0.971 mm) • Operating Temperature -40 °C to +85 °C • Mounting Thread SM1 (1.035"-40) • Materials SF5/N-SF6HT 	5

93	<p>Ø1" Protected Silver Mirror, 10 Pack</p> <ul style="list-style-type: none"> • Thickness 6.0 mm (0.24") • Thickness Tolerance ±0.2 mm • Reflectance (Average) >97% for 450 nm - 2 µm, >95% for 2-20 µm • Substrate Fused Silica • Surface Flatness (Peak to Valley) $\lambda/10$ @ 633 nm • Surface Quality 40-20 Scratch-Dig • Parallelism <3 arcmin • Clear Aperture >90% of Diameter • Damage Threshold Pulsed 0.225 J/cm² (800 nm, 99 fs, 1 kHz, Ø0.167 mm) <p>1 J/cm² (1064 nm, 10 ns, 10 Hz, Ø1.010 mm)</p> <p>CW: 500 W/cm (1.07 µm, Ø0.974 mm)</p> <p>1500 W/cm (10.6 µm, Ø0.339 mm)</p>	2
94	<p>Box with 10 Reflective ND Filters, Ø25 mm, SM1 Mounted, 350 - 1100 nm</p> <ul style="list-style-type: none"> • Included Optical Densities 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 1.0, 2.0, 3.0, 4.0 • Inconel Coated Ø25 mm SM1 Mounted Filters • Substrate N-BK7 • Front Surface Coating Inconel • Spectral Range 350 - 1100 nm • Unmounted Optic Diameter Ø25.0 +0.00/-0.20 mm • Unmounted Optic Thickness 1.0 ± 0.10 mm (unmounted) • Clear Aperture 90% of Optic Diameter • Surface Quality 40-20 Scratch-Dig • Surface Flatness <2λ • Parallelism <3 arcsec 	2
95	<p>Compact Laser Module with USB Connector, 520 nm,</p> <p>0.9 mW (Typ.)</p> <ul style="list-style-type: none"> • Output Power (Typical) 0.90 mW • Laser Safety Class Class 2 • Beam Shape Round, Ø3 mm (Typical) at 5 cm • Housing Dimensions Ø11.0 mm x 60.2 mm 	1
96	<p>Compact Laser Module with USB Connector, 635 nm,</p> <p>0.9 mW (Typ.)</p> <ul style="list-style-type: none"> • Wavelength (Typical) 635 nm • Output Power (Typical) 0.90 mW • Laser Safety Class Class 2 • Beam Shape Round, Ø3 mm (Typical) at 5 cm • Housing Dimensions Ø11.0 mm x 60.2 mm 	1

97	16 mm Cage-Cube-Mounted Polarizing Beamsplitter Cube, 620-1000 nm, 8-32 Tap <ul style="list-style-type: none"> • Ports 4 Ports with SM05 (0.535"-40) Threading • Beamsplitter Material N-SF1 • Extinction Ratio TP:TS > 1000:1 • Transmission Efficiency TP > 90% • Reflection Efficiency RS, avg > 95% • Transmitted Beam Deviation $0^\circ \pm 5$ arcmin • Reflected Beam Deviation $90^\circ \pm 20$ arcmin • Clear Aperture $\varnothing 12.50$ mm • Transmitted Wavefront Error $< \lambda/4$ at 633 nm over $\varnothing 12.50$ mm • Surface Quality 40-20 Scratch-Dig 	2
98	30 mm Cage Cube-Mounted Pellicle Beamsplitter, 45:55 (R:T), 700 - 900 nm <ul style="list-style-type: none"> • Ports 4, all SM1 Threaded (1.035"-40) • Membrane Material Nitrocellulose • Housing Material Engraved Black Anodized Aluminum • Temperature Range -40 to 70 °C • Index of Refraction 1.5 at 550 nm • Surface Quality 40-20 Scratch-Dig • Transmitted Wavefront Error 0.5λ (Typical) • Reflected Wavefront Error 1λ (Typical) 	2
99	Cube-Mounted Pellicle Beamsplitter, 8:92 (R:T), Uncoated, 400 - 2400 nm <ul style="list-style-type: none"> • Ports 4, all SM1 Threaded (1.035"-40) • Membrane Material Nitrocellulose • Housing Material Engraved Black Anodized Aluminum • Temperature Range -40 to 70 °C • Index of Refraction 1.5 at 550 nm • Surface Quality 40-20 Scratch-Dig • Transmitted Wavefront Error 0.5λ (Typical) • Reflected Wavefront Error 1λ (Typical) 	2
100	$\varnothing 25.0$ mm Unmounted Linear Polarizer, 550 - 1500 nm <ul style="list-style-type: none"> • Laser Damage Threshold 1 W/cm² Continuous Block • 5 W/cm² Continuous Pass • Thickness (T) 2.0 ± 0.2 mm <p style="margin-left: 40px;">Clear Aperture $\varnothing 22.9$ mm ($\varnothing 0.90$")</p>	2

101	<p>Fabry-Perot Benchtop Laser Source, 637 nm, 8.0 mW,</p> <p>FC/PC</p> <ul style="list-style-type: none"> • Minimum Full Output Power 8.0 mW • Setpoint Resolution 0.01 mW • Laser Class 3B • Numerical Aperture 0.10 - 0.14 • Output Fiber Connector FC/PC, Wide 2.1 mm Key • Compatible • Power Stability 15 min: ± 0.05 dB, 24 hr: ± 0.1 dB (After 1 hr Warm-Up at 25 ± 10 °C Ambient) • Display Accuracy $\pm 10\%$ • Adjustment Range ~ 0 mW to Full Power • Input Power 115 VAC / 230 VAC (Switch Selectable) 50 - 60 Hz • Modulation Input 0 - 5 V = 0 - Full Power, DC or Sine Wave Input Only • Operating Temperature 15 to 35 °C • Storage Temperature 0 to 50 °C 	1
102	<p>Infrared Viewer, 350 - 1300 nm</p> <ul style="list-style-type: none"> • Spectral Sensitivity 350 - 1300 nm • Resolution (Center) 60 LP/mm • Field of View 40° • Magnification 1X • Objective Lens F1.4/25 mm • Adjustable Iris Included • Focus <0.1 m to Infinity • Charging Port 5 V Micro-USB • Non-Uniformity of Screen <20% • Non-Uniformity of Response <15% • Distortion of Image <18% • Battery Life (Continuous) 50 hours • Weight 0.4 kg • Dimensions 153.0 mm - 157.1 mm x 172.9 mm x 51.0 mm (6.02" - 6.18" x 6.81" x 2.01") • Temperature Range -10 °C to 40 °C • Mounting Thread 1/4"-20 Internal Thread 	1

103	<p>Compact Power and Energy Meter Console, Digital 4" LCD</p> <ul style="list-style-type: none"> • Display Type Graphical LCD 320 x 240 pixels, LED Backlight • Display Screens Numerical, Bar Graph, Line Graph, Statistics, Simulated Analog Needle • Viewing Area 81.4 mm x 61.0 mm • (3.20" x 2.40") • Refresh Rate 20 Hz • Audio 1x Speaker • Sensor Interface • Time Constant Correction <1 s • AD Converter 16 bit • Trigger (Pulse Measurements, Pyroelectric Sensors) Adjustable, 0.1 - 100% • Connector DB9F, Left Side • Sensor Temperature Control Thermistor • Temperature Range -10 to 80 °C • Analog Outputs • Signal Amplified Input Signal (Not Corrected) • Voltage Range 0 to 2 V • Accuracy ±3% • Bandwidth Up to 100 kHz, Dependent on Sensor and Settings • Connector SMA, Left Side • Dimensions and Mounting • Dimensions (L x W x H) 180 mm x 105 mm x 38 mm • (7.09" x 4.13" x 1.50") • Weight <0.5 kg (<1.1 lb) • Mounting Options Kickstand; 1/4"-20 Post Thread • Operating Temperature 0 to 40 °C • Storage Temperature -40 to 70 °C 	1
104	<p>Standard Photodiode Power Sensor, Si, 400 - 1100 nm, 50 nW - 50 mW</p> <ul style="list-style-type: none"> • Aperture Size Ø9.5 mm • Head Temperature Measurement NTC Thermistor 4.7 kΩ • Housing Dimensions Ø30.5 mm x 12.7 mm • Active Detector Area 9.7 mm x 9.7 mm • Cable Length 1.5 m • Mounting Thread Universal 8-32 / M4 Tap, Post Not Included • Aperture Thread External SM1 (1.035"-40) • Linearity ±0.5% 	1

105	<p>Nexus Breadboard, 30" x 48" x 2.4", 1/4"-20 Mounting Holes</p> <ul style="list-style-type: none"> • Breadboard Thickness 60 mm (2.4") • Top Skin Flatness ± 0.1 mm (± 0.004") Over Any 600 mm x 600 mm Area • Construction Symmetrical Isotropic Construction in All Axes • Top and Bottom Plates 5 mm (0.20") Thick Stainless Steel, 4003 Grade Working Surface • Core Construction High-Density Plated Steel Honeycomb, 0.26 mm Thick • Damping Proprietary Optimized Broadband Damping • Side Panels Rigid Steel Box Section • Side Trim Finish Matte Black Linoleum, 2 mm Inset from Table Surface • Top Surface Finish Machined Matte Finish • Threads and Spacing 1/4"-20 Tapped Holes on 1" Centers • Distance from Edge to First Holes 0.5" from Table Edge on all Sides • Maximum Screw Depth 55 mm (2.1") [13.5 mm (0.53") for Outer Border Holes] 	1
106	<p>Clamping Fork, 1.24" Counterbored Slot, Universal</p> <ul style="list-style-type: none"> • Clamping Fork Secures Pedestal-Style Mount to a Breadboard or Optical Table • 1.24" (31.5 mm) Long Counterbored Slot • Swivel Fork 360° to Select Most Convenient Mounting Hole 	1
107	<p>1/4"-20 Cap Screw and Hardware Kit</p> <p>Includes:</p> <ul style="list-style-type: none"> • 1/4"-20 SS* Cap Screw, Thread Length: 3/8" Qty. 65 • 1/4"-20 SS* Cap Screw, Thread Length: 2" Qty. 35 • 1/4"-20 SS* Cap Screw, Thread Length: 5/8" Qty. 95 • 8-32 SS* Setscrew, 1/2" Qty. 220 • 1/4"-20 SS* Cap Screw, Thread Length: 3/4" Qty. 83 • 1/4"-20 SS* Setscrew, 1/2" Long Qty. 120 • 1/4"-20 SS* Cap Screw, Thread Length: 1" Qty. 66 • 1/4"-20 SS* Setscrew, 3/4" Long Qty. 83 • 1/4"-20 SS* Cap Screw, Thread Length: 1 1/4" Qty. 52 • 1/4"-20 SS* Nut Qty. 80 • 1/4"-20 SS* Cap Screw, Thread Length: 1 1/2" Qty. 46 • 1/4" SS* Washer, Outer Diameter: 0.500" Qty. 220 	2
108	<p>Ø1" Pedestal Pillar Post, 1/4"-20 Taps, L = 3"</p> <ul style="list-style-type: none"> • Solid Stainless Steel Construction • Precision Ground to Ø1" (Ø25.0 mm) • Stackable via 1/4"-20 (M6) Tapped Holes on Both Ends 	4
109	<p>Ø1" Pedestal Pillar Post, 1/4"-20 Taps, L = 0.5"</p> <ul style="list-style-type: none"> • Solid Stainless Steel Construction • Precision Ground to Ø1" (Ø25.0 mm) • Stackable via 1/4"-20 (M6) Tapped Holes on Both Ends 	4

110	8-32 Cap Screw and Hardware Kit <ul style="list-style-type: none"> ● 8-32 SS* Cap Screw, Thread Length: 1/4" Approx. Qty. 100 ● 8-32 SS* Cap Screw, Thread Length: 1 1/4" Approx. Qty. 21 ● 8-32 SS* Cap Screw, Thread Length: 3/8" Approx. Qty. 70 ● 8-32 SS* Cap Screw, Thread Length: 1 1/2" Approx. Qty. 33 ● 8-32 SS* Cap Screw, Thread Length: 1/2" Approx. Qty. 55 ● 8-32 SS* Nut Approx. Qty. 125 ● 8-32 SS* Cap Screw, Thread Length: 3/4" Approx. Qty. 38 ● #8 SS* Washer, Outer Diameter: 0.375" Approx. Qty. 260 ● 8-32 SS* Cap Screw, Thread Length: 1" Approx. Qty. 35 	2
111	Ø1" Pedestal Pillar Post, 1/4"-20 Taps, L = 2" <ul style="list-style-type: none"> ● Solid Stainless Steel Construction ● Precision Ground to Ø1" (Ø25.0 mm) ● Stackable via 1/4"-20 (M6) Tapped Holes on Both Ends 	7
112	Ø1" Pillar Post, 8-32 Taps, L = 4" <ul style="list-style-type: none"> ● Directly Mount Optomechanical Components ● 8-32 Tapped Hole on Both Ends 	3
113	Ø1" Pedestal Pillar Post, 8-32 Taps, L = 6" <ul style="list-style-type: none"> ● Solid Stainless Steel Construction ● Precision Ground to Ø1" (Ø25.0 mm) ● Stackable via 8-32 (M4) Tapped Holes on Both Ends 	10
114	Kinematic Mirror Mount for Ø1" Optics <ul style="list-style-type: none"> ● Mounts Ø1" Optics at Least 0.12" (3 mm) Thick ● Optic Held with a Nylon-Tipped Setscrew ● Angular Range: ±4° ● Resolution: 8 mrad (0.5°) per Revolution ● Two Counterbored #8 (M4) Through Holes Allow for Left- or Right-Handed Orientation ● 5/64" (2.0 mm) Hex Sockets in Lead Screws Accessible With or Without Knobs Removed 	2

