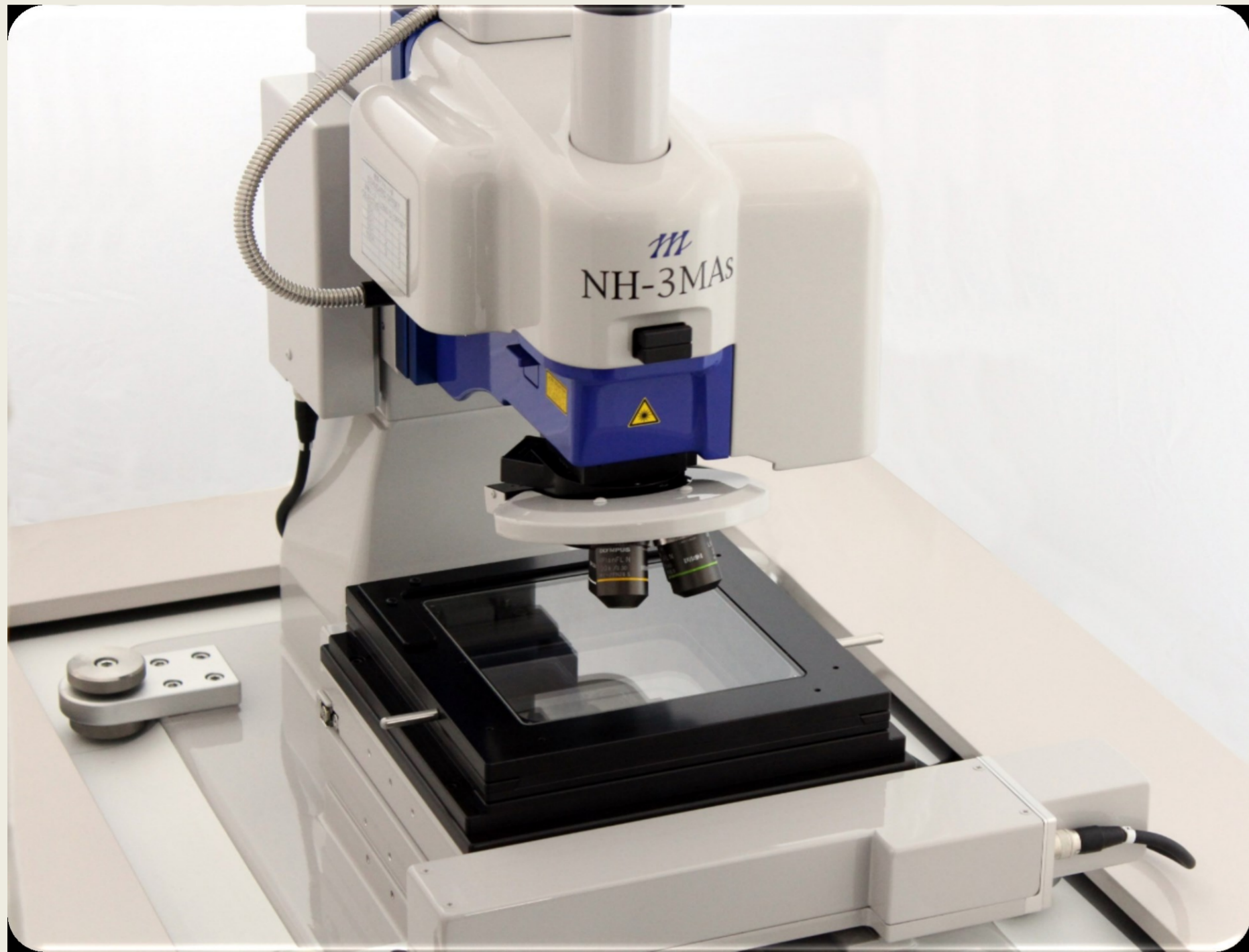


Point Autofocus Probe (ISO 25178-605) Micro Lens Array Form and Optical Characteristic Evaluation Instrument (NH-3MAs)

All round measurement for optical devices



Measuring principle

1) Surface texture & Form

● Point autofocus probe
(ISO 25178-605)

