## Company Profile

| | |
|---|---|
| Company Name | CORE SYSTEM Corporation |
| President &CEO | Masami ONODERA |
| Established | 27 June 1997 |
| Capital | ¥54,000,000 yen |
| Head Office | 2-144 Nishimiyauchi Nagaoka Niigata 940-1162 JAPAN |
| | Tel : +81-258-31-6233 |
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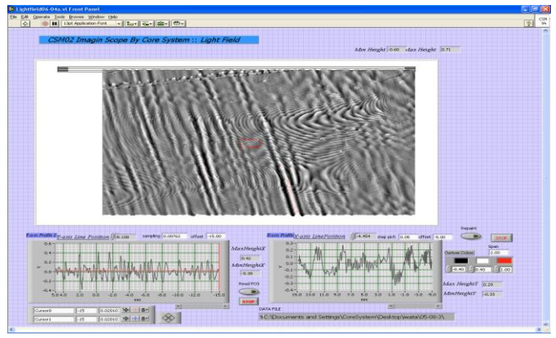
| | [URL] : http : //www.csys.jp |

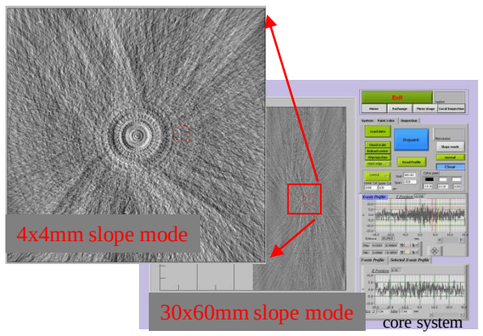
Products 1.LaserScanningSurfaceAnalyzer"NanoTopograh" for : Si Wafer, Compound Semiconductor Wafer, Hard Disk,Thin Film, Resin Film,

2. Super Long Working Distance Microscope/CCD Camera/Image Processing Software System

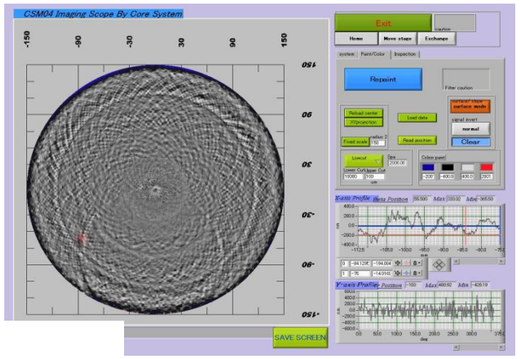
Functional Coated Resin Film Surface by Core System "CSYS"



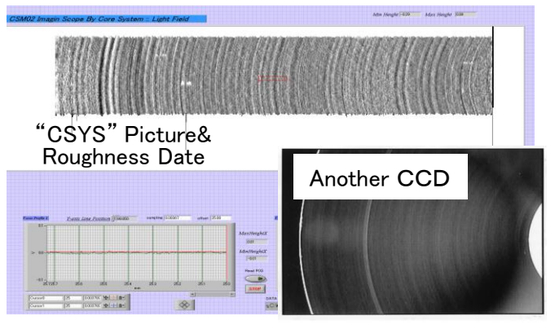
Polishing Pattern Center Si wafer Surface by Core System "CSYS"




Grinding Pattern Si Wafer Surface by Core System "CSYS"

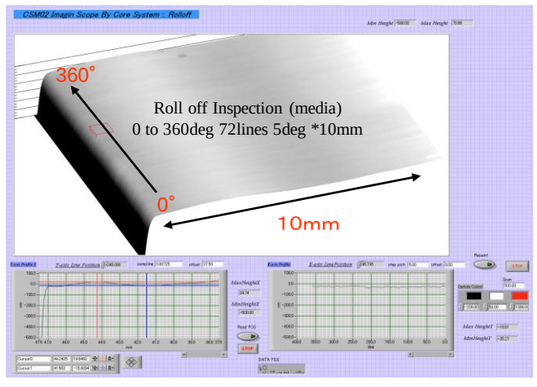


Texture Pattern Hard Disk Surface by Core System "CSYS" vs Another CCD Camera Picture




CCD Dark field Inspection Data

Roll Off Form Hard Disk Edge by Core System "CSYS"

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# Laser High Speed Scanning Surface Analyzer