115	Adapter with External 8-32 Threads and External 1/4"-20 Threads <ul style="list-style-type: none"> • Thread A (External): 8-32 • Thread B (External): 1/4"-20 • Length C: 0.57" (14.5 mm) • Machined from 303 Stainless Steel • Adapt One Common Thread Standard to Another • Ideal for Mounting Posts 	10
116	Ø1" Pedestal Pillar Post, 8-32 Taps, L = 4" <ul style="list-style-type: none"> • Solid Stainless Steel Construction • Precision Ground to Ø1" (Ø25.0 mm) • Stackable via 8-32 (M4) Tapped Holes on Both Ends 	6
117	Ø1" Pillar Post, 8-32 Taps, L = 0.5" 8-32 Tapped Hole on Both Ends	13
118	8-32 Stainless Steel Setscrew with Hex on Both Ends, 1/2" Long, 10 Pack <ul style="list-style-type: none"> • Length: 1/2" (12.7 mm) • Type: Double-Ended • Hex: 5/64" (Both Ends) • Material: 300 Series Stainless Steel 	2
119	Ø1" Pedestal Pillar Post, 1/4"-20 Taps, L = 1" <ul style="list-style-type: none"> • Solid Stainless Steel Construction • Precision Ground to Ø1" (Ø25.0 mm) • Stackable via 1/4"-20 (M6) Tapped Holes on Both Ends • The 1/4"-20 (M6) thread allows for easy integration of Ø1" post extensions and spacers. 	7
120	1/2" XYZ Translation Stage with Standard Micrometers, 1/4"- 20 Taps <ul style="list-style-type: none"> • Actuators: 148-811ST Micrometer • Resolution: 0.025" Translation per Revolution • Travel: 0.50" • Engraving: 0.001" (25.4 µm) per Division • Taps: Top: 1/4"-20 (Qty. 7) • Bottom: 1/4"-20 (Qty. 7) and 8-32 (Qty. 4) • Barrel Size: Ø3/8" (Ø9.5 mm) • Preconfigured, 3-Axis, Right-Handed XYZ Translators 	2
121	Compact Variable Height Clamp, 1/4"-20 Tapped Table clamp uses two cap screws: one in the 1/4"-20 tapped hole to adapt the clamp to virtually any height and another in the slotted hole to secure the clamp to the table.	20
122	Ø1" Pillar Post, 8-32 Taps, L = 1" <ul style="list-style-type: none"> • 8-32 Tapped Hole on Both Ends • These pillar posts are machined from nonmagnetic 303 stainless steel 	5

123	Ø3" Precision Kinematic Mirror Mount, 2 Adjusters <ul style="list-style-type: none"> • Optic Diameter: 3" or 75.0 mm • Minimum Optic Thickness: 0.28" (7.1 mm) • Optical Axis Height: 2.13" (54.1 mm) • Angular Adjustment: ±4° • Number of Adjusters: 2 • Type of Adjusters: Removable Knobs • Adjuster Thread: 1/4"-80 • Mounting: #8 (M4) Counterbored Holes, 4 Places • Optics Secured in Double-Bored Hole with Nylon-Tipped Setscrew • Thick Back Plate and Heavy-Duty Springs for Stability • Fabricated from Black Anodized Aluminum 	5
124	Ø1" Kinematic Mirror Mount, 2 Differential Adjusters, 1 1/4"- 80 Adjuster <ul style="list-style-type: none"> • Optic Diameter: 1" or 25.0 mm • Minimum Optic Thickness: 0.16" (4.1 mm) • Coarse Angular Adjustment: ±4° • Adjuster Thread: 1/4"-80 / M3 x 0.40 / M3 x 0.375 • Coarse Resolution: 8.3 mrad/rev • Resolution Using Differential Mechanism: 660 µrad/rev (136 arcsec/rev) • Minimum Incremental Movement: 2.91 µrad (0.6 arcsec) • Mounting Style: #8 (M4) Counterbored Holes, 2 Places • Angular Range with Differential Mechanism: ±1.5° • Optics Secured in Double Bored Hole with Nylon-Tipped Setscrew • Thick Back Plate and Heavy-Duty Springs for Stability • Fabricated from Black Anodized Aluminum 	2
125	Ø1" Clear-Edge Kinematic Mirror Mount, 2 Adjusters <ul style="list-style-type: none"> • Ø1" Optics Between 0.10" and 0.25" Thick • Angular Adjustment: ±4° • Resolution: 8.3 mrad/rev • Two #8 (M4) Counterbores Allow Left- and Right-Handed Post Mounting 	2
126	Adapter with Internal 8-32 Threads and External 1/4"-20 Threads, 0.38" Length	10
127	Ø1" Pillar Post, 8-32 Taps, L = 3" 8-32 Tapped Hole on Both Ends	3

128	Ø4" Precision Kinematic Mirror Mount, 2 Adjusters <ul style="list-style-type: none"> • Optic Diameter: 4" • Minimum Optic Thickness: 0.28" (7.1 mm) • Optical Axis Height: 2.85" (72.4 mm) • Angular Adjustment: ±4° • Number of Adjusters: 2 • Type of Adjusters: Removable Knobs • Adjuster Thread: 1/4"-80 • Mounting: #8 (M4) Counterbored Holes, 4 Places • Optics Secured in Double-Bored Hole with Nylon-Tipped Setscrew • Thick Back Plate and Heavy-Duty Springs for Stability • Fabricated from Black Anodized Aluminum • Hardened Stainless Steel Inserts at Kinematic Contacts Reduce Wear 	2
129	Screw-On Cable Straps (Qty. 15) Screw-On Straps for Cable Routing on Optical Tables or Breadboards	2
130	Optical Grade Cotton-Tipped Applicators, 100 Per Pack <ul style="list-style-type: none"> • 6" Wood Stick Disposable Applicators with Cotton Tips (100 per Pack) • Appropriate for Cleaning Connectors or Optics 	10
131	Kimwipes®, 280 Kimwipes per Box, 12 Boxes Per Case <ul style="list-style-type: none"> • 4.4" x 8.4" (11.2 cm x 21.3 cm), Durable, Absorbent, Extra Low Lint Sheets • Ideal for Cleaning Connectors between Polishing Steps 	2
132	Lens Tissues, 25 Sheets per Booklet, 50 Booklets in a Closeable Box <ul style="list-style-type: none"> • Extremely Soft, Premium Grade Sheets • Single Sheet Dimension: 4.9" x 2.9" (124 x 73 mm) 	1
133	20-Piece Balldriver and Hex Key Kit with Stand, Imperial <ul style="list-style-type: none"> • Facilitates Organization • Convenient Stand Included 	2
134	Adjustable Spanner Wrench <ul style="list-style-type: none"> • Diameter Range from 0.12" to 2.89" (3.0 mm to 73.4 mm) • Self-Centering, One-Handed Diameter Adjustment Mechanism • Replaceable Stainless Steel Blades 	1

135	<p>11-Piece Color-Coded Hex Key Set, Imperial</p> <ul style="list-style-type: none"> • Color Coded for Easily Distinguishable Sizes • Exposed Ends for Usual Hex Key Fit • 90 degree Bend, Black Oxide Finish • Engraved Holder Included 	2
136	<p>Ø25 mm Post Spacer and 1/4"-20 Setscrew Kit</p> <ul style="list-style-type: none"> • Solid Stainless Steel Construction • Large Diameter Relief Cut on Top and Bottom of Spacers for Additional Mounting Stability Includes: <ul style="list-style-type: none"> • Ø25 mm Post Spacer, 1 mm Thick Qty. 5 Ø25 mm Post Spacer, 7 mm Thick Qty. 1 • Ø25 mm Post Spacer, 2 mm Thick Qty. 5 Ø25 mm Post Spacer, 8 mm Thick Qty. 1 • Ø25 mm Post Spacer, 3 mm Thick Qty. 5 Ø25 mm Post Spacer, 9 mm Thick Qty. 1 • Ø25 mm Post Spacer, 4 mm Thick Qty. 5 Ø25 mm Post Spacer, 10 mm Thick Qty.5 • Ø25 mm Post Spacer, 5 mm Thick Qty. 5 1/4"-20 Setscrew, 7/8" Long Qty. 25 • Ø25 mm Post Spacer, 6 mm Thick Qty. 1 1/4"-20 Setscrew, 1" Long Qty. 25 	1
137	<p>High-dynamics tip/tilt platform, 35 mrad, strain gauge sensors, D-sub connector, incl. mirror Ø 12.5 mm</p> <ul style="list-style-type: none"> • Active axes θ_X, θ_Y • Integrated sensor SGS • Tip/tilt angle, closed loop (static motion at 0 to 120 V) ± 17.5 mrad • Resolution, open loop 0.1 μrad • Resolution, closed loop 1.0 μrad • Linearity 0.05 (unidirectional) % • Repeatability 1 (bidirectional) μrad • Resonant frequency, under load, with \varnothing 12.5 mm \times 3 mm quartz glass mirror 1.6 kHz • Gap between the center of rotation and platform surface 3.3 mm • Drive properties • Ceramic type PICMA® P-885 • Electrical capacitance per axis 6.2 μF • Operating temperature range -20 to 80 °C • Material platform Titanium • Mass (with cable and connector) 325 g • Cable length 2 m • Sensor/voltage connection Sub-D 37 (m) 	1

138

Digital multi-channel piezo controller, 3 axes, -30 to 130 V, strain gauge sensors, D-sub 37 socket, analog inputs

1

Axes: 3

Processor: DSP 32/64- bit, floating point, 375 MHz

Sampling rate, servo-control 25 kHz

Sensor:

Sensor type Strain gauge, piezoresistive sensors

Sensor resolution 20 at 1 kSPS oversampling bit

Sensor bandwidth (-3 dB) 6 kHz max.

Sensor channels 3

Amplifier

Output voltage -30 to 130 V

Amplifier channels 4

Amplifier bandwidth 6.5 kHz

Interface and operation

Interface / communication Ethernet, USB, RS-232, serial SPI

high- speed interface

Piezo / sensor connection Sub- D Special

Command set PI General Command Set (GCS)

Linearization 4th order polynomials, DDL (Dynamic Digital

Linearization)

Miscellaneous

Overtemp protection Max. 71 °C, deactivation of the piezo voltage output

Dimensions 263 × 89 × 302 mm

Mass 3 kg approx.

Operating voltage 24 VDC from external power supply (included)



CCD Camera: (Quantity 01)

1. CCD Sensor

- 1.1. Sensor Type: Scientific Interline CCD (Monochrome)
- 1.2. CCD Array: 1360 x 1024
- 1.3. Pixel Size: 6.45 μ m x 6.45 μ m
- 1.4. Sensor Dimensions: 8.8mm x 6.6mm (11mm diagonal)
- 1.5. Peak Quantum Efficiency: 75% at 600nm
- 1.6. Full Well Capacity: >11,000e- single pixel

2. Camera

- 2.1. Digital Output: 14-bit with 50MHz readout
- 2.2. Digitization Rate: USB3: 50MHz high frame rate
- 2.3. Read Noise (typical): <5.5e- RMS with 50MHz readout
- 2.4. Frame Rate: 22 fps (full resolution)
31 fps (binned 2x2)
- 2.5. Exposure Time Range: 25 μ s - 5 sec
- 2.6. Supported Binning Modes: 1x1, 2x2, 4x4, 6x6, 8x8, 12x12, 16x16
- 2.7. Dark Current Rate (typical): 0.036 e/p/s at +15oC regulated
- 2.8. Sensor Cooling: 0oC stabilized at 22oC ambient
Thermoelectric cooling with convection
- 2.9. Intelligent Quantification Features: DPC- Defective Pixel Correction

3. Interfacing

- 3.1. Computer Platforms/ Operating Systems: Windows 7 (64 bit), Windows 8 (64 bit), Windows 10 (64 bit), Windows 11.
- 3.2. Digital Interface: USB3.0
- 3.3. Triggering I/O Signals: Trigger In, Expose Out, End-of-Frame, Shutter Out
- 3.4. Supported Triggering Modes: Trigger First, Strobe, Bulb

4. Mechanical

- 4.1. Optical Interface: 1", C-mount optical format
- 4.2. Mounting Hole Thread Size: 1/4" - 20 thread, 4 sides
- 4.3. Camera Dimensions: 98.4mm x 76mm x 76mm (length x width x height)
- 4.4. Weight: 1.55lb, 0.72kg
- 4.5. Power Requirement: 7.5V DC, 2.5A

