

M-NanoCoord

Specifications

Main Unit
Structure
XY-plane guiding structure

Guiding method
Hydrostatic air bearing

Scales
Low-expansion laser holoscale

Vision Head
- Programmable Power Turret (PPT)
- 4-quadrant LED (PRL)
- High-sensitivity megapixel CCD camera

Factory options
- **UMAP Probes** (touch signal probe with a micro stylus)
(Refer the UMAP page for details)

UMAP 101
ø15µm ; L=0,2 mm
UMAP 103
ø30 µm ; L=2 mm
UMAP 107
ø70 µm ; L=5 mm
UMAP 110
ø100 µm ; L=10 mm
UMAP 130
ø300 µm ; L=16 mm

- **Minute Form Probe LNP** (ultra-low measuring force, contact-type probe)
Equipped with high performance contact-type probe system "Long-range Nano Probe"



LNP Probe : Long range Nano Probe

LNP allows measurement of minute features on workpieces such as light guide plates, using a diamond stylus with tip radius of 2 µm (optional). LNP allows scanning measurement with steeply-inclined surfaces of ±80° and touch-probe measurement of ±90° by vibration-type contact scanning probe with ultra-low measuring force (min. measuring force : 10 µN).

3D CNC Ultra High Resolution Measuring System

- Newly developed measuring machine capable of the most precise movements for unsurpassed form measurement accuracy in the nanometre region.
- Laser HoloScales with one nanometre resolution and virtually zero thermal expansion provide extreme measuring accuracy of (0,2+0,1L/100) µm.
- Fixed bridge, moving table construction.
- High-precision air bearings.
- Particularly suitable for workpieces with very small dimensions, such as MEMS parts, integrated circuits, precision formed components, aspheric lenses.
- Every model of the M-NanoCoord Series has a newly developed ultra-high accuracy main unit with a vision probe as a standard accessory.
- Can be equipped with probe systems (factory option).

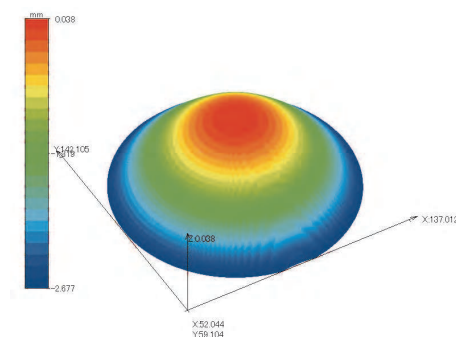


M-NanoCoord

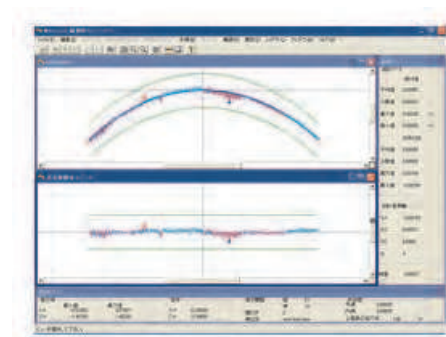
No.	Range (X, Y, Z-axis)	Resolution	Accuracy ⁽¹⁾
M-NanoCoord	200 x 200 x 100 mm	1 nm	E _{1(x,y)} = (0,2+0,1L/100) µm

⁽¹⁾ According to Mitutoyo inspection method L = measuring length (mm)

Example of an M-NanoCoord-LNP measurement application



Aspherical lens measurement result



Aspherical lens analysis by lens section comparison