# Surface " Nano Topograph "

## for : Si Wafer・Compound Semiconductor Wafer・Hard DISK・ Thin Film・Resin Film





Patented




Core System Corporation

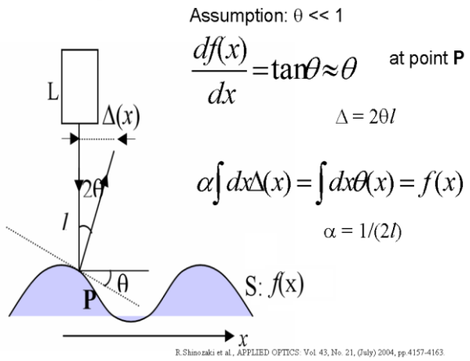
URL:http://www.csys.jp

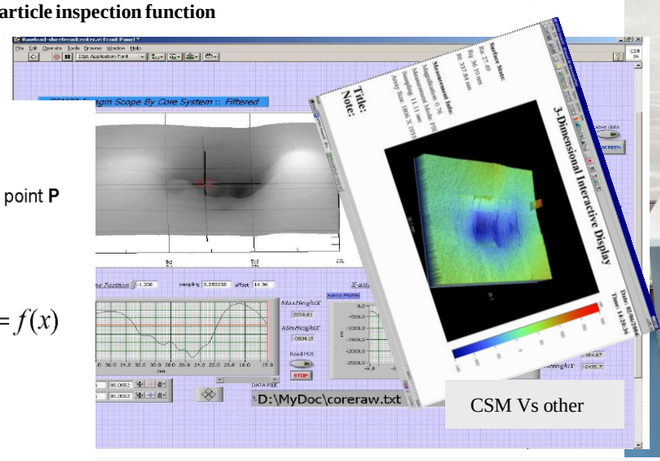
# Laser High Speed Scanning Surface Analyzer

**【Applications】**
**Mirror-Surface/**
**Thin Film, Spattered Surface and Resin Coated Surfaces**
**Silicon Wafer, Hard Disk, LCD・FPD**
**Metallic Film, Functional Film**
**Rough Surface/ Copy-Drum**

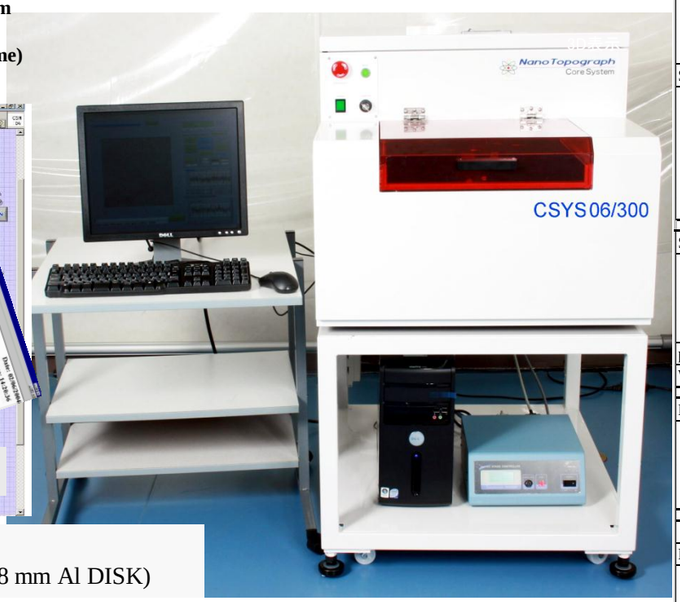
**【Feature】**
**Non-contact Scanning Laser Inspection**
**Height resolution: 0.1 nm**
**No anti-vibration table is required**
**Particle inspection function**
**Wide Inspection area:30x30 mm**
**High Speed Scanning(0.5ms/lime)**