SLD light sources and lenslet arrays

Sr. No.	Items Description	Qty.
1	SLD Light Source <ul style="list-style-type: none"> • Center wavelength (nm) 795 ± 5 • Spectral width, FWHM (nm) Min. 13 Typ. 15 • Output power, SM (mW) Min. 15.0 Typ. 20.0 	1
2	Light Source <ul style="list-style-type: none"> • Output power, Pop, ex SM fiber, 12.0 mW typ. • Forward current at Pop, 200 mA typ. • Central wavelength at Pop, 840 nm typ • Spectrum width at Pop, FWHM, 25 nm typ. • Slow / fast polarization ratio (PM modules) at Pop, 10 dB typ. • SLD forward voltage at Pop, 2.6 V • Operating temperature at Pop, $-20\text{ }^{\circ}\text{C}$ to $+65\text{ }^{\circ}\text{C}$ • Cooler current, 2.5 A 	1
3	Array of refractive positive orthogonal microlenses <ul style="list-style-type: none"> • Material fused silica • Pitch $P=240\mu\text{m}$ • Radius $R=4.0\text{mm}$ • Focus $F=8.75\text{mm}$ (at 633nm) <p>(a) Size: diameter D=10mm x 1mm (5 Qty.)</p> <p>(b) Size: diameter D=10mm x 3mm (5 Qty.)</p>	10

Consumables:

Serial no.	Item	Quantity required
01	Optical Grade cotton-tipped applicators, 100 per pack	10
02	Screw-on cable straps (quantity 15)	02
03	Lens tissues, 25 sheets per booklet, 50 booklet in a box	01

Technical Compliance Statement

Annexure IA

Serial No	Item	Quantity	Compliance please write Yes/No	Make/Brand & Model No. of the Quoted Item	Remark
1	Cage Assembly Rod, 6" Long, Ø6 mm, 4 Pack <ul style="list-style-type: none"> • Ø6 mm Precision-Ground Stainless Steel • 4-40 Removable Setscrew at Both Ends 	6			
2	Cage Assembly Rod, 12" Long, Ø6 mm <ul style="list-style-type: none"> • Ø6 mm Precision-Ground Stainless Steel • 4-40 Removable Setscrew at Both Ends 	6			
3	Cage Assembly Rod, 1/2" Long, Ø6 mm, 4 Pack <ul style="list-style-type: none"> • Ø6 mm Precision-Ground Stainless Steel • 4-40 Removable Setscrew at Both Ends 	4			
4	Cage Assembly Rod, 2" Long, Ø6 mm, 4 Pack <ul style="list-style-type: none"> • Ø6 mm Precision-Ground Stainless Steel • 4-40 Removable Setscrew at Both Ends 	4			
5	Cage Assembly Rod, 8" Long, Ø6 mm, 4 Pack <ul style="list-style-type: none"> • Ø6 mm Precision-Ground Stainless Steel • 4-40 Removable Setscrew at Both Ends 	4			
6	Cage Assembly Rod, 1/4" Long, Ø6 mm <ul style="list-style-type: none"> • Ø6 mm Precision-Ground Stainless Steel • 4-40 Removable Setscrew at Both Ends 	12			
7	Cage Assembly Rod, 4" Long, Ø6 mm, 4 Pack <ul style="list-style-type: none"> • Ø6 mm Precision-Ground Stainless Steel • 4-40 Removable Setscrew at Both Ends 	3			
8	Cage Assembly Rod, 1" Long, Ø6 mm, 4 Pack <ul style="list-style-type: none"> • Ø6 mm Precision-Ground Stainless Steel • 4-40 Removable Setscrew at Both Ends 	4			
9	30 mm Cage Mounting Bracket <ul style="list-style-type: none"> • Compatible with 30 mm Cage Systems • Brackets Offer Clearance for SM1 Lens Tubes 	12			

10	SM1-Threaded 30 mm Cage Plate, 0.35" Thick, 2 Retaining Rings, 8-32 Tap <ul style="list-style-type: none"> • Post Mountable via 8-32 (M4) Tapped Hole • 0.35" Thick • Directly Mounts Optical Components Within a 30 mm Cage • System Assembly 	18			
11	Internally SM1-Threaded End Cap <ul style="list-style-type: none"> • black-anodized aluminum end caps used to seal off a Ø1" lens tube • It has internal SM1 (1.035"-40) threads to seal the end of an externally SM1-threaded lens tube 	6			
12	Ø1" Slip-On Post Clamp, 1/4"-20 Tap, 1/4" Counterbore <ul style="list-style-type: none"> • Clamping Feature Setscrew w/ 5/64" (2.0 mm) Hex • Tapped Hole 1/4"-20 	4			
13	5/64" (2 mm) Hex Key Thumbscrew, 4 Pack <ul style="list-style-type: none"> • Red Anodized Adjustment Knob with Engraved Hex Size 	1			
14	Ø1" Slip-On Post Clamp, 8-32 Tap, 8-32 Threaded Stud <ul style="list-style-type: none"> • Clamping Feature Setscrew w/ 5/64" (2.0 mm) Hex • Tapped Hole 8-32 	2			
15	Ø1" Unthreaded Adapter for Ø11 mm Cylindrical Components <ul style="list-style-type: none"> • Length 0.48" • Smooth 1" (25.4 mm) Outer Diameter • Two Setscrews Secure Collimator in Adapter 	6			
16	5 VDC, 2 A Regulated Power Supply with USB Type-A Port, 100/240 VAC <ul style="list-style-type: none"> • 5 VDC Regulated Power Supply • USB Type-A Port 	2			

17	SM1-Threaded Adapter for Ø11 mm, ≥0.35" (8.9 mm) Long Cylindrical Components <ul style="list-style-type: none"> • External SM1 (1.035"-40) Threads • Setscrews Secure Component in Adapter • Length 0.59" 	6			
18	SM1 Lens Tube, 0.30" Thread Depth, SM1RR Retaining Ring, 5 Pack <ul style="list-style-type: none"> • Stackable Design Enables Multi-Element Optical Systems • SM1-Threaded (1.035"-40) Bore Accepts Ø1" (Ø25.4 mm) Optics • Internal Thread Depth 0.30" (7.6 mm) 	3			
19	Ø1/2" Optical Post, SS, 8-32 Setscrew, 1/4"-20 Tap, L = 4", 5 Pack <ul style="list-style-type: none"> • One 8-32 Tapped Hole on Top and One 1/4"-20 Tapped • Hole at Base • Removable Double-Ended 8-32 Setscrew 	1			
20	SM1 Lens Tube, 2.00" Thread Depth, SM1RR Retaining Ring, 5 Pack <ul style="list-style-type: none"> • Stackable Design Enables Multi-Element Optical Systems • SM1-Threaded (1.035"-40) Bore Accepts Ø1" (Ø25.4 mm) Optics • Internal Thread Depth 2.00" (50.8 mm) 	1			

21	30 mm Cage Plate, Ø1.2" Double Bore for SM1 and C-Mount Lens Tubes <ul style="list-style-type: none"> • Ø1.2" Bore Supports Outside Diameter of SM1 Lens Tubes and C-Mount Extension Tubes • Compatible with 30 mm Cage Systems • Nylon-Tipped Setscrew and Double Bore Securely Hold Lens Tubes • Not Post Mountable 	5			
22	Externally SM1-Threaded End Cap <ul style="list-style-type: none"> • Black-anodized aluminum end caps used to seal off a Ø1" lens tube. • It has external SM1 threads to seal the end of an internally SM1-threaded lens tube 	3			
23	Extension Tube, Internal SM1 Threading of 3" Depth, External C-Mount Threading, One Retaining Ring Included <ul style="list-style-type: none"> • SM1 Thread Depth 3.00" (76.2 mm) • One Retaining Ring Included 	9			
24	Kinematic Mount with Vertical Drive, Ø1" Optics, 8-32 Taps <ul style="list-style-type: none"> • Mounts Ø1" Optics • Minimum Optic Thickness: 0.11" • Total Angular Range of ±3° • 0.25° per Revolution Adjustment • Graduated Knobs with 50 Divisions per Revolution • 8-32 Mounting Holes 	2			

25	<p>Complete 1" x 1" Kinematic Base, Top and Bottom</p> <p>Plates, #8 Counterbores</p> <ul style="list-style-type: none"> ● Ball and V-Groove Design Allows High-Precision Positioning ● Bottom Plate has a #8 Counterbore 	3			
26	<p>4-40 Cap Screw and Hardware Kit for Mini-Series</p> <ul style="list-style-type: none"> ● 4-40 SS Cap Screw, Thread Length: 3/16" Approx. Qty. 165 ● 4-40 SS Nut Approx. Qty. 200 ● 4-40 SS Cap Screw, Thread Length: 1/4" Approx. Qty. 135 ● #4 SS Washer, Outer Diameter: 0.313" Approx. Qty. 350 ● 4-40 SS Cap Screw, Thread Length: 5/16" Approx. Qty. 135 ● 3/32" Hex Key for 4-40 Cap Screws Approx. Qty. 10 ● 4-40 SS Cap Screw, Thread Length: 3/8" Approx. Qty. 125 ● 0.050" Hex Key for 4-40 Setscrews Approx. Qty. 10 ● 4-40 SS Setscrew, 1/4" Long Approx. Qty. 190 	1			

27	<p>Large Goniometer, 1.75" Distance to Point of Rotation,</p> <p>±5°</p> <ul style="list-style-type: none"> • Distance to Point of Rotation from Top Surface 1.75" • Rotation ±5° • Accuracy 10 arcmin (0.167°) • Load Capacity 1.0 lb (0.45 kg) • Goniometer Dimensions (W x D x H) 1.50" x 1.50" x 0.75" • Base Plate Dimensions (W x D x H) 1.50" x 2.50" x 0.20" • Base Plate Mounting Features Two 1/4" Clearance Slots 	1			
28	<p>Ø2" Manual Rotation Stage</p> <ul style="list-style-type: none"> • 360° Continuous Rotation • Laser-Engraved Graduation Marks at 2° Increments and Witness Line • Mounting Platform Height: 0.63" • Four 1/4" Clearance Holes to Mount to Optical Tables or Breadboards 	1			
29	<p>SM1 (1.035"-40) Coupler, External Threads, 0.5" Long,</p> <p>Two Locking Rings</p> <ul style="list-style-type: none"> • Included Two Locking Rings • Lens Tube Separation Range 0.22" - 0.34" • Length 1.0" 	1			
30	<p>30 mm Cage System, XY Translating Mount for Ø1"</p> <p>Optics with Quick Release Plate</p> <ul style="list-style-type: none"> • Accepts Ø1.00" Optics • ±1 mm Travel in X and Y via 3/16"-100 Adjusters • Drive 100 Threads per Inch (TPI) Adjusters • Optic Mounting SM1 (1.035"-40) Thread 	3			

31	30 mm Cage System, XY Translating Lens Mount for Ø1" Optics <ul style="list-style-type: none"> • Accepts Ø1.00" (Ø25.4 mm) Optics up to 0.39" (10.0 mm) Thick • ±1 mm Travel in X and Y via 3/16"-100 Adjusters • Drive 100 Threads per Inch (TPI) Adjusters • Optic Mounting SM1 (1.035"-40) Thread 	1			
32	1/2" Travel Manual Translation Stage for 30 mm Cage Systems <ul style="list-style-type: none"> • Includes 1/2" (13 mm) Travel Micrometer with 0.001" (10 µm) per Graduation • Precision Linear Ball Bearings • Lockable Design 	3			
33	SM1 Lens Tube, 1.00" Thread Depth, One Retaining Ring Included <ul style="list-style-type: none"> • Stackable Design Enables Multi-Element Optical Systems • SM1-Threaded (1.035"-40) Bore Accepts Ø1" (Ø25.4 mm) Optics • Internal Thread Depth 1.00" (25.4 mm) 	10			
34	Ø1" Mounted Pinhole, 1000 ± 10 µm Pinhole Diameter, Stainless Steel <ul style="list-style-type: none"> • Foil Material 300 Series Stainless Steel, • Black-Oxide Conversion Coating • Housing Material 6061-T6 Aluminum • Pinhole Diameter 1 mm • Foil Thickness 50 µm 	2			

35	SM1 Graduated Ring-Actuated Iris Diaphragm (Ø1.0 - Ø12.0 mm) <ul style="list-style-type: none"> • SM1 (1.035"-40) Threaded on Both Sides • Ring-Controlled, Ø12.0 mm Max Aperture • Black Spring Steel Leaves • Locking Setscrew with 0.05" (1.3 mm) Hex 	4			
36	6-Axis Locking Kinematic Mount for Ø1" Optics <ul style="list-style-type: none"> • Independent X, Y, and Continuous 360° Roll Adjustment • Optic Cell Threading SM1 (1.035"-40) • Max Optic Thickness 0.57" (14.6 mm) • Pitch/Yaw Adjust (Resolution) ±4° (5 mrad/rev) • X/Y Adjust (Resolution) ±2 mm (254 µm/rev) • Z Adjust (Resolution) ±3.2 mm (318 µm/rev) 	1			
37	Cage Rotation Mount for Ø1" Optics, SM1 Threaded, 8-32 Tap <ul style="list-style-type: none"> • 360° of Continuous Rotation, Lockable • 2° Graduations on Dial, Labeled Every 20° • Maximum Optic Thickness: 0.37" 	6			
38	SMA Fiber Adapter Plate with External SM1 (1.035"-40) Threads <ul style="list-style-type: none"> • Threading External SM1 (1.035"-40) • Connector Type SMA 	1			
39	30 mm Removable Segment Cage Plate, 0.35" Thick, 8-32 Mounting Holes <ul style="list-style-type: none"> • Build Removable Cage Segments for 30 mm Cage Systems • Accepts Ø6 mm Cage Rods • Flexure Cam Lock Design Allows Cage Segment Removal • SM1 (1.035"-40) Internal Thread • Two Retaining Rings Included 	12			