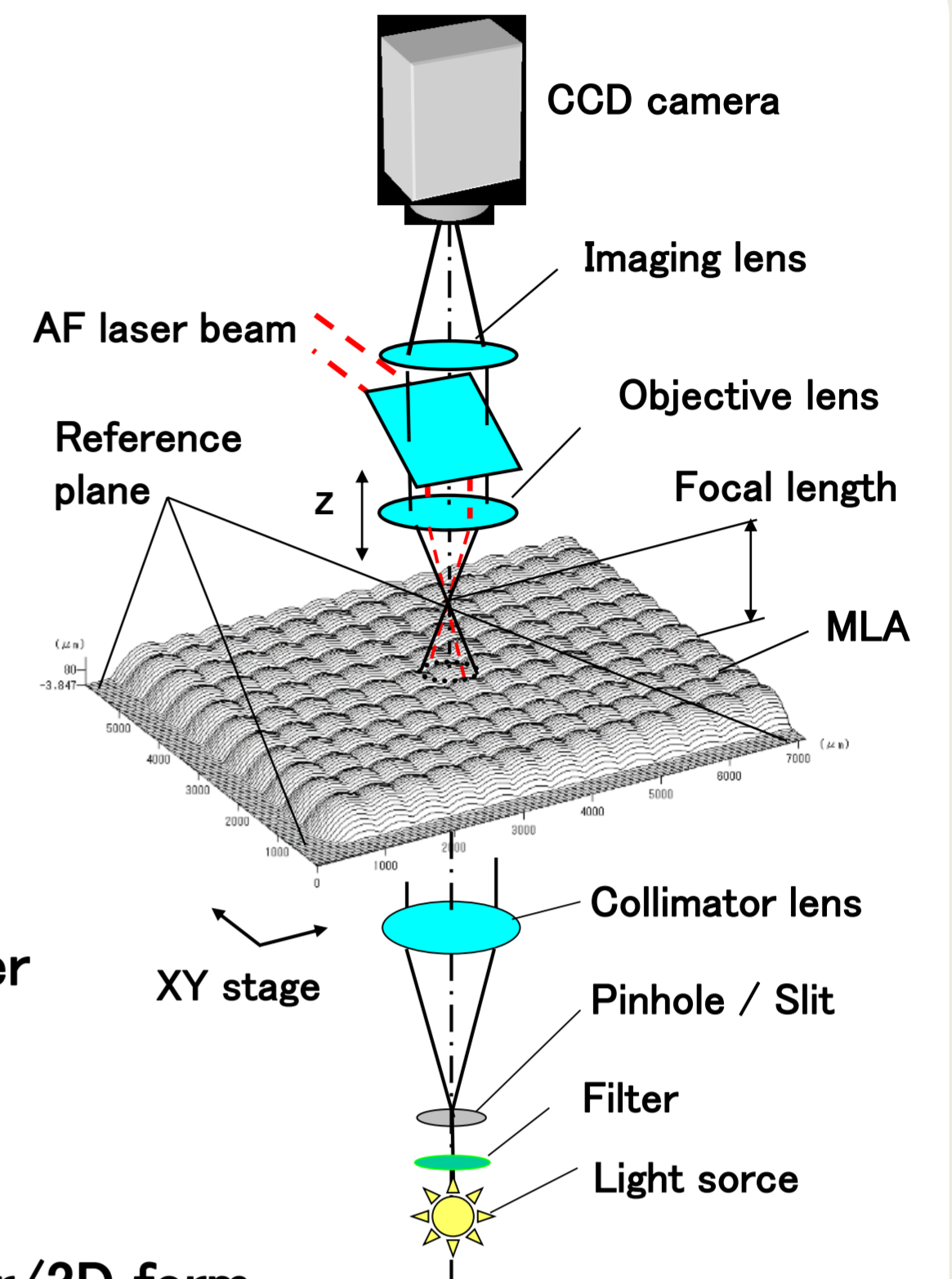
Laser spot diameter
 $D = 1 \mu\text{m}$ (100X)

2) Optical Characteristic

● Autocollimator
(Transmitted optics)

