

DEPARTMENT OF TECHNICAL EDUCATION  
GOVERNMENT ENGINEERING COLLEGE, THRISSUR

No.D1/2493 /2016

Dated : 26/9/16

SHORT TENDER NOTICE

Sealed Tenders are invited for the supply of Equipments/Consumables for Govt.Engineering college, Thrissur.

	Tender No.	Name of lab	Items & Specification	Last date of issue	Last date of receipt	Date of opening	Tender value	App.Cost
1	D1/ 73/16-17	Mechanical Dept	Dual channel syringe pump fitter and temperature controller for Mech.dept.	10/11/16 12 Noon	10/11/16 2 PM	11/11/16 11 AM	630/- + Postal Charges	190000/-
2	D1/ 75/16-17	Civil Dept	CCD Camera for Civil Engg.Dept.	10/11/16 12 Noon	10/11/16 2 PM	11/11/16 11 AM	1260/- + Postal Charges	400000/-

Total AS = Rs.5,90,000 /-

Phone No.0487-2334144

Website. [www.gectcr.ac.in](http://www.gectcr.ac.in)

Intending tenderers may obtain the requisite tender form from Principal, Govt.Engineering College, Thrissur on cash remittance of cost of Tender form + postal charge. Tender forms are not transferable. Late Tenders will not be accepted. Application for the tender form should be accompanied by cash remittance, as per the price fixed for the tender form.

Cheques, Postages stamps etc will not be accepted towards the cost of the forms nor the forms will be sent by VPP.

Tenders should be accompanied by EMD of 1% of the amount by DD drawn in favour of the Principal, Govt.Engineering College, Thrissur with an agreement in Kerala Stamp Paper worth Rs.200/-. Details can be had from the Govt.Engineering College Office working hours..

Copy to :- D1/2493/16.

PRINCIPAL

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THRISSUR

File no. D1/2493/16.  
Tender no. D1/73/16-17

Sl. No.	Particulars	QTY/ No. of items
1	Dual Channel Syringe Pump Syringe Size-10 $\mu$ L - 140 mL Flow Rate (60 mL Syringe) 0.831 $\mu$ L/min -150.5mL/min, Display-128 x 64 graphic LCD, Power Supply- AC100 - 240V, Operating Condition- Temperature 0 - 40 $^{\circ}$ C (32 - 104 $^{\circ}$ F), relative humidity < 80%	1
2	Filter, 5 micron,	8
3	Temperature Controller, 96x96 mm PID Controller	4

91/  
E.

File No. D1/2497/16  
T.No. D1/75/16-17

## Monochrome CCD Camera for image analysis

### Detailed Specification:

Item	CCD Camera with Mechanical Shutter & Color Filter Wheel with high colour depth for image analysis for research purpose
Electronic Shutter	Mechanical, exposure range: 0.03 seconds to 240 minutes
Mechanical Shutter	Yes
Internal Color Filter Wheel	ws. - 5-Position CFW ws-8 - 8-position CFW Holds 1.25" or opt. 31mm filters
Camera Body Configuration	Integrated Guider Port Enclosure
Dimensions	5-pos wsg, W4.45" x H5.0" x D3.08" 8-pos wsg-8, W5.86" x H6.1" x D3.08" (add 0.225" for T-Mount, 0.35" for 2.156" thread mount)
Weight, without Nosepiece	5-pos, 46 oz. / 1300g 8-pos, 56 oz. / 1600g
Optical Back Focus (w/o Filters in path)	2.10" (53.3mm) with 2.156" thread adapter (optional) 1.98" (50.2mm) with T mounting adapter 1.75" (44.5mm) w/o mounting adapter
Thermoelectric CCD Cooling	Temperature regulation +/- 0.1°C, @ 0°C to -40°C CCD temperature
In free air, Fans @ Full Speed	Typically 45°C below ambient air temperature with 85% cooling power
With Opt Liquid Cooling - Fans Off.	Typically 52°C below circulating liquid with 85% cooling power (adds 0.75" to camera depth)
Cooling Fan Control	Intelligent, user configurable
Read Rate	User Selectable High Quality mode at 800KHz, High Speed mode at 8MHz
Camera Gain	2.6 electrons per ADU
Digital Resolution	16 bits (both High Quality and High Speed mode)
Total System Read Noise	Typically <15 electrons RMS (CCD specification limited) in High Quality mode Typically <25 electrons RMS (CCD specification limited) in High Speed mode
Pixel Dark Current	<1.0 electron per second at 0°C <0.1 electron per second at -25°C
Full Image Read and Download Time	Typically <0.5 sec. (host computer dependent) in High Quality Mode (800KHz) Typically ~0.1 second (host computer dependent) in High Speed Mode (8MHz) Image download times will be reduced with binning and/or subframe (ROI)
Binning Modes	Symmetrical and Asymmetrical binning up to 9 pixels horizontally or vertically
Status and Notification	User configurable multi-color LED status indicator and multifunction audible beeper. Over-temperature and high/low voltage alarms.
Power Consumption	12v, 2A (24 watts) at max cooling, max fans and filter moving (25 AC watts max with included 90-240V AC power supply)
Operating Environment	Temperature: -20°C to 30°C, Humidity: 10% to 90% non-condensing
Computer Connectivity	USB 2.0 High Speed (USB 1.1 compatible)
Other Ports	Optically isolated 4 channel control port for telescope guiding or input/output shutter trigger (See API Reference Manual for

	details)
T Mounting Adapter	Standard - T-Thread, 42mm x .75mm pitch
C Mounting Adapter (1" x 32TPI) (Not recommended for 540i)	Optional, C-Mount (Type II) lens focus compatible (17.5mm backfocus)
Nosepiece	Standard, T-Adapter to 2" nosepiece Optional, T-Adapter to 1.25" nosepiece
Face Plate Adapter	Standard adapter - T-mount (2.156" x 24tpi adapter available)
Guide Camera Attachment	T-mount (42mm x 0.75mm) w/built-in manual rotator C-mount (1" x 32 tpi) w/built-in manual rotator
Guide Camera Optical Focal Depth	12.5mm +/- 1.5mm (0.49" +/- 0.06")