40	SM1 Retaining Ring for Ø1" Lens Tubes and Mounts <ul style="list-style-type: none"> • Thread SM1 (1.035"-40) • Thickness 0.08" (2.0 mm) • Clear Aperture Ø0.90" (Ø22.9 mm) 	4			
41	SM1 to M12 x 0.5 Lens Cell Adapter <ul style="list-style-type: none"> • Adapter Type Thread-to-Thread Adapter • External Threading SM1 (1.035"-40) 	4			
42	Adapter with External C-Mount Threads and Internal SM1 Threads, 4.4 mm Spacer <ul style="list-style-type: none"> • External Threads C-Mount (1.00"-32) • Internal Threads SM1 (1.035"-40) 	2			
43	Ø3" Precision Kinematic Mirror Mount, 2 Adjusters <ul style="list-style-type: none"> • Optics Secured in Double-Bored Hole with Nylon-Tipped Setscrew • Thick Back Plate and Heavy-Duty Springs for Stability • Fabricated from Black Anodized Aluminum • Hardened Stainless Steel Inserts at Kinematic Contacts • Reduce Wear • Minimum Optic Thickness 0.28" (7.1 mm) • Optical Axis Height 2.13" (54.1 mm) • Adjuster Thread 1/4"-80 	2			
44	Compact Rotation Stage with Fine Adjustment, 8-32 and 4-40 Taps <ul style="list-style-type: none"> • Coarse Rotation Range 360°, Continuous • Fine Adjustment Range ±6° • Horizontal Load Capacity Overall: 25 lbs (11.4 kg) • Fine Adjustment: 3.75 lbs (1.7 kg) • Platform Diameter 1.00" (25.4 mm) • Platform Height 0.75" (19.1 mm) • Platform Mounting Holes 8-32 (1 Place) 4-40 (8 Places) • Base Dimensions 1.50" x 1.50" (38.1 mm x 38.1 mm) 	1			

45	1.92" x 1.92" Kinematic Platform Mount <ul style="list-style-type: none"> ● Tapped Holes 6-32 (5 Places) ● Adjuster Thread 1/4"-80 ● Angular Range $\pm 4^\circ$ 	4			
46	$\varnothing 35$ mm Aperture, 30 mm Cage Plate, 0.35" Thick, 8-32 Tap <ul style="list-style-type: none"> ● Designed with the Largest Possible Clear Aperture ($\varnothing 35$ mm) ● Compatible with 30 mm Cage Systems ● Nylon-Tipped Setscrew and Double Bore Securely Hold Lens Tubes ● Post Mountable with an 8-32 Tapped Hole 	6			
47	Rotation Mount for $\varnothing 1/2$" Optics to Use with above stage <ul style="list-style-type: none"> ● Coarse Rotation: 360° Continuously Adjustable ● Graduations: 2° Increments ● Mount $\varnothing 1/2$" Optics up to 7.3 mm (0.29") Thick ● Runout: <0.0001" (25 μm) Along Optical Axis ● Max. Clear Aperture: 0.43" ● Lockable Design 	6			
48	Compact Electronics Housing, In-Line BNC, $\varnothing 0.63$" x 2.61" <ul style="list-style-type: none"> ● $\varnothing 0.63$" x 2.61" In-Line BNC Feedthrough Housing ● Compatible with Off-the-Shelf Electronic Elements ● Accepts 10 mm x 15 mm PCB ● Male and Female BNC Connectors ● Blank Area to Label Custom Circuits 	10			

49	SM30 Retaining Ring for Ø30 mm Lens Tubes and Mounts <ul style="list-style-type: none"> • Thread SM30 (M30.5 x 0.5) • Thickness 0.08" (2.0 mm) • Clear Aperture Ø1.10" (Ø27.9 mm) 	10			
50	Adapter with External SM1 Threads and Internal SM30 Threads, 0.29" Long <ul style="list-style-type: none"> • External Threads SM1 (1.035"-40) • Internal Threads SM30 (M30.5 x 0.5) 	6			
51	FC/APC Fiber Adapter Plate with External SM05 (0.535"-40) Threads, Wide Key (2.2 mm) <ul style="list-style-type: none"> • Connector Type FC/APC, 2.2 mm Wide Key • Threading External SM05 (0.535"-40) 	9			
52	SM30 Lens Tube, 1" Thread Depth, One Retaining Ring <p>Included</p> <ul style="list-style-type: none"> • Internal Thread Depth 1.00" (25.4 mm) • Stackable Design Enables Construction of Multi-Element Optical Systems • SM30-Threaded (M30.5 x 0.5) Bore Accepts Ø30 mm Optics • Compatible with All SM30-Threaded Components 	6			
53	30 mm Rotating Cage Segment Plate, Two SM1RR Retaining Rings Included, Imperial <ul style="list-style-type: none"> • Rotates an Entire 30 mm Cage System Subassembly • Around a Fixed SM1-Threaded Bore • Post Mountable via 8-32 Tapped Hole • Rotation Locked with Flexure Mechanism 	1			

54	Cage Rotation Mount for Ø1" Optics, SM1 Threaded, 8-32 Tap <ul style="list-style-type: none"> • 360° of Continuous Rotation, Lockable • 2° Graduations on Dial, Labeled Every 20° • Maximum Optic Thickness: 0.37" 	3			
55	FC/APC Fiber Adapter Plate with External SM1 (1.035"-40) Threads, Wide Key (2.2 mm) <ul style="list-style-type: none"> • Connector Type FC/APC, 2.2 mm Wide Key • Threading External SM1 (1.035"-40) 	3			
56	Blank 30 mm Cage Plate, 0.35" Thick, 8-32 Tap <ul style="list-style-type: none"> • Ideal for Custom Machining to Mount Non-Standard Components • Designed for 30 mm Cage System • Post-Mountable via 8-32 Tapped Hole • Black-Anodized Aluminum 	2			
57	SM05-Threaded 30 mm Cage Plate, 0.35" Thick, Two Retaining Rings, 8-32 Tap <ul style="list-style-type: none"> • Directly Mounts Ø1/2" Optical Components Within a 30 mm Cage System Assembly • 0.35" Thick • Tapped with Our Standard SM05 Thread (0.535"-40) • Post Mountable via 8-32 Tapped Hole 	3			
58	Ø1/2" Universal Post Holder, Spring Loaded Locking Thumbscrew, L = 2" <ul style="list-style-type: none"> • Base Swivels 360° for Mounting Convenience • Post can Pass Through Base, Enabling Minimum Beam Height • Magnets in Base Provide Holding Force Prior to Fastening to an Optical Table • Spring-Loaded Hex Locking Thumbscrews for Positioning Ease 	5			

59	Ø1/2" Optical Post, SS, 8-32 Setscrew, 1/4"-20 Tap, L = 2" <ul style="list-style-type: none"> • One 8-32 Tapped Hole on Top and One 1/4"-20 Tapped • Hole at Base • Removable Double-Ended 8-32 Setscrew 	5			
60	Ø3" Precision Kinematic Mirror Mount, 2 Adjusters <ul style="list-style-type: none"> • Optics Secured in Double-Bored Hole with Nylon-Tipped Setscrew • Thick Back Plate and Heavy-Duty Springs for Stability • Fabricated from Black Anodized Aluminum • Hardened Stainless Steel Inserts at Kinematic Contacts • Reduce Wear • Minimum Optic Thickness 0.28" • Optical Axis Height 2.13" • Angular Adjustment $\pm 4^\circ$ • Adjuster Thread 1/4"-80 	3			
61	Fine Hex Adjuster, 1/4"-80, 3/4" Long <ul style="list-style-type: none"> • Adjusters Manufactured from 303 Stainless Steel • 80 TPI Fine Adjustment 	1			
62	Small Goniometer with 1" Distance to Point of Rotation, $\pm 10^\circ$ <ul style="list-style-type: none"> • Rotation $\pm 10^\circ$ • Accuracy 10 arcmin (0.167°) • Load Capacity 0.25 lbs (0.113 kg) • Goniometer Dimensions (W x D x H) 1.00" x 1.00" x 0.50" • Base Plate Dimensions (W x D x H) 1.00" x 1.85" x 0.20" • Base Plate Mounting Features Two #4 Clearance Slots and • One 8-32 Threaded Hole Below the Stage 	2			

63	Spanner Wrench for SM1-Threaded Retaining Rings, Graduated Scale with 0.02" (0.5 mm) Increments, Length = 3.88" <ul style="list-style-type: none"> • Knurled Handle for Improved Grip • Feature Engraved Scale 	2			
64	0.050" (1.3 mm) Hex Key Thumbscrew, 4 Pack <ul style="list-style-type: none"> • Convenient Adjustment of Hex-Driven Actuators and Quick Component Assembly • Red Anodized Adjustment Knob with Engraved Hex Size 	2			
65	Soft Jaw Pliers, Ø1/2" to Ø2.5" <ul style="list-style-type: none"> • Ideal for Tightening and Loosening Ø1/2", Ø1", Ø30 mm, and Ø2" Lens Tubes • Non-Marring, Smooth, Urethane Jaw Design • Four Available Adjustment Positions 	2			
66	9/64" Hex Key Thumbscrew, 4 Pack <ul style="list-style-type: none"> • Convenient Adjustment of Hex-Driven Actuators and Quick Component Assembly • Red Anodized Adjustment Knob with Engraved Hex Size • Replaceable Hex Tip 	2			
67	7-Piece Precision Screwdriver Set <ul style="list-style-type: none"> • Superior Design for Maximum Control, Accuracy, and Durability • Chrome-Molybdenum Vanadium Steel Blades • Fast-Turning Swivel Caps with Cavity for Precision Centering • No-Roll Handle Design 	2			
68	Digital Calipers <ul style="list-style-type: none"> • Measurement Range 6.00" (150 mm) • Resolution 10 µm (0.0005") • Accuracy ±25.4 µm (±0.001") • Contact Points Carbide-Tipped 	1			

69	Spanner Wrench for SM30-Threaded Retaining Rings, Length = 4.35" <ul style="list-style-type: none"> ● Individual Sizes for Standard Retaining Rings ● Knurled Handle for Improved Grip 	2			
70	Spanner Wrench for SM05-Threaded Retaining Rings, Graduated Scale with 0.02" (0.5 mm) Increments, Length = 3.88" <ul style="list-style-type: none"> ● Feature Engraved Scale ● Individual Sizes for Standard Retaining Rings ● Knurled Handle for Improved Grip 	2			
71	Spanner Wrench for SM1.5-Threaded Retaining Rings, Graduated Scale with 0.02" (0.5 mm) Increments, Length = 3.88" <ul style="list-style-type: none"> ● Feature Engraved Scale ● Individual Sizes for Standard Retaining Rings ● Knurled Handle for Improved Grip 	2			
72	Spanner Wrench for SM2-Threaded Retaining Rings, Length = 4.35" <ul style="list-style-type: none"> ● Length = 4.35" ● Individual Sizes for Standard Retaining Rings ● Knurled Handle for Improved Grip 	2			

73	30 mm Removable Cage Plate, Front and Back Plate, Internal SM1 Threading <ul style="list-style-type: none"> • 30 mm Cage Compatible Back Plate • Magnetically Coupled Mounting Carriage • Accepts Ø1" (25.4 mm) Optics up to 0.20" (5.1 mm) Thick • Back Plate and Mounting Carriage Have Internal SM1 Threading • One Retaining Ring Included 	2			
74	SM1 Lens Tube, 3.00" Thread Depth, One Retaining Ring Included <ul style="list-style-type: none"> • Stackable Design Enables Multi-Element Optical Systems • SM1-Threaded (1.035"-40) Bore Accepts Ø1" (Ø25.4 mm) Optics • Internal Thread Depth 3.00" (76.2 mm) 	3			
75	f=19 mm, Ø1/2" Achromatic Doublet, SM05-Threaded Mount, ARC: 400-700 nm <ul style="list-style-type: none"> • AR Coating Range 400 - 700 nm • Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% • Diameter Tolerance +0.00/-0.10 mm • Focal Length Tolerance ±1% • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power 3λ/2 • Spherical Surface Irregularity (Peak to Valley) λ/4 • Centration ≤3 arcmin • Clear Aperture >90% of Diameter • Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) CW 300 W/cm (532 nm, Ø1.000 mm) • Materials N-BAF10/N-SF6HT • Mounting Thread SM05 (0.535"-40) 	2			