Sensor : CCD camera

Image processor : Mitaka Imager



Function

1) Surface texture & Form

a) 2D/3D roughness, b) Contour/3D form

c) Aspherical form d) flatness

2) Optical Characteristic

a) Effective focal length b) Back focal length c) Spot information

d) Focal position displacement e) Distortion aberration f) MTF

Specification

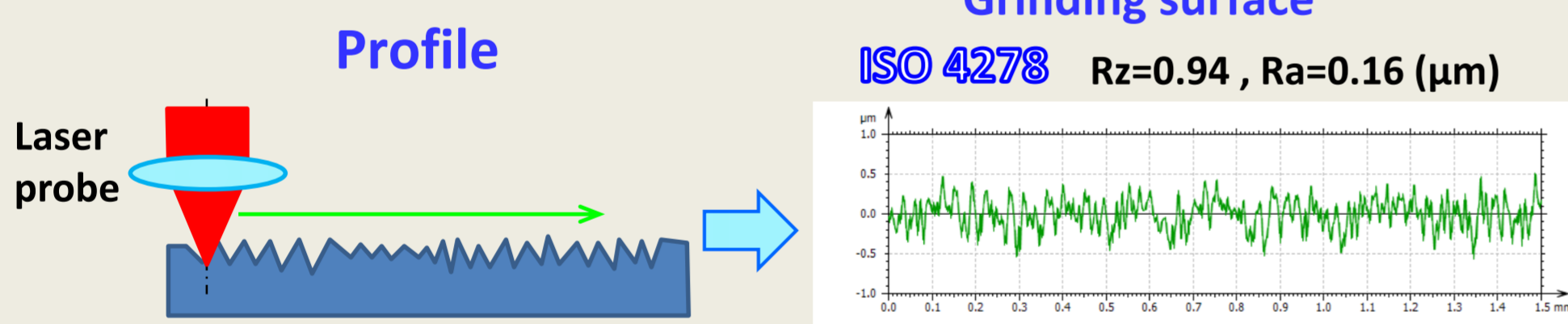
Axis	X	Y	Z	AF (Z1)
Measuring range	100mm	100mm	100mm	10mm
Scale resolution	0.01 μm	0.01 μm	(0.1 μm)	0.001 μm
Measuring accuracy	(2+4L/1000) μm	(2+4L/1000) μm	(for positioning)	(0.1+0.3L/10) μm

L = Measuring length in mm

Profile / Areal Surface texture

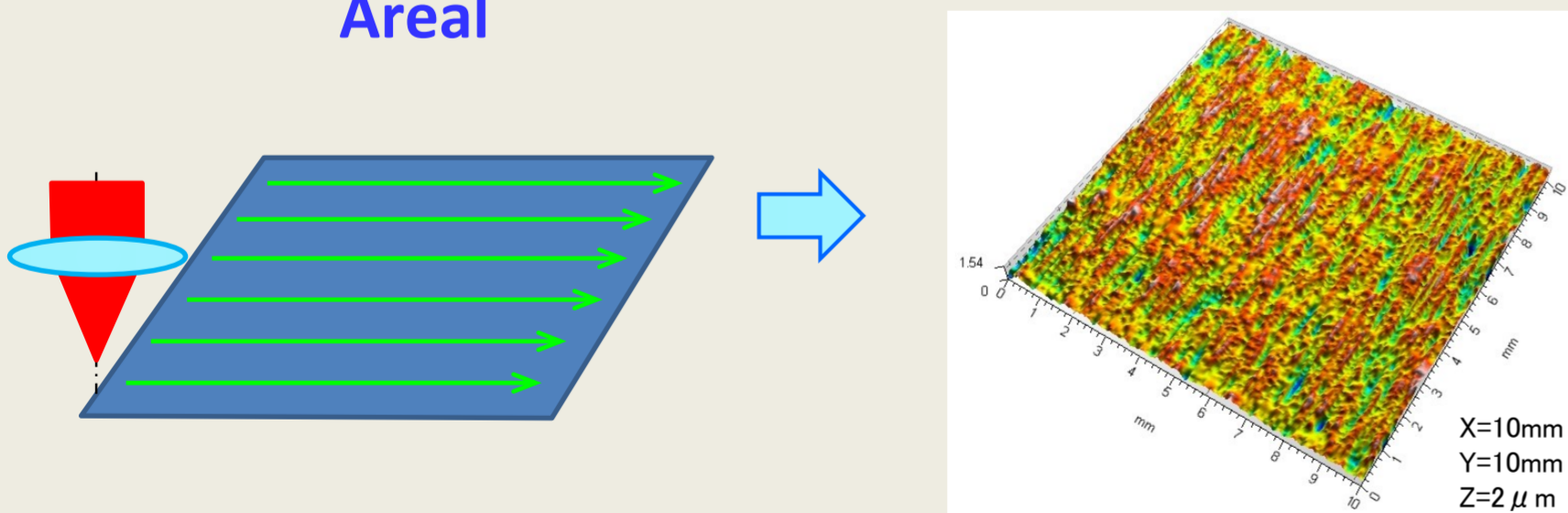
Grinding surface

ISO 4278 Rz=0.94, Ra=0.16 (μm)



