## Nano Research Facility Indian Institute of Technology Delhi

## **Notice for inviting quotations**

Dt: 25-08-2011

Sub: Purchase of optical, optomechanical and optoelectrical components

Please send your quotation for purchase of above said item(s) as per specifications given below. Your quotations should reach latest by  $5\,PM$  on  $09^{th}$  September 2011. Quotations are solicited only for item manufactured by reputed company with proven past record of sales, supply and after-sale service.

		Category I: Optical components	
			No. required
1		Lens System complete set	•
	i.	N-BK 7 Plano Convex lens, 1" dia,	
		f=75mm	2
		f=100mm	2
		f=150mm	2
		f=200mm	2
		' f=300mm	2
	ii.	UV Fused Silica Plano-Convex Lens, 1" dia	
		f=50mm	
		f=100mm	2
		f=150mm	2
			2
	iii.	N-BK 7 Plano Convex lens, 2" dia,	
		f=60mm	2
		f=100mm	2
		f=150mm	2
		f=200mm	2
	iv.	Lens mount	
		SM1 threads Ø1"	16
		SM2 threads Ø2"	8
	v.	N-BK7 Plano-Convex Lens Set, Ø1", 14 pc	
		f(mm) = 25.4, 35, 50, 75, 100, 125, 150, 200, 250, 300, 400, 500, 750, and 1000	1
	vi.		
		f = 75 mm; $H = 50.8 mm$ ; $L = 53 mm$	1
		f = 100 mm, H = 30 mm, L = 60 mm	1
	vii.	Right handed Kinematic Cylindrical Lens Mount	2
	viii.	Bases & Post Holders Kit (assorted items) in a box	1
		Post Holders	
		x150mm	5
		x100mm	5
		x75mm	10
		x50.8mm	10
		x40mm	10
		x25mm	10
		Mounting Bases	
		(25x58x10)mm	10
		(25x75x10)mm	10
		(50x75x10)mm	10
		Locking Thumb Screws	20
		x5mm	20
			10
		Thumb Screws	10

		Standard Base Clamps	20
	ix.	Posts	
		20 mm	4
		30 mm	4
		40mm 50mm	4 4
		75mm	4
		100mm	4
		150mm	4
2		Mirror Systems	
	i.	10 Pack of Protected Silver Mirrors, Ø1" (Ø25.4 mm)	1 Set
	ii.	10 Pack of UV enhanced Aluminium Mirrors, Ø1" (Ø25.4 mm)	1 Set
	iii.	Kinematic mirror Mounts for Ø1"	20
		<ul> <li>Pitch and Yaw Angular Range of ±4°</li> </ul>	
		• 1/4"-80 Adjuster	
		Screws for Greater Sensitivity	
		Removable Adjuster	
		Knobs Expose Hex Sockets	
	iv.	Ø1/2" Post	
		×20mm	4
		×40mm	4
		×75mm	4
		×100mm	4
	V.	Complete Laser Port Hole Periscope Assembly Kit, Metric	1
-	vi.	Post-Mounted Iris Diaphragm, Ø25.0 mm Max Aperture	2
	vii.	ND Filters (01 Nos. each) Diameter: Ø25.0 mm wavelength range: ~350-1100nm; Thickness: 1.0 ± 0.25 mm (Unmounted); O.D- 0.1, 0.2,0,5,1,2 and 3	1 set
	viii.	Mounted step Variable Circular ND filter, Ø2.5"; O.D.= 0.04-3.0	1
	ix.	Mirror Flip mount with 90° Flip Action	1
3	х.	BEAMSPLITTER	
		Broadband Non-Polarizing Beam Splitter Cube, 400-700 nm	2
		BASE for the beamsplitter	2
		Rotatable Cover Plate	2
4		Series Fiber Adapter, SM1-to-SMA Adapter (1" mountable)	
		MACNIETIC DASE-	4
5		MAGNETIC BASEs	
		Kinematic MAGNETIC BASE: The top and bottom base plates , magnetically coupled. 3" x 3" x 1" (metric), M6 tapped holes and through hole.	2
		Heavy-duty magnetic base : has a switchable magnet for quick positioning of optical component, with M6 mounting stud	2
6		Assorted screws and hex keys	
6		CAP SCREW KIT: Assorted cap screws, washers and nuts organized storage box of (i) M6, (ii) M3 and (iii) M4.	1 set each
		M6 x 1.0 Setscrews set: Contains the M6 x 1.0 Setscrews: 6, 10, 12, 16, 20, 25, 30, and 35 mm long; ten 3 mm Hex Keys.	1 set
		Hex Keys Set: The Metric Hex Key Kit contains two organizers plus 20 pieces of each of the following sizes: 0.7 mm, 0.9 mm, 1.3 mm, 1.5 mm, 2 mm, 2.5 mm, 3 mm, 4 mm, and 5 mm and ten pieces of the 6 mm size.	1 set

7	Mechanical Kit: Cage Assemblies and Lens Tubes	1
	Contains four rigid steel rods on which optical components can be mounted along a	
	common optical axis	
	Contains:	
	Cage Assembly Rods - 1", Ø6 mm	4
	0.5" Thick Cage Plates, 30 mm	3
	SM1 Lens Tubes, 1.00" (25.4 mm) Bore Depth	5
	30 mm Cage System Cube, 4-Way	1
	30 mm Cage System Alignment Plates with 1 mm Hole	4
	XY Slip Plate Positioner, Coarse 1 mm	1