76	<p>f=19 mm, Ø1/2" Achromatic Doublet, SM05-Threaded Mount, ARC: 650-1050 nm</p> <ul style="list-style-type: none"> • AR Coating Range 650 - 1050 nm • Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% • Diameter Tolerance +0.00 / -0.10 mm • Focal Length Tolerance ±1% • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power 3λ/2 • Spherical Surface Irregularity (Peak to Valley) λ/4 at 632.8 nm • Centration <3 arcmin • Clear Aperture >90% of Diameter • Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, 0.155 mm) CW 1000 W/cm (1070 nm, Ø0.971 mm) • Materials N-BAF10/N-SF6HT • Mounting Thread SM05 (0.535"-40) 	2			
77	<p>f=50 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 400-700 nm</p> <ul style="list-style-type: none"> • AR Coating Range 400 - 700 nm • Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% • Diameter Tolerance +0.00/-0.10 mm • Focal Length Tolerance ±1% • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power 3λ/2 • Spherical Surface Irregularity (Peak to Valley)c λ/4 • Centration ≤3 arcmin • Clear Aperture >90% of Diameter • Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) CW 300 W/cm (532 nm, Ø1.000 mm) • Operating Temperature -40 °C to 85 °C • Lens Diameter (mm) 25.4 • Mounting Thread SM1 (1.035"-40) • Materials N-BAF10/N-SF10 	2			

78	<p>f=50 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 650-1050 nm</p> <ul style="list-style-type: none"> • AR Coating Range 650 - 1050 nm • Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% • Diameter 1" • Diameter Tolerance +0.00 / -0.10 mm • Focal Length Tolerance ±1% • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\lambda/4$ at 632.8 nm • Centration <3 arcmin • Clear Aperture >90% of Diameter • Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, 0.155 mm) • CW 1000 W/cm (1070 nm, Ø0.971 mm) • Operating Temperature -40 °C to +85 °C • Mounting Thread SM1 (1.035"-40) • Materials N-LAK22/N-SF6HT 	2			
79	<p>f=75 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 400-700 nm</p> <ul style="list-style-type: none"> • AR Coating Range 400 - 700 nm • Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% • Diameter Tolerance +0.00/-0.10 mm • Focal Length Tolerance ±1% • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\lambda/4$ • Centration ≤3 arcmin • Clear Aperture >90% of Diameter • Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) • CW 300 W/cm (532 nm, Ø1.000 mm) • Operating Temperature -40 °C to 85 °C • Lens Diameter (mm) 25.4 • Mounting Thread SM1 (1.035"-40) • Materials N-BK7/SF5 	2			

80	<ul style="list-style-type: none"> ● f=75 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 650-1050 nm ● AR Coating Range 650 - 1050 nm ● Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% ● Diameter 1" ● Diameter Tolerance +0.00 / -0.10 mm ● Focal Length Tolerance ±1% ● Surface Quality 40-20 Scratch-Dig ● Spherical Surface Power 3λ/2 ● Spherical Surface Irregularity (Peak to Valley) λ/4 at 632.8 nm ● Centration <3 arcmin ● Clear Aperture >90% of Diameter ● Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, 0.155 mm) ● CW 1000 W/cm (1070 nm, Ø0.971 mm) ● Operating Temperature -40 °C to +85 °C ● Mounting Thread SM1 (1.035"-40) ● Materials N-BAF10/N-SF6HT 	2			
81	<p>f=80 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 400-700 nm</p> <ul style="list-style-type: none"> ● AR Coating Range 400 - 700 nm ● Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% ● Diameter Tolerance +0.00/-0.10 mm ● Focal Length Tolerance ±1% ● Surface Quality 40-20 Scratch-Dig ● Spherical Surface Power 3λ/2 ● Spherical Surface Irregularity (Peak to Valley)c λ/4 ● Centration ≤3 arcmin ● Clear Aperture >90% of Diameter ● Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) ● CW 300 W/cm (532 nm, Ø1.000 mm) ● Operating Temperature -40 °C to 85 °C ● Lens Diameter (mm) 25.4 ● Mounting Thread SM1 (1.035"-40) ● Materials N-BK7/N-SF5 	2			

82	<p>f=80 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 650-1050 nm</p> <ul style="list-style-type: none"> ● AR Coating Range 650 - 1050 nm ● Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% ● Diameter 1" ● Diameter Tolerance +0.00 / -0.10 mm ● Focal Length Tolerance ±1% ● Surface Quality 40-20 Scratch-Dig ● Spherical Surface Power $3\lambda/2$ ● Spherical Surface Irregularity (Peak to Valley) $\lambda/4$ at 632.8 nm ● Centration <3 arcmin ● Clear Aperture >90% of Diameter ● Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, Ø0.155 mm) ● CW 1000 W/cm (1070 nm, Ø0.971 mm) ● Operating Temperature -40 °C to +85 °C ● Mounting Thread SM1 (1.035"-40) ● Materials N-BAF10/N-SF6HT 	2			
83	<p>f=100 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 400-700 nm</p> <ul style="list-style-type: none"> ● AR Coating Range 400 - 700 nm ● Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% ● Diameter Tolerance +0.00/-0.10 mm ● Focal Length Tolerance ±1% ● Surface Quality 40-20 Scratch-Dig ● Spherical Surface Power $3\lambda/2$ ● Spherical Surface Irregularity (Peak to Valley) $\lambda/4$ ● Centration ≤ 3 arcmin ● Clear Aperture >90% of Diameter ● Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) ● CW 300 W/cm (532 nm, Ø1.000 mm) ● Operating Temperature -40 °C to 85 °C ● Lens Diameter (mm) 25.4 ● Mounting Thread SM1 (1.035"-40) ● Materials N-BK7/SF5 	5			

84	<p>f=100 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 650-1050 nm</p> <ul style="list-style-type: none"> • AR Coating Range 650 - 1050 nm • Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% • Diameter 1" • Diameter Tolerance +0.00 / -0.10 mm • Focal Length Tolerance ±1% • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\lambda/4$ at 632.8 nm • Centration <3 arcmin • Clear Aperture >90% of Diameter • Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, 0.155 mm) • CW 1000 W/cm (1070 nm, Ø0.971 mm) • Operating Temperature -40 °C to +85 °C • Mounting Thread SM1 (1.035"-40) • Materials N-LAK22/N-SF6HT 	5			
85	<p>f=125 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 400-700 nm</p> <ul style="list-style-type: none"> • AR Coating Range 400 - 700 nm • Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% • Diameter Tolerance +0.00/-0.10 mm • Focal Length Tolerance ±1% • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\lambda/4$ • Centration ≤3 arcmin • Clear Aperture >90% of Diameter • Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) • CW 300 W/cm (532 nm, Ø1.000 mm) • Operating Temperature -40 °C to 85 °C • Lens Diameter (mm) 25.4 • Mounting Thread SM1 (1.035"-40) • Materials N-BK7/N-SF5 	5			

86	<p>f=125 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 650-1050 nm</p> <ul style="list-style-type: none"> ● AR Coating Range 650 - 1050 nm ● Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% ● Diameter 1" ● Diameter Tolerance +0.00 / -0.10 mm ● Focal Length Tolerance ±1% ● Surface Quality 40-20 Scratch-Dig ● Spherical Surface Power $3\lambda/2$ ● Spherical Surface Irregularity (Peak to Valley) $\lambda/4$ at 632.8 nm ● Centration <3 arcmin ● Clear Aperture >90% of Diameter ● Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, Ø0.155 mm) ● CW 1000 W/cm (1070 nm, Ø0.971 mm) ● Operating Temperature -40 °C to +85 °C ● Mounting Thread SM1 (1.035"-40) ● Materials N-BK7/N-SF8 	5			
87	<p>f=150 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 400-700 nm</p> <ul style="list-style-type: none"> ● AR Coating Range 400 - 700 nm ● Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% ● Diameter Tolerance +0.00/-0.10 mm ● Focal Length Tolerance ±1% ● Surface Quality 40-20 Scratch-Dig ● Spherical Surface Power $3\lambda/2$ ● Spherical Surface Irregularity (Peak to Valley)c $\lambda/4$ ● Centration ≤3 arcmin ● Clear Aperture >90% of Diameter ● Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) ● CW 300 W/cm (532 nm, Ø1.000 mm) ● Operating Temperature -40 °C to 85 °C ● Lens Diameter (mm) 25.4 ● Mounting Thread SM1 (1.035"-40) ● Materials N-BK7/SF5 	5			

88	<p>f=150 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 650-1050 nm</p> <ul style="list-style-type: none"> • AR Coating Range 650 - 1050 nm • Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% • Diameter 1" • Diameter Tolerance +0.00 / -0.10 mm • Focal Length Tolerance ±1% • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\lambda/4$ at 632.8 nm • Centration <3 arcmin • Clear Aperture >90% of Diameter • Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, Ø0.155 mm) • CW 1000 W/cm (1070 nm, Ø0.971 mm) • Operating Temperature -40 °C to +85 °C • Mounting Thread SM1 (1.035"-40) • Materials N-LAK22/N-SF6HT 	5			
89	<p>f=200 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 400-700 nm</p> <ul style="list-style-type: none"> • AR Coating Range 400 - 700 nm • Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% • Diameter Tolerance +0.00/-0.10 mm • Focal Length Tolerance ±1% • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\lambda/4$ • Centration ≤ 3 arcmin • Clear Aperture >90% of Diameter • Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) • CW 300 W/cm (532 nm, Ø1.000 mm) • Operating Temperature -40 °C to 85 °C • Lens Diameter (mm) 25.4 • Mounting Thread SM1 (1.035"-40) • Materials N-SSK5/LAFN7 	5			

90	<p>f=200 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 650-1050 nm</p> <ul style="list-style-type: none"> ● AR Coating Range 650 - 1050 nm ● Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% ● Diameter 1" ● Diameter Tolerance +0.00 / -0.10 mm ● Focal Length Tolerance ±1% ● Surface Quality 40-20 Scratch-Dig ● Spherical Surface Power $3\lambda/2$ ● Spherical Surface Irregularity (Peak to Valley) $\lambda/4$ at 632.8 nm ● Centration <3 arcmin ● Clear Aperture >90% of Diameter ● Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, Ø0.155 mm) ● CW 1000 W/cm (1070 nm, Ø0.971 mm) ● Operating Temperature -40 °C to +85 °C ● Mounting Thread SM1 (1.035"-40) ● Materials N-LAK22/N-SF10 	5			
91	<p>f=250 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 400-700 nm</p> <ul style="list-style-type: none"> ● AR Coating Range 400 - 700 nm ● Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% ● Diameter Tolerance +0.00/-0.10 mm ● Focal Length Tolerance ±1% ● Surface Quality 40-20 Scratch-Dig ● Spherical Surface Power $3\lambda/2$ ● Spherical Surface Irregularity (Peak to Valley)c $\lambda/4$ ● Centration ≤3 arcmin ● Clear Aperture >90% of Diameter ● Damage Threshold Pulsed 0.5 J/cm² (532 nm, 10 ns Pulse, 10 Hz, Ø0.566 mm) ● CW 300 W/cm (532 nm, Ø1.000 mm) ● Operating Temperature -40 °C to 85 °C ● Lens Diameter (mm) 25.4 ● Mounting Thread SM1 (1.035"-40) ● Materials N-BK7/SF2 	5			

92	<p>f=250 mm, Ø1" Achromatic Doublet, SM1-Threaded Mount, ARC: 650-1050 nm</p> <ul style="list-style-type: none"> • AR Coating Range 650 - 1050 nm • Reflectance Over AR Coating Range (0° AOI) Ravg < 0.5% • Diameter 1" • Diameter Tolerance +0.00 / -0.10 mm • Focal Length Tolerance ±1% • Surface Quality 40-20 Scratch-Dig • Spherical Surface Power $3\lambda/2$ • Spherical Surface Irregularity (Peak to Valley) $\lambda/4$ at 632.8 nm • Centration <3 arcmin • Clear Aperture >90% of Diameter • Damage Threshold Pulse 5 J/cm² (810 nm, 10 ns pulse, 10 Hz, Ø0.155 mm) • CW 1000 W/cm (1070 nm, Ø0.971 mm) • Operating Temperature -40 °C to +85 °C • Mounting Thread SM1 (1.035"-40) • Materials SF5/N-SF6HT 	5			
93	<p>Ø1" Protected Silver Mirror, 10 Pack</p> <ul style="list-style-type: none"> • Thickness 6.0 mm (0.24") • Thickness Tolerance ±0.2 mm • Reflectance (Average) >97% for 450 nm - 2 µm, >95% for 2-20 µm • Substrate Fused Silica • Surface Flatness (Peak to Valley) $\lambda/10$ @ 633 nm • Surface Quality 40-20 Scratch-Dig • Parallelism <3 arcmin • Clear Aperture >90% of Diameter • Damage Threshold Pulsed 0.225 J/cm² (800 nm, 99 fs, 1 kHz, Ø0.167 mm) <p>1 J/cm² (1064 nm, 10 ns, 10 Hz, Ø1.010 mm)</p> <p>CW: 500 W/cm (1.07 µm, Ø0.974 mm)</p> <p>1500 W/cm (10.6 µm, Ø0.339 mm)</p>	2			