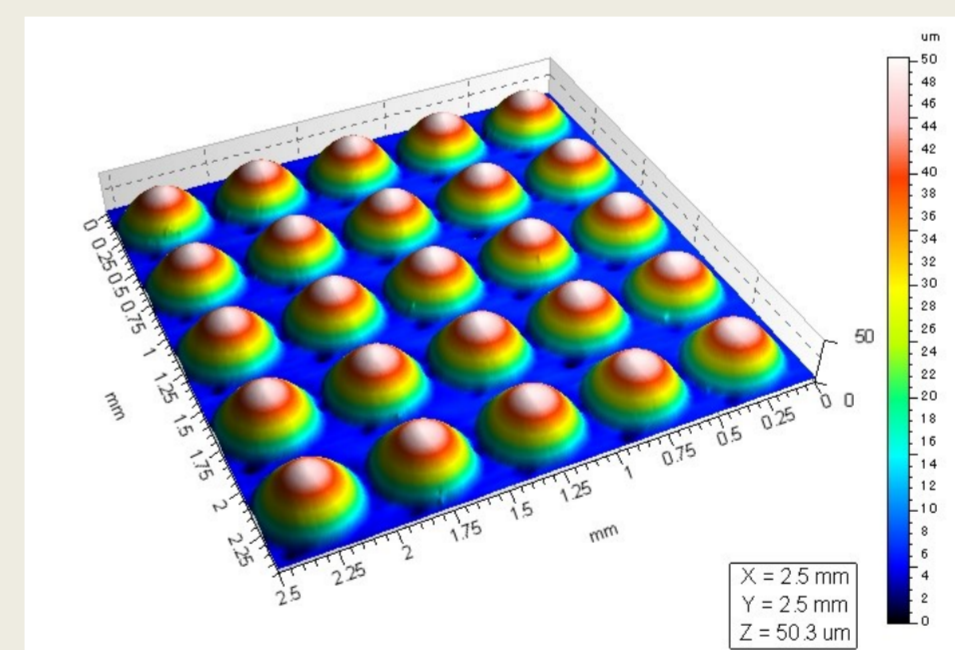
Areal

ISO25178 Sz=1.96, Sa=0.26 (μm)

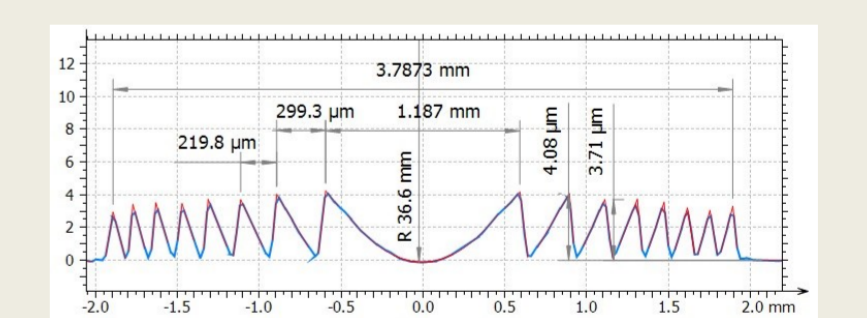
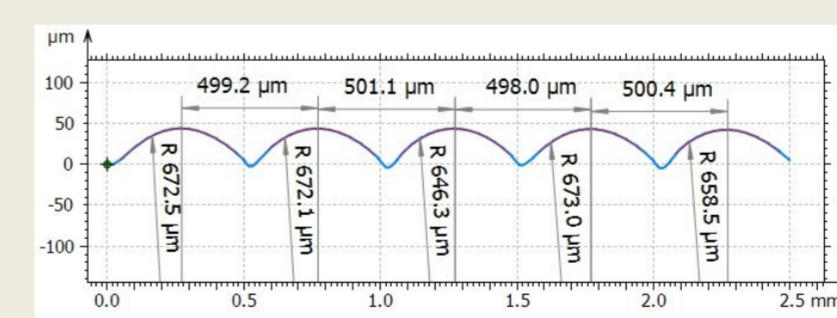
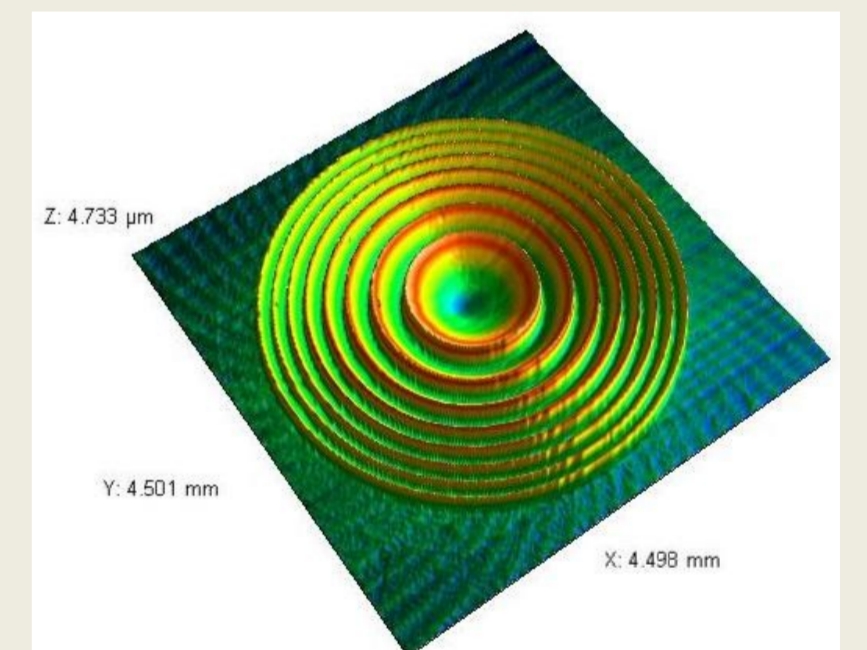


