Measurement Equipment

3D ProfileMaster - 3D None Contact Profile Measurement / Inspection System

09IAE-909020-G-3D   09IAE-303010-G-3D   09IAE-151510-A-3D

* High standard quality control usage
* Up to 0.5um precision
* Full inspection process & auto analyzed functions
* Able to measure all kinds of materials
  • transparent and dark samples
  • high reflective and diffusive
  • measuring range up to 180mm (Z axis)
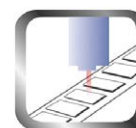
It's here to make things better

Collinearity   **Time saving**   **3D Imaging**   **In line inspection**

Able to measure objects ranging from sub-microns to half a meter, using interchangeable lenses

Capable of measuring angles very close to normal incidence, as high as 85°. This unique capability permits the reproduction of complex shapes with high fidelity to the original model without distorting the profile.

Measure different types of surfaces, such as reflective, translucent, and diffusive, with no need for coating measurement enhancing materials.

The sensor's collinear operation allows measurement of deep and narrow slots, grooves and blind holes.
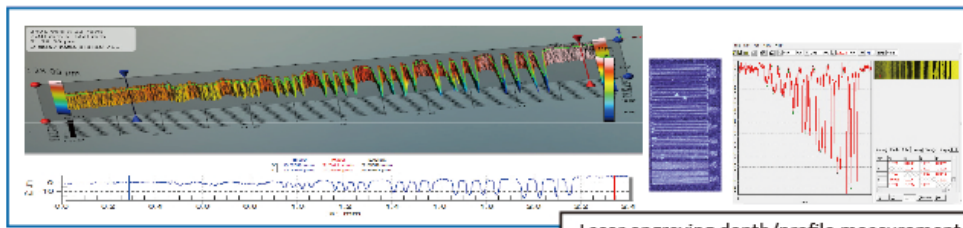
Analyzing Functions

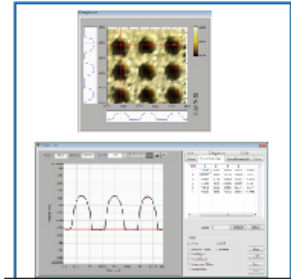* Parameter, angles, depth(height), roughness (Ra,Rq), radius, distance 3D CAD comparison and auto analysis

Scanning Functions

* X,Y Single/Multi line (snake move)
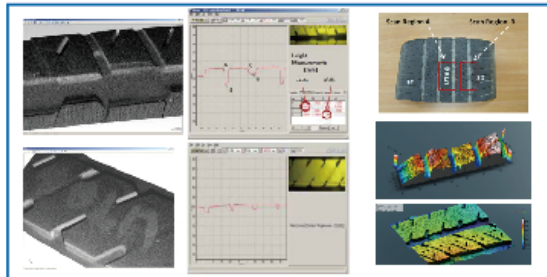* Full scan 3D imaging

TEL : 886-3-462-6569
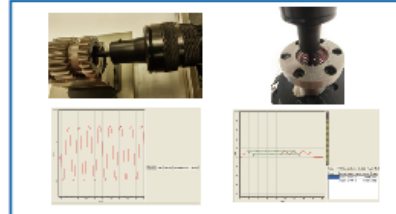
3D Measurement Applications

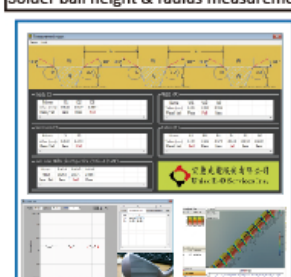Laser engraving depth/profile measurement

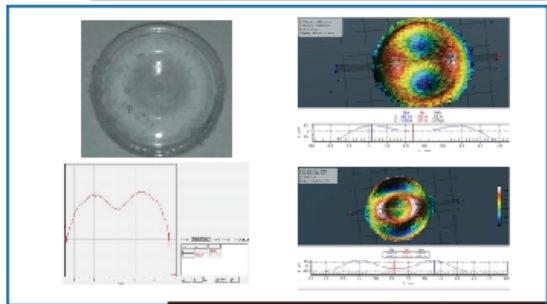Solder ball height & radius measurement

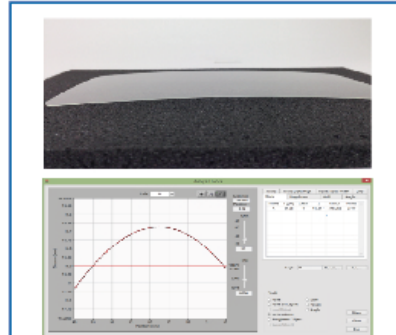Black rubber texture measurement & CAD file comparison
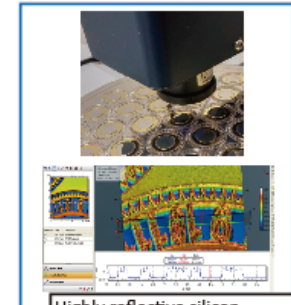