94	<p>Box with 10 Reflective ND Filters, Ø25 mm, SM1 Mounted, 350 - 1100 nm</p> <ul style="list-style-type: none"> • Included Optical Densities 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 1.0, 2.0, 3.0, 4.0 • Inconel Coated Ø25 mm SM1 Mounted Filters • Substrate N-BK7 • Front Surface Coating Inconel • Spectral Range 350 - 1100 nm • Unmounted Optic Diameter Ø25.0 +0.00/-0.20 mm • Unmounted Optic Thickness 1.0 ± 0.10 mm (unmounted) • Clear Aperture 90% of Optic Diameter • Surface Quality 40-20 Scratch-Dig • Surface Flatness <2λ • Parallelism <3 arcsec 	2			
95	<p>Compact Laser Module with USB Connector, 520 nm,</p> <p>0.9 mW (Typ.)</p> <ul style="list-style-type: none"> • Output Power (Typical) 0.90 mW • Laser Safety Class Class 2 • Beam Shape Round, Ø3 mm (Typical) at 5 cm • Housing Dimensions Ø11.0 mm x 60.2 mm 	1			
96	<p>Compact Laser Module with USB Connector, 635 nm,</p> <p>0.9 mW (Typ.)</p> <ul style="list-style-type: none"> • Wavelength (Typical) 635 nm • Output Power (Typical) 0.90 mW • Laser Safety Class Class 2 • Beam Shape Round, Ø3 mm (Typical) at 5 cm • Housing Dimensions Ø11.0 mm x 60.2 mm 	1			

97	16 mm Cage-Cube-Mounted Polarizing Beamsplitter Cube, 620-1000 nm, 8-32 Tap <ul style="list-style-type: none"> • Ports 4 Ports with SM05 (0.535"-40) Threading • Beamsplitter Material N-SF1 • Extinction Ratio TP:TS > 1000:1 • Transmission Efficiency TP > 90% • Reflection Efficiency RS, avg > 95% • Transmitted Beam Deviation $0^\circ \pm 5$ arcmin • Reflected Beam Deviation $90^\circ \pm 20$ arcmin • Clear Aperture $\varnothing 12.50$ mm • Transmitted Wavefront Error $< \lambda/4$ at 633 nm over $\varnothing 12.50$ mm • Surface Quality 40-20 Scratch-Dig 	2			
98	30 mm Cage Cube-Mounted Pellicle Beamsplitter, 45:55 (R:T), 700 - 900 nm <ul style="list-style-type: none"> • Ports 4, all SM1 Threaded (1.035"-40) • Membrane Material Nitrocellulose • Housing Material Engraved Black Anodized Aluminum • Temperature Range -40 to 70 °C • Index of Refraction 1.5 at 550 nm • Surface Quality 40-20 Scratch-Dig • Transmitted Wavefront Error 0.5λ (Typical) • Reflected Wavefront Error 1λ (Typical) 	2			
99	Cube-Mounted Pellicle Beamsplitter, 8:92 (R:T), Uncoated, 400 - 2400 nm <ul style="list-style-type: none"> • Ports 4, all SM1 Threaded (1.035"-40) • Membrane Material Nitrocellulose • Housing Material Engraved Black Anodized Aluminum • Temperature Range -40 to 70 °C • Index of Refraction 1.5 at 550 nm • Surface Quality 40-20 Scratch-Dig • Transmitted Wavefront Error 0.5λ (Typical) • Reflected Wavefront Error 1λ (Typical) 	2			
100	$\varnothing 25.0$ mm Unmounted Linear Polarizer, 550 - 1500 nm <ul style="list-style-type: none"> • Laser Damage Threshold 1 W/cm² Continuous Block • 5 W/cm² Continuous Pass • Thickness (T) 2.0 ± 0.2 mm <p style="text-align: center;">Clear Aperture $\varnothing 22.9$ mm ($\varnothing 0.90$")</p>	2			

101	<p>Fabry-Perot Benchtop Laser Source, 637 nm, 8.0 mW,</p> <p>FC/PC</p> <ul style="list-style-type: none"> • Minimum Full Output Power 8.0 mW • Setpoint Resolution 0.01 mW • Laser Class 3B • Numerical Aperture 0.10 - 0.14 • Output Fiber Connector FC/PC, Wide 2.1 mm Key • Compatible • Power Stability 15 min: ± 0.05 dB, 24 hr: ± 0.1 dB (After 1 hr Warm-Up at 25 ± 10 °C Ambient) • Display Accuracy $\pm 10\%$ • Adjustment Range ~0 mW to Full Power • Input Power 115 VAC / 230 VAC (Switch Selectable) 50 - 60 Hz • Modulation Input 0 - 5 V = 0 - Full Power, DC or Sine Wave Input Only • Operating Temperature 15 to 35 °C • Storage Temperature 0 to 50 °C 	1			
102	<p>Infrared Viewer, 350 - 1300 nm</p> <ul style="list-style-type: none"> • Spectral Sensitivity 350 - 1300 nm • Resolution (Center) 60 LP/mm • Field of View 40° • Magnification 1X • Objective Lens F1.4/25 mm • Adjustable Iris Included • Focus <0.1 m to Infinity • Charging Port 5 V Micro-USB • Non-Uniformity of Screen <20% • Non-Uniformity of Response <15% • Distortion of Image <18% • Battery Life (Continuous) 50 hours • Weight 0.4 kg • Dimensions 153.0 mm - 157.1 mm x 172.9 mm x 51.0 mm (6.02" - 6.18" x 6.81" x 2.01") • Temperature Range -10 °C to 40 °C • Mounting Thread 1/4"-20 Internal Thread 	1			

103	<p>Compact Power and Energy Meter Console, Digital 4" LCD</p> <ul style="list-style-type: none"> • Display Type Graphical LCD 320 x 240 pixels, LED Backlight • Display Screens Numerical, Bar Graph, Line Graph, Statistics, Simulated Analog Needle • Viewing Area 81.4 mm x 61.0 mm (3.20" x 2.40") • Refresh Rate 20 Hz • Audio 1x Speaker • Sensor Interface • Time Constant Correction <1 s • AD Converter 16 bit • Trigger (Pulse Measurements, Pyroelectric Sensors) Adjustable, 0.1 - 100% • Connector DB9F, Left Side • Sensor Temperature Control Thermistor • Temperature Range -10 to 80 °C • Analog Outputs • Signal Amplified Input Signal (Not Corrected) • Voltage Range 0 to 2 V • Accuracy ±3% • Bandwidth Up to 100 kHz, Dependent on Sensor and Settings • Connector SMA, Left Side • Dimensions and Mounting • Dimensions (L x W x H) 180 mm x 105 mm x 38 mm (7.09" x 4.13" x 1.50") • Weight <0.5 kg (<1.1 lb) • Mounting Options Kickstand; 1/4"-20 Post Thread • Operating Temperature 0 to 40 °C • Storage Temperature -40 to 70 °C 	1			
104	<p>Standard Photodiode Power Sensor, Si, 400 - 1100 nm, 50 nW - 50 mW</p> <ul style="list-style-type: none"> • Aperture Size Ø9.5 mm • Head Temperature Measurement NTC Thermistor 4.7 kΩ • Housing Dimensions Ø30.5 mm x 12.7 mm • Active Detector Area 9.7 mm x 9.7 mm • Cable Length 1.5 m • Mounting Thread Universal 8-32 / M4 Tap, Post Not Included • Aperture Thread External SM1 (1.035"-40) • Linearity ±0.5% 	1			

105	<p>Nexus Breadboard, 30" x 48" x 2.4", 1/4"-20 Mounting Holes</p> <ul style="list-style-type: none"> ● Breadboard Thickness 60 mm (2.4") ● Top Skin Flatness ± 0.1 mm (± 0.004") Over Any 600 mm x 600 mm Area ● Construction Symmetrical Isotropic Construction in All Axes ● Top and Bottom Plates 5 mm (0.20") Thick Stainless Steel, 4003 Grade Working Surface ● Core Construction High-Density Plated Steel Honeycomb, 0.26 mm Thick ● Damping Proprietary Optimized Broadband Damping ● Side Panels Rigid Steel Box Section ● Side Trim Finish Matte Black Linoleum, 2 mm Inset from Table Surface ● Top Surface Finish Machined Matte Finish ● Threads and Spacing 1/4"-20 Tapped Holes on 1" Centers ● Distance from Edge to First Holes 0.5" from Table Edge on all Sides ● Maximum Screw Depth 55 mm (2.1") [13.5 mm (0.53") for Outer Border Holes] 	1			
106	<p>Clamping Fork, 1.24" Counterbored Slot, Universal</p> <ul style="list-style-type: none"> ● Clamping Fork Secures Pedestal-Style Mount to a Breadboard or Optical Table ● 1.24" (31.5 mm) Long Counterbored Slot ● Swivel Fork 360° to Select Most Convenient Mounting Hole 	1			

107	1/4"-20 Cap Screw and Hardware Kit Includes: <ul style="list-style-type: none"> ● 1/4"-20 SS* Cap Screw, Thread Length: 3/8" Qty. 65 ● 1/4"-20 SS* Cap Screw, Thread Length: 2" Qty. 35 ● 1/4"-20 SS* Cap Screw, Thread Length: 5/8" Qty. 95 ● 8-32 SS* Setscrew, 1/2" Qty. 220 ● 1/4"-20 SS* Cap Screw, Thread Length: 3/4" Qty. 83 ● 1/4"-20 SS* Setscrew, 1/2" Long Qty. 120 ● 1/4"-20 SS* Cap Screw, Thread Length: 1" Qty. 66 ● 1/4"-20 SS* Setscrew, 3/4" Long Qty. 83 ● 1/4"-20 SS* Cap Screw, Thread Length: 1 1/4" Qty. 52 ● 1/4"-20 SS* Nut Qty. 80 ● 1/4"-20 SS* Cap Screw, Thread Length: 1 1/2" Qty. 46 ● 1/4" SS* Washer, Outer Diameter: 0.500" Qty. 220 	2			
108	Ø1" Pedestal Pillar Post, 1/4"-20 Taps, L = 3" <ul style="list-style-type: none"> ● Solid Stainless Steel Construction ● Precision Ground to Ø1" (Ø25.0 mm) ● Stackable via 1/4"-20 (M6) Tapped Holes on Both Ends 	4			
109	Ø1" Pedestal Pillar Post, 1/4"-20 Taps, L = 0.5" <ul style="list-style-type: none"> ● Solid Stainless Steel Construction ● Precision Ground to Ø1" (Ø25.0 mm) ● Stackable via 1/4"-20 (M6) Tapped Holes on Both Ends 	4			

110	8-32 Cap Screw and Hardware Kit <ul style="list-style-type: none"> ● 8-32 SS* Cap Screw, Thread Length: 1/4" Approx. Qty. 100 ● 8-32 SS* Cap Screw, Thread Length: 1 1/4" Approx. Qty. 21 ● 8-32 SS* Cap Screw, Thread Length: 3/8" Approx. Qty. 70 ● 8-32 SS* Cap Screw, Thread Length: 1 1/2" Approx. Qty. 33 ● 8-32 SS* Cap Screw, Thread Length: 1/2" Approx. Qty. 55 ● 8-32 SS* Nut Approx. Qty. 125 ● 8-32 SS* Cap Screw, Thread Length: 3/4" Approx. Qty. 38 ● #8 SS* Washer, Outer Diameter: 0.375" Approx. Qty. 260 ● 8-32 SS* Cap Screw, Thread Length: 1" Approx. Qty. 35 	2			
111	Ø1" Pedestal Pillar Post, 1/4"-20 Taps, L = 2" <ul style="list-style-type: none"> ● Solid Stainless Steel Construction ● Precision Ground to Ø1" (Ø25.0 mm) ● Stackable via 1/4"-20 (M6) Tapped Holes on Both Ends 	7			
112	Ø1" Pillar Post, 8-32 Taps, L = 4" <ul style="list-style-type: none"> ● Directly Mount Optomechanical Components ● 8-32 Tapped Hole on Both Ends 	3			
113	Ø1" Pedestal Pillar Post, 8-32 Taps, L = 6" <ul style="list-style-type: none"> ● Solid Stainless Steel Construction ● Precision Ground to Ø1" (Ø25.0 mm) ● Stackable via 8-32 (M4) Tapped Holes on Both Ends 	10			

114	Kinematic Mirror Mount for Ø1" Optics <ul style="list-style-type: none"> • Mounts Ø1" Optics at Least 0.12" (3 mm) Thick • Optic Held with a Nylon-Tipped Setscrew • Angular Range: ±4° • Resolution: 8 mrad (0.5°) per Revolution • Two Counterbored #8 (M4) Through Holes Allow for Left- or Right- Handed Orientation • 5/64" (2.0 mm) Hex Sockets in Lead Screws Accessible With or Without Knobs Removed 	2			
115	Adapter with External 8-32 Threads and External 1/4"-20 Threads <ul style="list-style-type: none"> • Thread A (External): 8-32 • Thread B (External): 1/4"-20 • Length C: 0.57" (14.5 mm) • Machined from 303 Stainless Steel • Adapt One Common Thread Standard to Another • Ideal for Mounting Posts 	10			
116	Ø1" Pedestal Pillar Post, 8-32 Taps, L = 4" <ul style="list-style-type: none"> • Solid Stainless Steel Construction • Precision Ground to Ø1" (Ø25.0 mm) • Stackable via 8-32 (M4) Tapped Holes on Both Ends 	6			
117	Ø1" Pillar Post, 8-32 Taps, L = 0.5" 8-32 Tapped Hole on Both Ends	13			
118	8-32 Stainless Steel Setscrew with Hex on Both Ends, 1/2" Long, 10 Pack <ul style="list-style-type: none"> • Length: 1/2" (12.7 mm) • Type: Double-Ended • Hex: 5/64" (Both Ends) • Material: 300 Series Stainless Steel 	2			
119	Ø1" Pedestal Pillar Post, 1/4"-20 Taps, L = 1" <ul style="list-style-type: none"> • Solid Stainless Steel Construction • Precision Ground to Ø1" (Ø25.0 mm) • Stackable via 1/4"-20 (M6) Tapped Holes on Both Ends • The 1/4"-20 (M6) thread allows for easy integration of Ø1" post extensions and spacers. 	7			

