

**Indian Institute of Technology, Kanpur
Department of Physics**

Enquiry no.: IITK/PHY/340-3

Enquiry date: 10.1.2013

Closing date: 5 p.m., 18th January, 2013

Sealed quotations are invited for **2 diode lasers**. Quotes are also invited for one **optical (tapered) amplifier** and **one digital PID frequency locking unit**, which should be compatible with the lasers.

1) The lasers should have the following specifications(Qty # 2):

Center Wavelength	780 nm
Max. Power	80 mW
Coarse tuning range	>30 nm
Mode Hop Free Tuning	30-50 Ghz
Laser Linewidth	100 kHz
Output Beam Characteristics:	3 mm X 1mm
Output Beam Polarization:	100:1
Typical fiber coupling efficiency:	55 %
Long term frequency drift:	<< 100 MHz/K
Operating Temperature:	15- 30 C
Operating Voltage:	220V -240 V, 50-60Hz
High Bandwidth Modulation Input	Ac and Dc coupled
Accessories:	
A 500 mW current module	Yes
High Voltage Scan Module	Yes
A Temperature control module	Yes
Cables to connect the laser to the control modules	Yes

2) The optical (tapered) amplifier, compatible with the lasers should have the following specifications(Qty# 1):

Configuration	Optical Amplifier
Master Laser	External
Center Wavelength	780 nm
Max Power	1.5 W(max. at center wavelength) > 750 mW (Between 770 and 790 nm)

Optical Gain	20 dB
Output Polarization(for single mode polarized input)	1:100
Control Electronics	Should be integrated into the laser head
Power Supply(Current Controller)	To be included
Heat management and temperature controller	Should be integrated with the amplifier with electronic temperature controller

3) Feedback controller for the laser frequency(Qty# 1)

Controller Type	PID
Bandwidth	1MHz
<u>Scan Function:</u>	
Scan Frequency	0.1 - 33 x 10 ⁶ Hz
Waveform Types	Sine, triangle, square, sawtooth (preferable)
Laser Linewidth	100 kHz
<u>PID functionality:</u>	
Number of PID controllers in one unit	2
Signal Latency	< 200ns

Terms and conditions:

- Quotes are preferable from one vendor with all three units together, for compatibility. However, individual quotes for any of the three units with above mentioned specifications can also be submitted.
- Quote should be made in two parts: Technical bid and Financial bid separately in sealed envelopes.
- Financial bids for the product whose technical bid is not acceptable will not be opened. Any quote with the financial bid included in the technical bid will be summarily rejected.
 - The sealed envelopes with the quotes should be superscribed with the Inquiry number and whether it is a technical or financial bid.
 - The delivery period should be specifically stated.
 - Quotes should be made options for the either of the following delivery modes
 - Ex-works for pickup by our world-wide transport provider
 - FOB in country of origin
 - CIF, New Delhi
 - For delivery to IIT Kanpur
 - Maximum educational discounts should be applied – this equipment will be used for research as well as teach and train students.
 - Quotes should have a minimum validity of 60 days

Address the quotations to:

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