Internal thread pitch/height measurement

Golf club head grooves automatic measurement & analysis system

Transparent aspherical lens detection

Curve lens measurement

Highly reflective silicon wafer surface measurement

Hardware Specification

XY Stage

Stage Size	390 x 390mm / 510 x 510mm / 900 x 900mm
Travel Range	150mm / 300mm / 900mm
Resolution	up to 0.1um
Repeatability	± 1 count, depends on encoder resolution

Z Stage

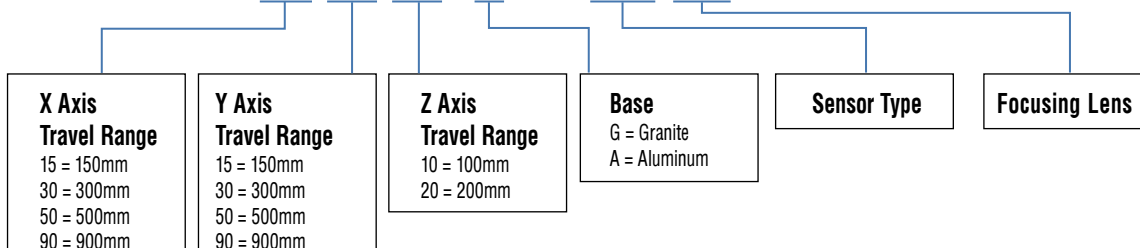|	
Travel Range	100 mm
Resolution	± 0.01mm
Base	Granite or Aluminum
Power	110V/220V

Sensor Specification

Scanner Type	Lens Size	Precision	Working range(mm)	Repeatability(um)	Laser spot size(um)	Cover angle(deg)
R type for Reflective	25mm	0.5um	1	0.06	< 5	5
	50mm	2um	5	0.1	16	3
C type for Diffusive	25mm	3um	1.8	0.06	27	150
	50mm	6um	8	0.1	37	170
	75mm	10um	18	0.3	47	170

* Higher working ranges are available.

Ordering Information:

Model No : 09IAE- ☐☐ ☐☐ ☐☐ – ☐ – 3D - CPXX– ☐☐

X Axis Travel Range
15 = 150mm
30 = 300mm
50 = 500mm
90 = 900mm

Y Axis Travel Range
15 = 150mm
30 = 300mm
50 = 500mm
90 = 900mm

Z Axis Travel Range
10 = 100mm
20 = 200mm

Base
G = Granite
A = Aluminum

Sensor Type

Focusing Lens

*All of the mechanical parts (Stage size, travel range and mechanical precision) an analyzing software and holding mounts can be customized base on requirement.

LED/LD Beam Profiler

The eyepiece adapter allows e-Pro to be mounted on the eyepiece, a va riety of adapter tubes are also available, compatible with eyepieces of different inner diamete rs. If the microscope itself has a video port, you ca n mounted e-Pro directly on the video port. e-Pro also provides an attenuator kit, when e-Pro is not mounted on a microscope, e-Pro a lso can be used as a general laser beam a nalyzer.
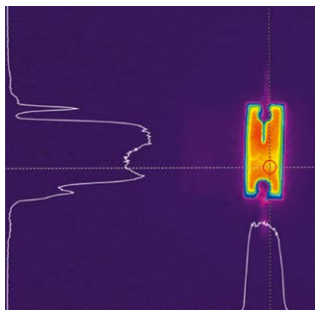
2D Beam Display
＊Adjust exposure time automatically / manually
＊Adjust gain automatically / manually
＊Set ROI manually
＊Relatively Intensity in 2D and 3D map
＊Centroid and peak position of the beam
＊ISO definitions of beam width
＊Pass / Fail function
＊Export Excel report
＊Export Image
＊Beam Profile measurement

Exclude microscope

Mounted on the eyepiere

Mounted on the video port

Description	ULB-E-EP	ULB-E-VP
2.8 MP CCD Camera wavelength 355nm to 1064nm	1	1
USB 3.1 Cable, Type-A to Micro-B(Locking), 3 meter	1	1
Non-Reflective ND Filters	1 set	1 set
CS- to C-Mount Extension Adapter	1	1
Adjustable Microscope eyepiece Adapters	1 set	X

Optical Transmittance / Reflectance Analyzer

The Optical Transmittance / Reflectance Analyzer (OTA/ORA) contain a spectrometer and a light source. The OTA/ORA use to measure the Transmittance / Reflectance of optical lens or material. In addition to measure the full range transmission spectrum, you also can set up a range or single wavelength for analysis.

