

Maple II | Micro Raman / PL



Key Features

- High Performance Raman PL / PLE / EL
- Compatible with Various Detectors
- High Resolved PL Mapping

Application

- Semiconductor Characterization and Testing (III-V Materials)
- GaN / ZnO LED Wafer Surface Characterization (Surface Containment, Uniformity, Reflectivity, Thickness and Bowing Test)
- Solar Cell EL Measurement
- Sensor Development for NIR Range
- Gemstone PL, Diamond by HPTP
- Development of Material of LED with GaN / GaAs
- Diamond Anvil PL
- TDIPL & IQE

Specification

Excitation source

Wavelength	266 / 325 / 532 / 632.8 / 785 / 1064 nm (Up to 6 Different Laser)
Beam Quality	<1.2 M ²
Output Power	18 / 50 / 90 / 100 / 200 mW (CW mode)

Spectrograph

Focal Length	320 mm / 500 mm (Two Exit Port)
Spectral Resolution	0.09 nm
Stray Light Rejection	1.0 * 10 ⁻⁵

Sample Chamber

Wavelength	High Performance Spectroscopic Micro Sample Chamber
PC Control	Sample Stage & Filter Wheel

Detector

Type	TE Cooled CCD (Open Electrode)
Pixel Format	1024 * 256
Quantum Efficiency	59 % @ 750 nm

Software

Solis & Monoworks	User-friendly Interface for Simultaneous Detector & Spectrograph Control
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Maple II System

I Micro Raman / PL



Key Features

- Turn-key System From Laser to Microscope
- Fully Compatible with Various Peripheral Devices
- DXG's Own Mapping Solution Adopted

System Configuration

Input Laser Source

325 nm He-Cd Laser set Output Power	50 mW @ 325 nm 25 mW @ 325 nm
532 nm Solid State Laser set Output Power	200 mW @ 532 nm
785 nm Stabilized Laser set Output Power	90 mW @ 785 nm

Sample Chamber

	75 * 50 mm
Large Area X-Y Stepper Motorized Stage	Travel Range (Typical) up to 200 * 200 mm (Optional) 0.05 um Minimum Resolution
Power Control	PC Controlled ND Filter Wheel (Optical Density : 0 ~ 3)
Motorized Filter Wheel System	Automatically Change Depend on Input Laser Source
Beam Spot Size	<1 um @ Fulfilled Entrance Aperture & Gaussian Beam Profile, 532 nm
Objective Lens	50 x / N.A.0.55, W.D.13 mm FL : 4 mm For 400 - 1100 nm 40x LMU-NUV/N.A.0.5, W.D.1 mm For 325 - 750 nm

Spectrograph

Focal Length	320 mm, 500 mm (Two Exit Port)
Wavelength Range	200 ~ 1000 nm (UV-VIS) 900 ~ 1700 nm (NIR)
Resolution	0.05 nm or 0.1 nm @ 435.8 nm 1200 gr/mm Grating 10 um Slits <2 cm - 1 @ 785 nm 2400 gr/mm

CCD Detector

	1024 * 256 Pixel CCD
CCD Detector	26 * 26 um Pixel Size 200 ~ 1000 nm Detecting Range (95 % @ 800 nm)

Software

Features	Easy Parameter Selection
Functions	Select Monochromator, Serial Port , Turret, Grating & Current Wavelength Information, Wavelength Range, Number of Point / Resolution, Integrating Time, Accumulation
Calibration	Semi-auto Calibration

Options

	Detectors for UV - VIS - NIR
	Low Temp Application for TDIPL
	Mapping Function for Low & High Scan Speed