Indian Institute of Technology Kanpur
Center for Lasers & Photonics

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Quotations for following items

Sealed quotations are invited for the items with specifications given below.

Sl. No.	**Item**	**Specifications**	**Quantity**
1.	Hand-held OSA	Wavelength range 1250 to 1650nm Resolution bandwidth FWHM≤ 0.1nm Wavelength uncertainty± 0.1nm Power measurement range -60 to 30dBm Power uncertainty ± 0.4dB Connectors UPC Universal Interface APC Universal Interface Display LCD Warranty: 5 years or better	1(one)
2.	AC/DC Multimeters	Handheld model and digital display DC/AC voltage range(0.1mV-1000V) DC/AC current range(0.1mA-10A) Resistance (0-40MΩ) AC response: 40-500 Hz Accuracy: 1% or better Diode and continuity tester with buzzer Temperature measurement (20^{o}-60^{o}C) All in a durable holster 500 hrs of battery life 1 year warranty	1(one)
3.	Variable DC power supply	Variable output ±30V, ± 15V, ±5V Course/Fine voltage tuning Current rating: 5A 230V/50Hz A.C input Digital display Warranty: 3 years or better	1(one)

4.	Variable DC power supply	Variable output ±30V, ± 15V, ±5V Course/Fine voltage tuning Current rating: 10A 230V/50Hz A.C input Digital display Warranty: 3 years or better	1(one)
5.	FPGA	Eight 250 MSPS, 14-bit A/D channels +/-1V, AC-Coupled, 50 ohm, SMC inputs Xilinx Virtex6 SX315T/SX475T or LX240T 4 Banks of 1GB DRAM (4 GB total) Ultra-low jitter programmable clock Gen2 x8 PCI Express option providing 2 GB/s sustained transfer rates PCI 32-bit, 66 MHz with P4 to Host card PMC/XMC Module (75x150 mm) 18-22W typical Conduction Cooling per VITA 20 Ruggedization Levels for Wide Temperature Operation Adapters for VPX, Compact PCI, desktop PCI and cabled PCI Express systems	4(Four)
6.	Signal generator	Up to 1GHz, 1kHz setting resolution Phase noise -110 dBc at 25 kHz offset Max Output power level +7 dBm Power level setting resolution 0.1 dB Output connector: SMA/SMB/N/BNC AM, PM, FM modulation capability RS 232/GPIB/USB interface	1(one)
7.	WDM Mux/DeMux	No. of channels 16 Channel spacing100GHz Central wavelength 1529.55-1560.61 nm (ITU Grid) Insertion loss <3 dB Return loss 45 dB Isolation (adjacent channels) 25dB or better Isolation (non-adjacent channels) 40 dB or better SMF pigtailed, Connector type FC/PC	2(two)
8.	WDM Mux/DeMux	No. of channels 4 Central wavelength 1550.82, 1546.52, 1551.32, and 1554.34 nm Insertion loss <3 dB Return loss 45 dB Isolation (adjacent channels) 25dB or better Isolation (non-adjacent channels) 40 dB or better SMF pigtailed, Connector type FC/PC	2(two)
9.	Patch cords	SMP FC/PC 1550nm connector	

		Insertion loss < 0.2 dB Return loss > 40 dB Length 0.5m	50(Fifty)
10.	Optical adapters	Duplex, Single mode, FC/PC 1550nm, Insertion loss < 0.2 dB	50(Fifty)
11.	Butterfly laser diode mounts	Mount for 14-Pin Butterfly Packaged laser diode Current rating 5A With heat sink	5(Five)
12.	Laser driver	Operates in Constant Current and/or Constant Power Mode 500mA-1.5 A of Drive Current <1A TEC Current	5(Five)
13.	Erbium doped fiber	Operating wavelength C-Band, Mode field diameter at 5.8μm at 1550nm Numerical aperture 0.23 SMF pigtailed, FC/PC connectors Length: 8m	1(one)
14.	Fiber Bragg grating	Central wavelength 1549.70nm 3dB bandwidth range 0.1nm Central wavelength accuracy ±0.1nm Reflectivity: 45 dB or better Insertion loss 0.1~0.2dB SMF pigtailed, FC/PC connectors	1(one)
15.	Fiber Bragg grating	Central wavelength 1549.85nm 3dB bandwidth range 0.1nm Central wavelength accuracy ±0.1nm Reflectivity: 45 dB or better Insertion loss 0.1~0.2dB SMF Pigtailed, FC/PC connectors	1(one)
16.	APD	Detector type: InGaAs APD Wavelength range: C-band Responsivity: 0.9 A/W at 1550nm for M = 1 Maximum Conversion Gain: 90×10^4V/W Output Connector: BNC, 50Ω Output Coupling: AC NEP: 0.46 pW/√Hz Supply Voltage: 15 V Butterfly DIP package SMF Pigtailed, FC/PC connectors	3(Three)
17.	PCF	Photonic crystal fiber (1550nm) Zero dispersion at 1550nm Core diameter < 10μm PMF pigtailed, FC/PC connectors Length: 10meter	1(one)
18.	HNLF	Dispersion flattened fiber with	

		Zero dispersion wavelength at 1550nm Core diameter < 10µm PMF pigtailed, FC/PC connectors Length: 100meter	1(one)
19.	2.5 Gbps Intensity modulator	C-band, SMF pigtailed, FC/PC connectors In-build bias circuit, low Vpi	2(two)
20.	2.5 Gbps PIN diode TIA receiver module	C-band detection, SMF pigtailed, FC/PC connectors, 50 Ohm output impedance, Full module if available	2(two)
21.	Optical circulator	C-band operation, SMF pigtailed, FC/PC connectors	2(two)

Price quoted is FOR IIT Kanpur. Please mention Taxes & Duty charges, Commissioning charges, Validity, Insurance &Warranty period. Also mention shipping and courier charges. IIT Kanpur is exempt from Customs.

The quotations from Indian firms/distributors should reach to

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In case you do not have a sales office/distributor in India, please send a scanned (signed) copy of the quotation by email. You can also send a computer generated quotation (mentioned clearly in the quotation) by email.

Closing date: 11th September 2013