Feature

✴ Simple and easy to use
✴ Export data to TXT file format
✴ Offer an aluminum box, easy for stored and save space

Software

✴ Transmission spectrum graph
✴ Auto save with auto sequence number function
✴ Monitor point setup (up to 10 points)
✴ Average transmission calculation (Tavg)
✴ Wavelength of $T_{10\%}$ 、 $T_{50\%}$ and $T_{90\%}$
✴ GO/NG function (single wavelength)
✴ Transmission spectrum calibration function

Specification
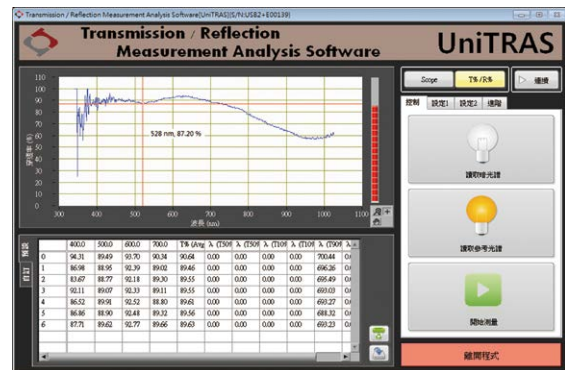
	Optical Transmittance Analyzer			Optical Reflectance Analyzer
Model name	09OTA-UV-VIS	09OTA-VIS-NIR	09OTA-VIS-NIR-IS	09ORA-VIS-NIR-IS
Wavelength range	250 – 750nm	350 – 1000nm	350 – 1000nm	350 – 1000nm
Light source lamp life time	10^9 pulses (230 days @ 50Hz)	10000 hours	1000 hours	10000 hours
Color temperature	-	2800K	3000K	2800K
Integration sphere	NA	NA	*	*
Optical resolution	2nm			
Interface	USB			
Power input	100 – 240VAC 50/60Hz			
Dimension	110(W) x 170(D) x 360(H)[mm]			
Weight	< 3Kgs			

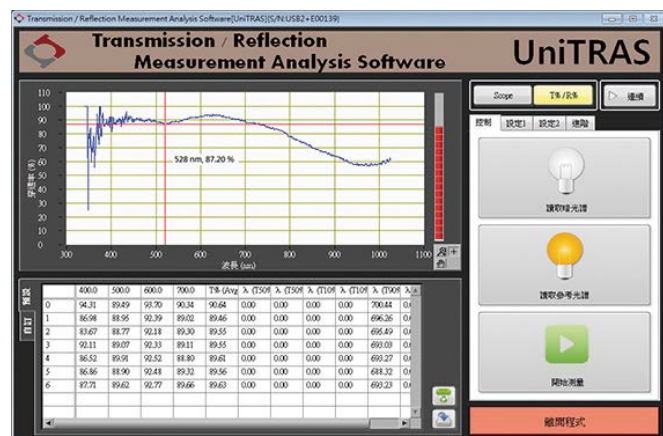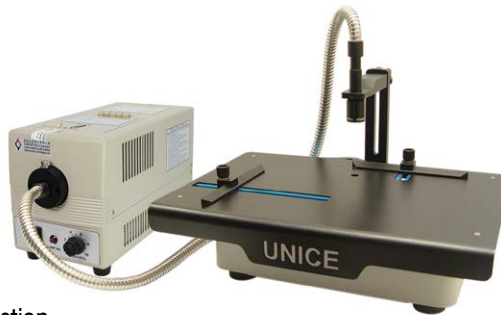## 09OTA-CP Optical Transmittance Analyzer

Application

✴ Glass or plastic material products
✴ Optical thin film. i.e. Window film, ITO, Filter (IR-cut, Band Pass etc.)