**【Principal】**



CSM Vs other

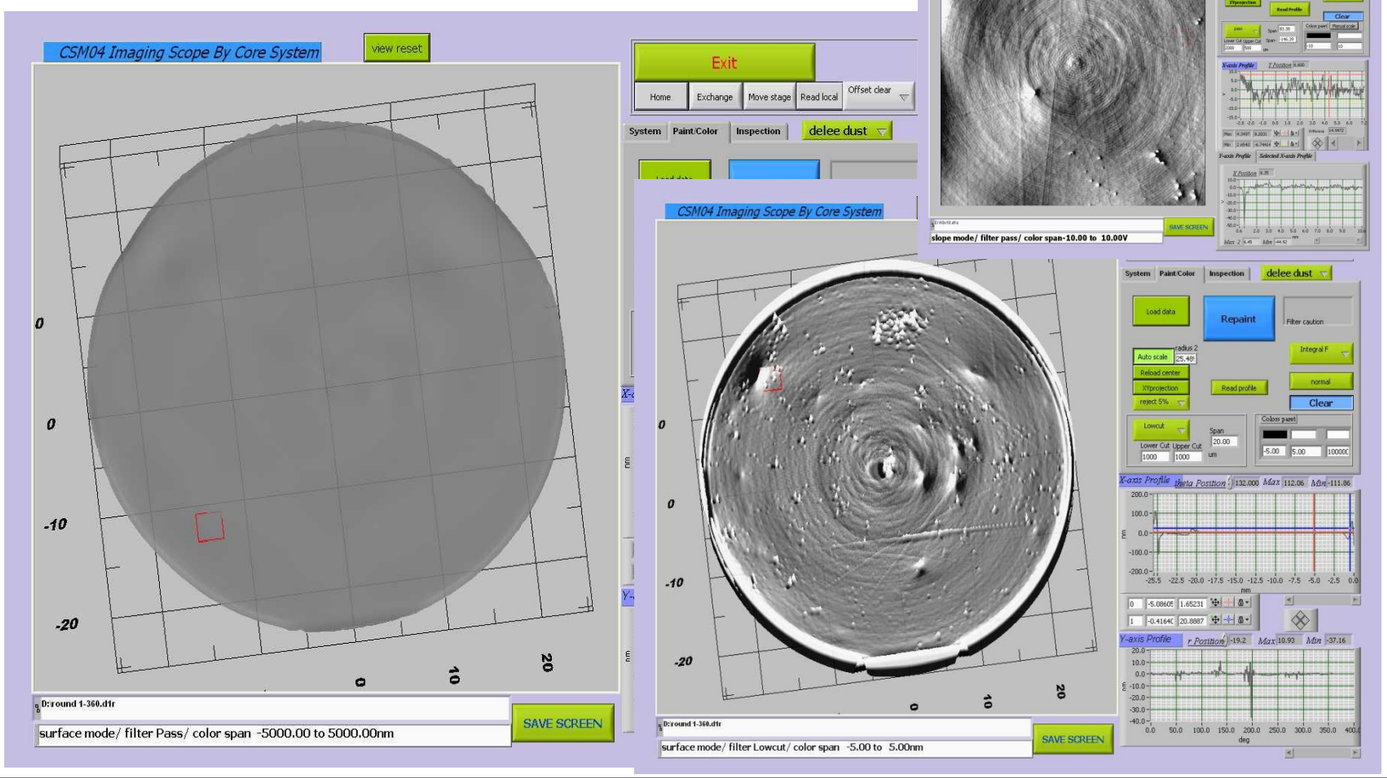



We can read by Core System "CSYS" **CORE**
Written bottom-side and read up-side inspection(by 0.8 mm Al DISK)