	Category II: Fiber optic components	
8	Fiber probe spectrometer (miniature) suitable for SMA connectors of Fiber optic white light sources.  Detector: CCD type, with pixels 1024 x 58 (1044 x 64 total pixels), with TE cooling, Sensitivity = ~0.06 counts / e- or less; quantum efficiency= 90% or above Appropriate filter arrangement; Optical resolution =~ 0.2nm or less; Spectral range ~200-1100nm, S/N ratio: 1000:1 or more, USB operation, required cables and power supply should be provided.	1
0	Fiber collimating lens fixture, Acromatic doublet  5mm dia, f = ~10mm  Wavelength region: 350-1700nm  200-2000nm  Fixture with both sides tapped with SMA905 connecters	2 Each 2 Each
10	Collimating lens of SMA905 connector for fiber optic spectrometer, 5mm dia, f= ~10mm, 200-2000nm region	2
11	Fiber path card, SMA terminals, 400 and 1000 micron core, 2mts length Core dia- (400 µm ± 8 µm); Wave length-(300-1100)nm Core dia(1000 µm ± 20 µm); Wave length-(300-1100)nm	2 2

		Category III: Optomechanical and optoelectrical components	
8		<ul> <li>XYZ translational stage</li> <li>Configured in XZ and XYZ Orientations</li> <li>1/4"-20 (M6 x 1.0) Mounting Holes</li> <li>Travel Range: 1"; resolution: 400 μm(course)&amp;25 μm(fine) or better)</li> <li>Vertical Load (Max): 20 lbs (9 kg)</li> <li>Horizontal Load (Max): 90 lbs (41 kg)</li> </ul>	3
9		Translational stage  1" Travel Translation Stage, Micrometer Drive  Left- or Right-Hand Configurable	3
10		Micropositioner and parts for micro-positioning applications,	
	i.	3-Axis Positioner W/ Differential Micrometers (manual) load =~1kg, height 62.5mm (optical access height 75mm); resolution 0.5mm/rev (course) and 50 μm (fine) or better,	2
	ii.	Replacement Mounting Plate for Flexure Stages [Metric].	2
	iii.	SM1 Compatible Flexure Stage Mount	2
	iv.	5.5mm Riser for Flexure Stage Mounts	2
	v.	Long Mounting Bracket, 56 mm Long	2
	vi.	Standard Waveguide Mount,35mm Length	2
	vii.	Standard V-Groove Fiber Holder	2
	viii.	Package of 6 Magnetic Clamps	2

	ix.	Bag of 15 Cleats	2
11		Optical Chopper System With b0 10-slot[36°] Chopper Blade	1
12	i.	Compact Power and Energy meter Console, Digital 4" LCD	1
	ii.	C-Series Thermal Power Sensor, Surface Absorber, 0.19-25µm, upto 10W	1
	iii.	C-Series Standard Power Sensor, Si based, 200-1100 nm, upto 50mW	1
13	i.	Standard Series Optical Table - 2500 mm x 1250 mm x 210 mm -(8.3'x4.1'x12.4")  • Flatness: ±0.004" (±0.1 mm) Over any 11.0 ft²(1 m²) Area  • Double-Plate, Single-Honeycomb Core  • Mounting Hole Pattern  • Metric: M6 x 1.0 on 25 mm Centers  • Imperial: 1/4"-20 on 1" Centers	2
	ii.	Rigid, Non-Isolating Supports, Set of 4 27.5" (700 mm)  Maximum Load Capacity): 5500 lbs (2500 kg) Height Adjustment: +0.6", -0.25" (+15 mm, -6 mm)	2 sets

## TERMS & CONDITIONS COVERING SUBMISSION OF QUOTATIONS

- 1. Technical requirements
  - 1) All items are to be in **metric scale** only.
  - 2) The quotation must contain the following details, otherwise quotation cannot be considered.
    - a. The quote must contain all the items at least in **ONE** category.
    - The <u>technical</u> bid must contain all the required specifications, drawings, graphs of transmission/reflection/response spectra of components if any) etc.
    - Along with the technical bid, please enclose support documents related to previous sale of the above items(s) within India.

**2. DELIVERY:** The rates quoted must be for C.I.F. Delhi (Air Freight) ( if required)

3. TERMS OF PAYMENT: 100% payment on delivery and satisfactory installation

**4. INSTITUTE'S RIGHTS:** IIT Delhi reserves the rights of acceptance or rejection of

any or all quotations.

**5. VALIDITY OF QUOTATIONS:** Quotations should be valid at least for a period of <u>3 months</u>.

6. SUBMISSION OF QUOTATIONS: Both Technical and price bids are to be quoted separately in separate sealed covers. Both these bids should be sent in a sealed cover marked at the top

SUBJECT AND DUE DATE

## 09<sup>th</sup> September 2011

Quotations should be sent, on or before due date to:

Dr. G. Vijaya Prakash, Associate Professor Department of Physics, IIT Delhi, Hauz Khas, New Delhi 110 016, India.

G. Vijaya Prakash Associate Professor, Department of Physics, IIT Delhi.