Software

✴ Transmission spectrum graph
✴ Auto save with auto sequence number function
✴ Monitor point setup (up to 10 points)
✴ Average transmission calculation (Tavg)
✴ Wavelength of T10%、T50% and T90%
✴ GO/NG function (single wavelength)
✴ Transmission spectrum calibration function

Specification

Model	09OTA-CP
Wavelength range	400 – 950nm
Optical resolution	3.8nm
Wavelength data interval	0.1, 0.5, 1, 2, 5 and 10nm
Wavelength reproducibility	< 0.5nm
Transmission stability	< 1%
Light source stability	± 0.5%
Drift of optical output	< 2% per hour at 550nm
Power requirement	AC 110 – 220V

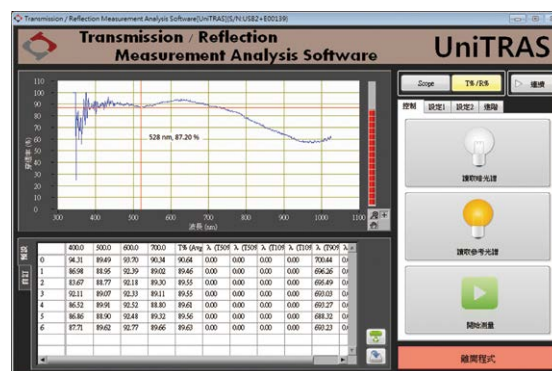## 09OTA-NM Optical Transmittance Analyzer

Application

* Glass or plastic material products
* Optical thin film. i.e. Window film, ITO, Filter (IR-cut, Band Pass etc.)

Software

* Transmission spectrum graph
* Auto save with auto sequence number function
* Monitor point setup (up to 10 points)
* Average transmission calculation (Tavg)
* Wavelength of T10%、T50% and T90%
* GO/NG function (single wavelength)
* Transmission spectrum calibration function

Specification

Model	09OTA-NM
Wavelength range	350 – 1000nm (can be changed for requirement)
Optical resolution	2.1nm (can be changed for requirement)
Wavelength data interval	0.1, 0.5, 1, 2, 5 and 10nm
Wavelength reproducibility	< 0.5nm
Transmission stability	< 1%
Light source stability	0.5% (after 30 min.)
Drift of optical output	< 0.3% per hour
Light source lamp life time	10000 hours (typical)
Color temperature	3000K
Sample holder	Φ30.1mm, Φ19.4mm, Φ7.1mm andΦ7.3 x 8.9mm (can be changed for requirement)
Operating temperature	5 – 35℃
Operating humidity	20 – 70%

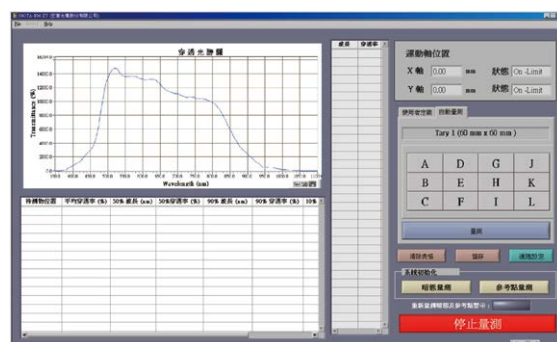## 09OTA-NM-XY Optical Transmittance Analyzer

Application

* Glass or plastic material products
* Optical thin film. i.e. Window film, ITO, Filter (IR-cut, Band Pass etc.)

Software

* Transmission spectrum graph
* Center wavelength calculation (λ_c)
* FWHM calculation
* Average transmission calculation (T_{avg})
* $T_{10\%}$ to $T_{10\%}$ wavelength and width calculation
* $T_{50\%}$ to $T_{50\%}$ wavelength and width calculation
* $T_{90\%}$ to $T_{90\%}$ wavelength and width calculation
* Various measurement mode (Auto, user define and any point)

Specification

Model	09OTA-NM-XY
Wavelength range	350 – 1000nm (can be changed for requirement)
Optical resolution	1.1nm (can be changed for requirement)
Wavelength data interval	0.1, 0.5, 1, 2, 5 and 10nm
Wavelength reproducibility	< 0.5nm
Transmission stability	< 1%
Light source stability	0.5% (after 30 min.)
Drift of optical output	< 0.3% per hour
Light source lamp life time	1000 hours (typical)
Color temperature	3000K
Sample holder	60 x 60mm and 80 x 88mm (can be changed for requirement)
Operating temperature	5 – 35℃
Operating humidity	20 – 70%

MEMO