120	1/2" XYZ Translation Stage with Standard Micrometers, 1/4"- 20 Taps <ul style="list-style-type: none"> ● Actuators: 148-811ST Micrometer ● Resolution: 0.025" Translation per Revolution ● Travel: 0.50" ● Engraving: 0.001" (25.4 μm) per Division ● Taps: Top: 1/4"-20 (Qty. 7) ● Bottom: 1/4"-20 (Qty. 7) and 8-32 (Qty. 4) ● Barrel Size: Ø3/8" (Ø9.5 mm) ● Preconfigured, 3-Axis, Right-Handed XYZ Translators 	2			
121	Compact Variable Height Clamp, 1/4"-20 Tapped Table clamp uses two cap screws: one in the 1/4"-20 tapped hole to adapt the clamp to virtually any height and another in the slotted hole to secure the clamp to the table.	20			
122	Ø1" Pillar Post, 8-32 Taps, L = 1" <ul style="list-style-type: none"> ● 8-32 Tapped Hole on Both Ends ● These pillar posts are machined from nonmagnetic 303 stainless steel 	5			
123	Ø3" Precision Kinematic Mirror Mount, 2 Adjusters <ul style="list-style-type: none"> ● Optic Diameter: 3" or 75.0 mm ● Minimum Optic Thickness: 0.28" (7.1 mm) ● Optical Axis Height: 2.13" (54.1 mm) ● Angular Adjustment: ±4° ● Number of Adjusters: 2 ● Type of Adjusters: Removable Knobs ● Adjuster Thread: 1/4"-80 ● Mounting: #8 (M4) Counterbored Holes, 4 Places ● Optics Secured in Double-Bored Hole with Nylon-Tipped Setscrew ● Thick Back Plate and Heavy-Duty Springs for Stability ● Fabricated from Black Anodized Aluminum 	5			

124	<p>Ø1" Kinematic Mirror Mount, 2 Differential Adjusters, 1 1/4"- 80 Adjuster</p> <ul style="list-style-type: none"> • Optic Diameter: 1" or 25.0 mm • Minimum Optic Thickness: 0.16" (4.1 mm) • Coarse Angular Adjustment: ±4° • Adjuster Thread: 1/4"-80 / M3 x 0.40 / M3 x 0.375 • Coarse Resolution: 8.3 mrad/rev • Resolution Using Differential Mechanism: 660 µrad/rev • (136 arcsec/rev) • Minimum Incremental Movement: 2.91 µrad (0.6 arcsec) • Mounting Style: #8 (M4) Counterbored Holes, 2 Places • Angular Range with Differential Mechanism: ±1.5° • Optics Secured in Double Bored Hole with Nylon-Tipped Setscrew • Thick Back Plate and Heavy-Duty Springs for Stability • Fabricated from Black Anodized Aluminum 	2			
125	<p>Ø1" Clear-Edge Kinematic Mirror Mount, 2 Adjusters</p> <ul style="list-style-type: none"> • Ø1" Optics Between 0.10" and 0.25" Thick • Angular Adjustment: ±4° • Resolution: 8.3 mrad/rev • Two #8 (M4) Counterbores Allow Left- and Right-Handed Post Mounting 	2			
126	<p>Adapter with Internal 8-32 Threads and External 1/4"-20 Threads, 0.38" Length</p>	10			
127	<p>Ø1" Pillar Post, 8-32 Taps, L = 3"</p> <p>8-32 Tapped Hole on Both Ends</p>	3			

128	Ø4" Precision Kinematic Mirror Mount, 2 Adjusters <ul style="list-style-type: none"> • Optic Diameter: 4" • Minimum Optic Thickness: 0.28" (7.1 mm) • Optical Axis Height: 2.85" (72.4 mm) • Angular Adjustment: ±4° • Number of Adjusters: 2 • Type of Adjusters: Removable Knobs • Adjuster Thread: 1/4"-80 • Mounting: #8 (M4) Counterbored Holes, 4 Places • Optics Secured in Double-Bored Hole with Nylon-Tipped Setscrew • Thick Back Plate and Heavy-Duty Springs for Stability • Fabricated from Black Anodized Aluminum • Hardened Stainless Steel Inserts at Kinematic Contacts Reduce Wear 	2			
129	Screw-On Cable Straps (Qty. 15) Screw-On Straps for Cable Routing on Optical Tables or Breadboards	2			
130	Optical Grade Cotton-Tipped Applicators, 100 Per Pack <ul style="list-style-type: none"> • 6" Wood Stick Disposable Applicators with Cotton Tips (100 per Pack) • Appropriate for Cleaning Connectors or Optics 	10			
131	Kimwipes®, 280 Kimwipes per Box, 12 Boxes Per Case <ul style="list-style-type: none"> • 4.4" x 8.4" (11.2 cm x 21.3 cm), Durable, Absorbent, Extra Low Lint Sheets • Ideal for Cleaning Connectors between Polishing Steps 	2			
132	Lens Tissues, 25 Sheets per Booklet, 50 Booklets in a Closeable Box <ul style="list-style-type: none"> • Extremely Soft, Premium Grade Sheets • Single Sheet Dimension: 4.9" x 2.9" (124 x 73 mm) 	1			

133	20-Piece Balldriver and Hex Key Kit with Stand, Imperial <ul style="list-style-type: none"> ● Facilitates Organization ● Convenient Stand Included 	2			
134	Adjustable Spanner Wrench <ul style="list-style-type: none"> ● Diameter Range from 0.12" to 2.89" (3.0 mm to 73.4 mm) ● Self-Centering, One-Handed Diameter Adjustment Mechanism ● Replaceable Stainless Steel Blades 	1			
135	11-Piece Color-Coded Hex Key Set, Imperial <ul style="list-style-type: none"> ● Color Coded for Easily Distinguishable Sizes ● Exposed Ends for Usual Hex Key Fit ● 90 degree Bend, Black Oxide Finish ● Engraved Holder Included 	2			
136	Ø25 mm Post Spacer and 1/4"-20 Setscrew Kit <ul style="list-style-type: none"> ● Solid Stainless Steel Construction ● Large Diameter Relief Cut on Top and Bottom of Spacers for Additional Mounting Stability <p style="margin-left: 40px;">Includes:</p> <ul style="list-style-type: none"> ● Ø25 mm Post Spacer, 1 mm Thick Qty. 5 ● Ø25 mm Post Spacer, 7 mm Thick Qty. 1 ● Ø25 mm Post Spacer, 2 mm Thick Qty. 5 ● Ø25 mm Post Spacer, 8 mm Thick Qty. 1 ● Ø25 mm Post Spacer, 3 mm Thick Qty. 5 ● Ø25 mm Post Spacer, 9 mm Thick Qty. 1 ● Ø25 mm Post Spacer, 4 mm Thick Qty. 5 ● Ø25 mm Post Spacer, 10 mm Thick Qty. 5 ● Ø25 mm Post Spacer, 5 mm Thick Qty. 5 ● 1/4"-20 Setscrew, 7/8" Long Qty. 25 ● Ø25 mm Post Spacer, 6 mm Thick Qty. 1 ● 1/4"-20 Setscrew, 1" Long Qty. 25 	1			

137	<p>High-dynamics tip/tilt platform, 35 mrad, strain gauge sensors, D-sub connector, incl. mirror Ø 12.5 mm</p> <ul style="list-style-type: none"> • Active axes θ_X, θ_Y • Integrated sensor SGS • Tip/tilt angle, closed loop (static motion at 0 to 120 V) ± 17.5 mrad • Resolution, open loop 0.1 μrad • Resolution, closed loop 1.0 μrad • Linearity 0.05 (unidirectional) % • Repeatability 1 (bidirectional) μrad • Resonant frequency, under load, with Ø 12.5 mm \times 3 mm quartz glass mirror 1.6 kHz • Gap between the center of rotation and platform surface 3.3 mm • Drive properties • Ceramic type PICMA® P-885 • Electrical capacitance per axis 6.2 μF • Operating temperature range -20 to 80 °C • Material platform Titanium • Mass (with cable and connector) 325 g • Cable length 2 m • Sensor/voltage connection Sub-D 37 (m) 	1			
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138	<p>Digital multi-channel piezo controller, 3 axes, - 30 to 130 V, strain gauge sensors, D-sub 37 socket, analog inputs</p> <p>Axes 3</p> <p>Processor DSP 32/64- bit, floating point, 375 MHz</p> <p>Sampling rate, servo-control 25 kHz</p> <p>Sensor</p> <p>Sensor type Strain gauge, piezoresistive sensors</p> <p>Sensor resolution 20 at 1 kSPS oversampling bit</p> <p>Sensor bandwidth (-3 dB) 6 kHz max.</p> <p>Sensor channels 3</p> <p>Amplifier</p> <p>Output voltage -30 to 130 V</p> <p>Amplifier channels 4</p> <p>Amplifier bandwidth 6.5 kHz</p> <p>Interface and operation</p> <p>Interface / communication Ethernet, USB, RS-232, serial SPI</p> <p>high- speed interface</p> <p>Piezo / sensor connection Sub- D Special</p> <p>Command set PI General Command Set (GCS)</p> <p>Linearization 4th order polynomials, DDL (Dynamic Digital Linearization)</p> <p>Miscellaneous</p> <p>Overtemp protection Max. 71 °C, deactivation of the piezo voltage output</p> <p>Dimensions 263 × 89 × 302 mm</p> <p>Mass 3 kg approx.</p> <p>Operating voltage 24 VDC from external power supply (included)</p>	1			
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CCD Camera: (Quantity 01)

Sl. No.	Specification: Item Name	Compliance	Make/Brand	Remark
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		please write Yes/No	& Model No. of the Quoted Item	
1. CCD Sensor				
1.1	Sensor Type: Scientific Interline CCD (Monochrome)			
1.2.	CCD Array: 1360 x 1024			
1.3.	Pixel Size: 6.45 μ m x 6.45 μ m			
1.4.	Sensor Dimensions: 8.8mm x 6.6mm (11mm diagonal)			
1.5.	Peak Quantum Efficiency: 75% at 600nm			
1.6.	Full Well Capacity: >11,000e- single pixel			
2. Camera				
2.1.	Digital Output: 14-bit with 50MHz readout			
2.2.	Digitization Rate: USB3: 50MHz high frame rate			
2.3.	Read Noise (typical): <5.5e- RMS with 50MHz readout			
2.4.	Frame Rate: 22 fps (full resolution) 31 fps (binned 2x2)			
2.5.	Exposure Time Range: 25 μ s - 5 sec			
2.6.	Supported Binning Modes: 1x1, 2x2, 4x4, 6x6, 8x8, 12x12, 16x16			
2.7.	Dark Current Rate (typical): 0.036 e/p/s at +15 $^{\circ}$ C regulated			
2.8.	Sensor Cooling: 0 $^{\circ}$ C stabilized at 22 $^{\circ}$ C ambient Thermoelectric cooling with convection			
2.9.	Intelligent Quantification Features: DPC- Defective Pixel Correction			
3. Interfacing				
3.1.	Computer Platforms/ Operating Systems: Windows 7 (64 bit), Windows 8 (64 bit), Windows 10 (64 bit), Windows 11			
3.2.	Digital Interface: USB3.0			
3.3.	Triggering I/O Signals: Trigger In, Expose Out, End-of-Frame, Shutter Out			
3.4.	Supported Triggering Modes: Trigger First, Strobe, Bulb			
4. Mechanical				
4.1.	Optical Interface: 1", C-mount optical format			
4.2.	Mounting Hole Thread Size: 1/4" - 20 thread, 4 sides			
4.3.	Camera Dimensions: 98.4mm x 76mm x 76mm (length x width x height)			
4.4.	Weight: 1.55lb, 0.72kg			
4.5.	Power Requirement: 7.5V DC, 2.5A			

SLD light sources and lenslet array

Sr. No.	Items Description	Qty.	Compliance please write Yes/No	Make/Brand & Model No. of the Quoted Item	Remark

