

平成26年5月2日

訂 正 公 告

学校法人沖縄科学技術大学院大学学園
調達セクション

「CCD検出器搭載分光器 一式の購入（電子入札対象案件）」に係る仕様書について、別紙のとおり訂正いたします。

以上

Specification sheet

仕様書

Subject: Spectrometer with CCD detectors

CCD 検出器搭載分光器

1. General

(1)General Provision

This Specification sheet specifies the specifications of Confocal RAMAN spectrometer system which is used with installed ultra-high vacuum with low temperature Scanning Tunneling Microscope (UHV-LT-STM) in research enterprise of Okinawa Institute of Science and Technology Graduate University School Corporation.

(2)Configuration

Spectrometer with CCD detectors

- Con-focal RAMMAN spectrometer system (Tokyo Instrument's Nanofinder FLEX equivalent)	1 set
2-1.Imaging spectrometer	1
Focal length: 52cm, F 6.2	
Incident slit (x1), CCD exist port (x1) , APD exit port (x1)	
2-2.Cooled CCD detector	1
DU920P-BEX2-DD type, 1024x255 pixels	
2-3. APD detector	1
SPCM-AQRH-14-FC	
2-4. RAMAN optical unit	1
Correspond to 523nm wavelength	
2-5. Sensing fiber for spectrometer (with/without pin hole)	1
2-6. Laser incident fiber/focusing unit	
Output alignment device/housing	
(Does not include Laser source device)	
2-7. System controller	1
2-8. Optics for UHV-LT-STM	1
Beam position alignment optics	
Attachment instrument for RAMAN optical unit	
2-9. Photons counter	1
2-10. Shipping and installation	1
2-11. Training	1

(3)Specifications and Performances

• Imaging spectrometer

Focal length : 52cm
F-number : 6.2
Spectral resolution : 1.3cm⁻¹/pixel@550nm,1200G/mm
Incident port : 1, CCD exist port : 1, APD exit port : 1

- Cooled CCD detector

QE : $\geq 90\%$ @(450nm、800nm)
Active Pixels : $\geq 1024 \times 255$
Pixel Size : 26 x 26 μm
ADC : 3MHz
Minimum Temperature(typ) : Air Cooled -80°C

- APD

Active Area (diameter) : ≥ 170 ~~mm~~ micron
Detection Range : 400-1060nm
Peak Photon Detection Efficiency (PDE) : $\geq 70\%$ @ 700 nm
Dark Count : ≤ 100 Counts / second
Optical fiber input (FC connector)

- RAMAN optical unit

Wavenumber range : 50 cm⁻¹~4000 cm⁻¹@532 nm
Laser Input / Signal output : optical fiber (FC connector)

- Optics for UHV-LT-STM

Incident Beam angle : 35 degree
Beam position alignment optics for Lens (aspherical/NA 0.3 : This lens is not included)
Manual XY stage for Viewport of STM : XY \pm 12.5mm

- Others

RAMAN optical unit can be attached to Optical microscope easily.

(4)Place of delivery

A Place designated by the school personnel at Okinawa Institute of Science and Technology Graduate University School (1919-1, Tancha, Onna-son, Kunigami-gun, Okinawa, Okinawa Institute of Science and Technology Graduate University School Laboratory 2)

(5)Delivery deadline

September 30, 2014

2. Test and Inspection

After delivery, the vendor must test the system before the school personnel, and must comply with the specifications that are written in this specification sheet.

The vendor must gain the school personnel's approval for the test items and methods by submitting the test plan.

3. Operating Instruction

After succeeding the test, the vendor must explain the operating and maintenance methods.
The vendor must be able to conduct the explanation in English.
The vendor must conduct 5 days training.

4. Documents to be submitted

Operation manual both in English and Japanese

5. Others

If questions on specification that are not written in this specification sheet should arise, both party will conduct mutual consultation, and vendor must the will of this school to the extent possible.

On delivery, the vendor must submit the delivery plan to the school's facility personnel beforehand, and give sufficient consideration to the existing facility by using sheet curing etc.

The vendor must collect packaging materials and wood scraps.

The vendor must pay for the cost of delivery and pipe arrangement for installation.

If special tools are required for the usual operation and maintenance, the vendor must supply them at the delivery.