| Model | | CSYS10-B 10 | CSYS10-B 10 | CSYS 10-R 25 |
|---|---|---|---|---|
| Optical unit | | | | |
| | Scan width | 40mm | 40mm | 30mm |
| | Scan ratio | 30Line/sec | 30Line/sec | 30Line/sec |
| | Sampling ratio | 1～10MHz(3.9μm) | 1～10MHz(3.9μm) | 1～10MHz(3.9μm) |
| | Testing time | 20sec | 20sec | 20sec |
| | pich/line | 30×30mm/100μm pich | 30×30mm/100μm pich | 30×30mm/100μm pich |
| Soft wear | | | | |
| | Display | 3D Surface | 3D Surface | 3D Surface |
| | | Line Profile | Line Profile | Line Profile |
| | Flatness mode | Surface Flatness | Surface Flatness | Surface Flatness |
| | Microwaviness | Filtered Flatness | Filtered Flatness | Filtered Flatness |
| | Slope mode | Slope Surface | Slope Surface | Slope Surface |
| | Intend mode | Scatter Dencity | Scatter Dencity | Scatter Dencity |
| Stage Type | | | | |
| | Stage | 500x500mm (φ450mm) | 300x300mm (φ300mm) | 200x200mm (φ200mm) |
| | X axis | ±250mm ( 0.010mm pich) | ±150mm ( 0.010mm pich) | ±100mm ( 0.002mm pich) |
| | Y axis | ±250mm ( 0.010mm pich) | ±150mm ( 0.010mm pich) | ±100mm ( 0.002mm pich) |
| | Θaxis | 360°( 0.0025°pich) | 360°( 0.0025°pich) | 360°( 0.0025°pich) |
| poewr supply | | AC100V±15% / 15A | AC100V±15% / 15A | AC100V±15% / 15A |
| Weight | | 100kg | 70kg | 50kg |
| Laser Light source | | Violet Laser | Violet Laser | Read Laser |
| | Wave length | 405 nm | 405 nm | 655 nm |
| | Power | 20 mW | 20 mW | 30mW |
| | Class | class 3b | class 3b | class 3b |
| | Beem spot size | φ10μm | φ10μm | φ25μm |
| | | Polish Surface | Polish Surface | Rough Surface |
| Examination angle | | ±0.2° | ±0.2° | ±2° |
| | V sensitivity | 0.1nm(1Å) | 0.1nm(1Å) | 1nm |
| | H sensitivity | 50nm | 50nm | 200nm |

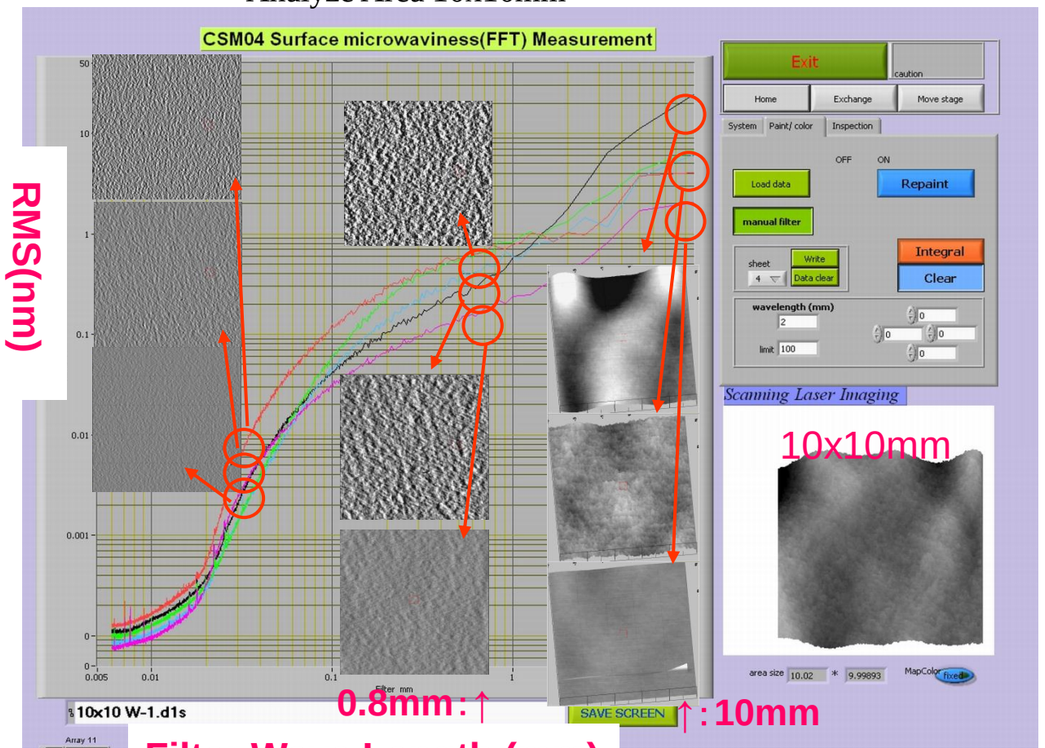
## Try Height Magnification : X1,000,000
## Just Find New Surprise !!

**Wide-area inspection**




Si Wafer Surface Inspection
Waviness

Si Wafer Surface Analyze Result with FFT
Analyze Area 10x10mm




**Filter Wave Length (mm)**

## Wide area inspection and FFT analyze

You will find new discovery, wafer surface have big difference, by polishing process, equipment and method