1	SLD Light Source <ul style="list-style-type: none"> Center wavelength (nm) 795 ± 5 Spectral width, FWHM (nm) Min. 13 Typ. 15 Output power, SM (mW) Min. 15.0 Typ. 20.0 	1			
2	Light Source <ul style="list-style-type: none"> Output power, Pop, ex SM fiber, 12.0 mW typ. Forward current at Pop, 200 mA typ. Central wavelength at Pop, 840 nm typ Spectrum width at Pop, FWHM, 25 nm typ. Slow / fast polarization ratio (PM modules) at Pop, 10 dB typ. SLD forward voltage at Pop, 2.6 V Operating temperature at Pop, -20°C to $+65^{\circ}\text{C}$ Cooler current, 2.5 A 	1			
3	Array of refractive positive orthogonal microlenses <ul style="list-style-type: none"> Material fused silica Pitch $P=240\mu\text{m}$ Radius $R=4.0\text{mm}$ Focus $F=8.75\text{mm}$ (at 633nm) (a) Size: diameter $D=10\text{mm} \times 1\text{mm}$ (5 Qty.) (b) Size: diameter $D=10\text{mm} \times 3\text{mm}$ (5 Qty.)	10			

Consumables

Serial no.	Item	Quantity required			
01	Optical Grade cotton-tipped applicators, 100 per pack	10			
02	Screw-on cable straps (quantity 15)	02			
03	Lens tissues, 25 sheets per booklet, 50 booklet in a box	01			



TECHNO-COMMERCIAL BID

E-Tender Enquiry No. **IISERBpr/S&P/2024-25/06** date **22.05.2024**
Supply of Research Equipment for IISER Berhampur

1.	Name of Tendering Company with Registration No. & Date issued by appropriate authorities (Please enclose copy of certificate of registration)			
2.	Do you possess trade license issued by Competent Authorities in India? If so, please enclose a copy.			
3.	Name of Proprietor / Director			
4.	Furnish following particulars of the Registered Office a. Complete Postal Address			
	b. Telephone No.			
	c. Fax. No.			
	d. E-Mail Address			
5.	Furnish following particulars of the Local Branch Office. (if any) a. Complete Postal Address			
	b. Telephone No.			
	c. Fax. No.			
	d. E-Mail Address			
6.	PAN No. (Attach Attested Copy)			
7.	TIN No. (Attach Attested Copy)			
8.	If Manufacturer – Pl. attach the certificate of Registration If Authorized Dealer / Distributer – Pl. attach relevant tender specific authorization certificate.			
9.	Financial Turnover for the last three Financial Years (Please attach copy of certificate by Chartered Accountant in original) The bidder should have 50% of the estimated value of the equipment.	2020-21		
		2021-22		
		2022-23		
10.	Give details of the major clients – Educational Institutes/Universities, Government Departments, Research Organizations, to whom item/material of the same type have been supplied by the bidder during the last two years in the following format.	Name of Client	PO No. & Date	PO Value
11.	The agency should not have been black listed or banned by any Govt. Department, Government Organization, PSU, University, Autonomous Institute etc. .A notarized certificate to this fact should be enclosed with techno-commercial bid as per attached format.			
12.	Are you an ISO certified manufacturer? If so, please attach a copy of the certificate.			
13.	Please specify the minimum time required to supply the item / material from the date of receipt of the Purchase Order			
14.	Additional information, if any (Attach separate sheet, if required)			
15.	EMD Details, if exempted please upload relevant certificate.			



भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान बरहमपुर
Indian Institute of Science Education and Research Berhampur
Established by the Ministry of Education, Govt. of India

16	Price Basis (please mention the appropriate INCO term i.e FOB/FCA/CIP/CIF/FOR)	
17	Country of origin	
18.	Indicate approximate dimensions of the packages	
19.	Total weight of consignment	Not Applicable
20	Furnish details of registration with the competent authority in case procurement from a bidder of a country which shares a land border with India in accordance with Ministry of Finance, GoI order No. F.7/10/2021-PPD(1) dt. Feb 23, 2023.	

FORMAT FOR INTEGRITY PACT

INTEGRITY AGREEMENT

This Integrity Agreement is made at on thisday of 20.....

BETWEEN

Director IISER Berhampur represented through Stores and Purchase Officer, IISER Berhampur, (Hereinafter referred as the institute, „Principal/Owner“, which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

.....
(Name and Address of the Individual/firm/Company)
through (Hereinafter referred to as the (Details of duly authorized signatory)

“**Bidder/Contractor**” and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal / Owner has floated the Tender (NIT No) (hereinafter referred To as “**Tender/Bid**”) and intends to award, under laid down organizational procedure, contract for.....

(Name of work)

Here in after referred to as the “**Contract**”.

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as “**Integrity Pact**” or “**Pact**”), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal/Owner

- 1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:

- (a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - (b) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.
 - (c) The Principal/Owner shall endeavor to exclude from the Tender process any person, whose conduct in the past has been of biased nature.
- 2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/Contractor(s)

- 1) It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.
- 2) The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:
 - a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.
 - b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.
 - c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly, Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent

participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

- e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose (with each tender as per proforma enclosed) any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.
- 3) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 4) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent **practice means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.**
- 5) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contractor its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

- 1) If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days' notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may be forever or for a limited period as decided by the Principal/Owner.
- 2) **Forfeiture of EMD/Performance Guarantee/Security Deposit:** If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/ Contractor.
- 3) **Criminal Liability:** If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a bidder or Contractor which constitutes corruption within the meaning of Indian Penal Code (IPC)/Prevention of Corruption Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing

agencies for further investigation.

Article 4: Previous Transgression

- 1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
- 2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.
- 3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

- 1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Subcontractors/ sub-vendors.
- 2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.
- 3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.

If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, IISER Berhampur.

Article 7- Other Provisions

1. This Pact is subject to Indian Law, place of performance and jurisdiction is the **Headquarters of the Division** of the Principal/Owner, who has floated the Tender.
2. Changes and supplements need to be made in writing. Side agreements have not been made.
3. If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.

4. Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
5. It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

Article 8- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

(For and on behalf of Principal/Owner)

(For and on behalf of Bidder/Contractor)

WITNESSES:

1.

1.

2.

2.

(signature, name and address)

(signature, name and address)

Place :

Place :

Date :

Date :

FORMAT FOR PERFORMANCE GUARANTEE BOND

(To be typed on Non-judicial stamp paper of the value of Indian Rupees of One Hundred) (TO BE ESTABLISHED THROUGH ANY OF THE NATIONAL BANKS (WHETHER SITUATED AT BERHAMPUR OR OUTSTATION) WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH AT BERHAMPUR OR ANY SCHEDULED BANK SITUATED AT BERHAMPUR. BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED.).

To,
The Director,
IISER Berhampur, Govt. ITI Campus, Engineering School Road, Berhampur, Odisha -760010.

LETTER OF GUARANTEE

WHEREAS Indian Institute of Science Education and Research, Berhampur (Buyer) have placed an order for supply of (item name)..... vide Purchase Order Number..... Dt..... and NIT No. dt. ANDWHEREAS

the said Purchase Order requires that any eligible successful tenderer (seller) wishing to supply the equipment / machinery, etc. in response thereto shall establish an irrevocable Performance Guarantee Bond in favour of "The Director, Indian Institute of Science Education and Research, Berhampur" in the form of Bank Guarantee for Rs.....

(10% (Ten percent) of the purchase value) and valid till 60 days beyond warranty period (i.e. Warranty period + 60 days) from the date of issue of Performance Guarantee Bond may be submitted within (Fifteen)15 days from the date of Order Acknowledgement as a successful bidder.

NOW THIS BANK HEREBY GUARANTEES that in the event of the said tenderer (seller) failing to abide by any of the conditions referred in tender document, purchase order / performance of the equipment / machinery, etc. this Bank shall pay to Indian Institute of Science Education and Research, Berhampur on demand and without protest or demur Rs (Rupees.).

This Bank further agrees that the decision of Indian Institute of Science Education and Research, Berhampur (Buyer) as to whether the said Tenderer (Seller) has committed a breach of any of the conditions referred in tender document / purchase order shall be final and binding.

We, (name of the Bank & branch) hereby further agree that the Guarantee herein contained shall not be affected by any change in the constitution of the Tenderer (Seller) and/ or Indian Institute of Science Education and Research, Berhampur (Buyer).

Notwithstanding anything contained herein:

1. Our liability under this Bank Guarantee shall not exceed Rs. (Indian Rupees only).
2. This Bank Guarantee shall be valid up to (date) and
3. We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only and only if IISER Berhampur serve upon us a written claim or demand on or before (date).

This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office at situated at (Address of local branch).

Yours truly,
Signature and seal of the guarantor: Name of Bank:
Address:
Date:

Instruction to Bank: Bank should note that on expiry of Bond Period, the Original Bond will not be returned to the Bank. Bank is requested to take appropriate necessary action on or after expiry of bond

FORMAT FOR CERTIFICATE & DECLARATION
CERTIFICATE & DECLARATION

I have carefully gone through the Terms & Conditions as mentioned in the above referred Tender document. I declare that all the provisions of this Tender are acceptable to my company.

2. It has been certified that all information provided in tender form is true and correct to the best of my knowledge and belief. No forged / tampered document(s) are produced with tender form for gaining unlawful advantage. We understand that IISER, Berhampur is authorized to make enquiry to establish the facts claimed and obtain confidential reports from clients.

3. In case it is established that any information provided by us is false / misleading or in the circumstances where it is found that we have made any wrong claims, we are liable for forfeiture of EMD/SD and or any penal action and other damages including withdrawal of all work / purchase orders being executed by us. Further IISER, Berhampur is also authorized to blacklist our firm/company/agency and debar us in participating in any tender/bid in future.

4. I / We assure the Institute that neither I / We nor any of my / our workers will do any act/s which are improper / illegal during the execution in case the tender is awarded to us.

5. Neither I / We nor anybody on my / our behalf will indulge in any corrupt activities / practices in my / our dealing with the Institute.

6. Our Firm/ Company/ Agency is not being blacklisted or banned by any Govt. Department, PSU, University, Autonomous Institute or Any Other Govt. Organization.

Date

Signature of the Tenderer

Place

Stamp

Note: This certificate should be executed on duly notarized` 100/- NJ Stamp Paper.

CERTIFICATE OF COMPLIANCE
(To be given on Company Letter Head)

Date : _____

To,

The Registrar,
IISER Berhampur
Berhampur, Ganjam District
Odisha – 760010

Sub: Certificate of Compliance

Tender Reference No: _____

Name of Tender: _____

We have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. We declare that our company is not from such a country or, if from such a country, has been registered with the Competent Authority. We hereby certify that all requirements in this regard are fulfilled and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached]

Yours faithfully,

(Signature of the Bidder, with Official Seal)

DECLARATION OF LOCAL CONTENT

(To be given on company letter head - For tender value below Rs.10 crores)
(To be given by Statutory Auditor/Cost Auditor/Cost Accountant/CA for tender value above Rs.10 crores)

Date : _____

To,

The Registrar,
IISER Berhampur
Berhampur, Ganjam District
Odisha – 760010

Sub: Declaration of Local content Tender Reference No: _____

Name of Tender : - _____

1. Country of Origin of Goods being offered: _____

2. We hereby declare that items offered has ____% local content.

“Local Content” means the amount of value added in India which shall, be the total value of the item being offered minus the value of the imported content in the item (including all customs duties) as a proportion of the total value, in percent.

The bidders cannot claim services such as transportation, insurance, installation, commissioning , training and after sales service support like AMC/CMC etc as local value addition.

“*False declaration will be in breach of Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.” Yours faithfully,

(Signature of the Bidder, with Official Seal)



भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान बरहमपुर
Indian Institute of Science Education and Research Berhampur
Established by the Ministry of HRD, Govt. of India

for Indigenous Supplies, Quotes in INR only
NIT No. IISER Bpr/S&P/2024-25/06 dt. May 22, 2024

Sr. No.	Description of Item & Specification (Specifications as per section IV of NIT)	HSN/S A C Code	Quantity in Units	Unit Price □	Discount %	IGST %	CGST %	SGST%	Total Bid Price □
1	Optics, optomechanics, light safety equipment, optics lab consumables, tip-tilt mirror, CCD camera, light sources and lenslet arrays		As per tender						
	Installation and commissioning charges								
	Other Charges Please Specify Details								
Grand Total									

HSN Code: "Harmonized System of Nomenclature Code No." and SAC Code:" Service Accounting Codes

1.	Delivery mode	Delivery at IISER Berhampur, at site only.
2.	Total Bid price	should be inclusive of all taxes and levies transport, loading, unloading etc.
3.	Validity of bid	Minimum 90 days from the date of submission of quotation/tender.
4.	Delivery Period	
5.	Payment Term	

Note : Prices quoted in other currencies will be summarily rejected.

Price Bid for Optional items / CMC/AMC

(for Optional Items - The Institute will decide based on its requirements and may be evaluated separately)

OEM Default warranty as per product catalogue : _____

Description	INR
Please quote your most competitive Package Rates for extended warranty after the default OEM warranty:	
1 st Year	
2 nd Year	
3 rd Year	
4 th year	
Please quote your most competitive package Rates for Comprehensive Maintenance Contract after the extended warranty of four years:	
1 st year	
2 nd Year	
3 rd Year	
4 th year	
5 th Year	
Please quote your most competitive package Rates for AMC for a period of : One Year	
Two Years	
Three Years	
Please quote prices of Optional items /equipment if any	
1.	
2	
3	
4	
5	
6	
7	
8	
9	
10	