# **Department of Physics** Notice Inviting Quotations (NIQ)

## 06 February 2014

We plan to purchase the following three items viz., (a) Liquid Crystal Variable Waveplate (b) Liquid Crystal Variable Polarization Rotators and (c) Liquid Crystal Radial/Azimuthal polarization Converters. The specifications for each of them are listed below:

Specifications for Liquid Crystal Variable Waveplate	
Retardance	$\sim$ 30nm to $\lambda$ (visible)
Transmission	Above 80%
Mounted in a housing	Yes
Clear Aperture	20 mm dia
Transmitted wavefront distortion TWD	$\lambda$ /10 at 632.8nm

The device includes appropriate electrical Liquid crystal driver(s)/controller(s)

#### **Specifications for Liquid Crystal Variable Polarization Rotators**

Polarization angle rotation	0 to 90 degrees
Polarization purity	Above 1000:1
Operating wavelength range	520-550 nm
	If wide operating wavelength is possible, mention the polarization purity
	of the device – also quote for this case separately.
Transmission	Above 80%
Mounted in a housing	Yes
Clear Aperture	10 mm dia (minimum)
Transmitted wavefront distortion TWD	λ/10 at 632.8nm

The device includes appropriate electrical Liquid crystal driver(s) / controller(s)

#### Specifications for Liquid Crystal Radial/Azimuthal polarization Converters

Input polarization : Linear polarization	Output polarization : Radial or azimuthal (device include a TN cell to switch between these two states and a variable phase retarder for phase step compensation along the disclination line)
Wavelength range	400-1700 nm
Active area	10mm diameter
Transmission	Above 70%
Mounted in a housing	All the three devices, variable phase shifter, polarization rotator and theta cell mounted in a single housing with proper alignment.
Transmitted wavefront distortion TWD	$\lambda/10$ at 632.8nm

The device includes appropriate electrical Liquid crystal driver(s) / controller(s)

# YOU ARE REQUESTED TO KINDLY SEND THE TECHNICAL AND FINANCIAL BIDS (C.I.F. NEW DELHI) FOR THE SAME IN SEPARATE SEALED COVERS BY 25-02-2014 (Tuesday).

### **Terms and Conditions:**

1. Quotations are due by 5:00 p.m. on 25-02-2014 (Tuesday).

- 2. Please quote FOB prices. Also mention CIF New Delhi prices, inclusive of installation and freight charges. Any other taxes or levies not included in the price must be clearly indicated. Quote should be in Indian Rupees and/ or in foreign currency (if applicable) and to be valid for at least 3 months. Delivery period must be clearly specified.
- 3. Our payment terms are payment by cheque on receipt & satisfactory installation of the product at our site. In case of foreign currency, the payment terms will be as per the Institute norms.
- 4. Quotation should be directly from Original manufacturer or authorized sales agent with authorization letter. If the items quoted are proprietary in nature, please enclose proprietary certificate from the principals. Also include a

letter from the manufacturer that the model quoted will be supported by the manufacturer for a minimum period of 5 years and all the required spares and accessories will be available for this period.

- 5. The technical bid must contain relevant technical literature. A Statement of Compliance (in the form of a table) indicating the specifications asked for, and that for the model offered must also be provided.
- 6. The products will be used for educational purposes. Applicable academic institution discounts must be offered and stated.
- 7. Product must carry minimum one year (preferably 3 years) comprehensive warranty.
- 8. Institute reserves the right to order equipment with better quality over lower price and to accept or reject any or all the quotations without assigning reasons thereof.
- 9. Technical and commercial bids (marked "Technical/ Commercial bid for Liquid crystal polarizing elements and Accessories") should be submitted separately in separate sealed envelopes to the following address:

Prof. P.Senthilkumaran, Department of Physics, Indian Institute of Technology Delhi, Hauz Khas New Delhi 110016, India.

Emails: psenthil@physics.iitd.ac.in, psenthilk@yahoo.com

Prof. P. Senthilkumaran

Prof. D. S. Mehta Member - PC

Prof.Arun Kumar Chairman-PC

Member - PC

Prof. Joby Joseph Member - PC

Purchase committe : 15705