3D topography & Contour

MLA

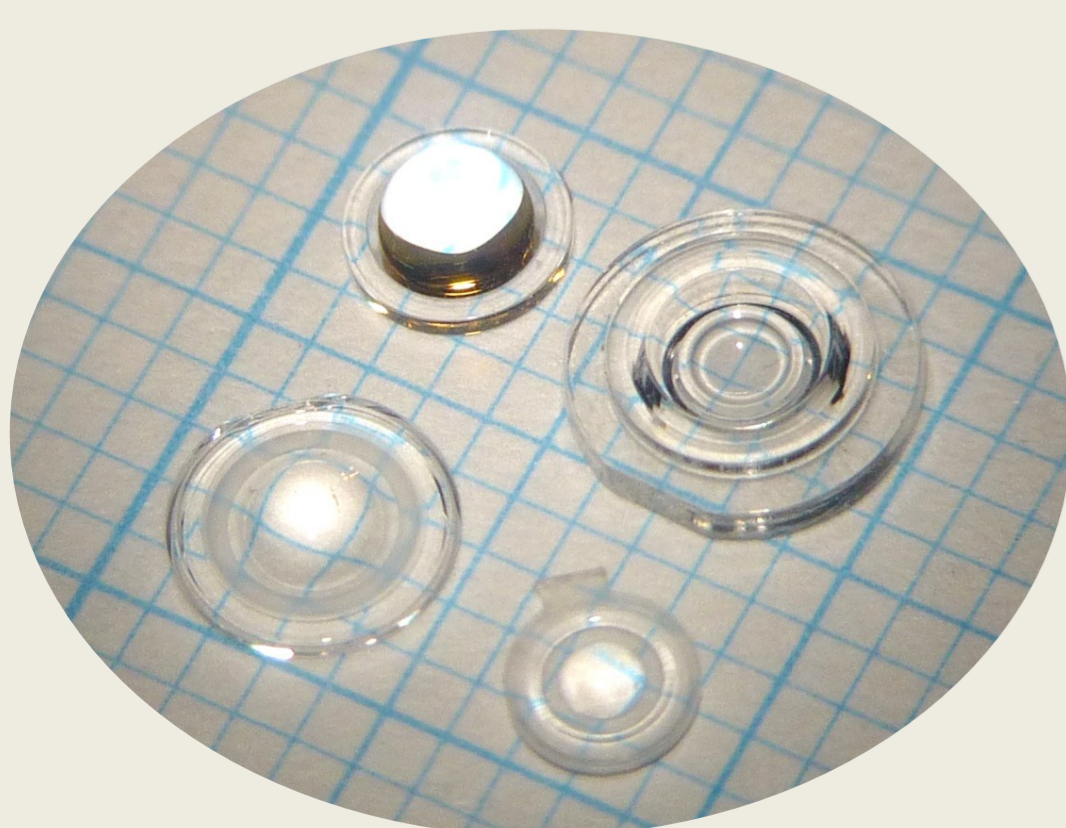


Fresnel lens

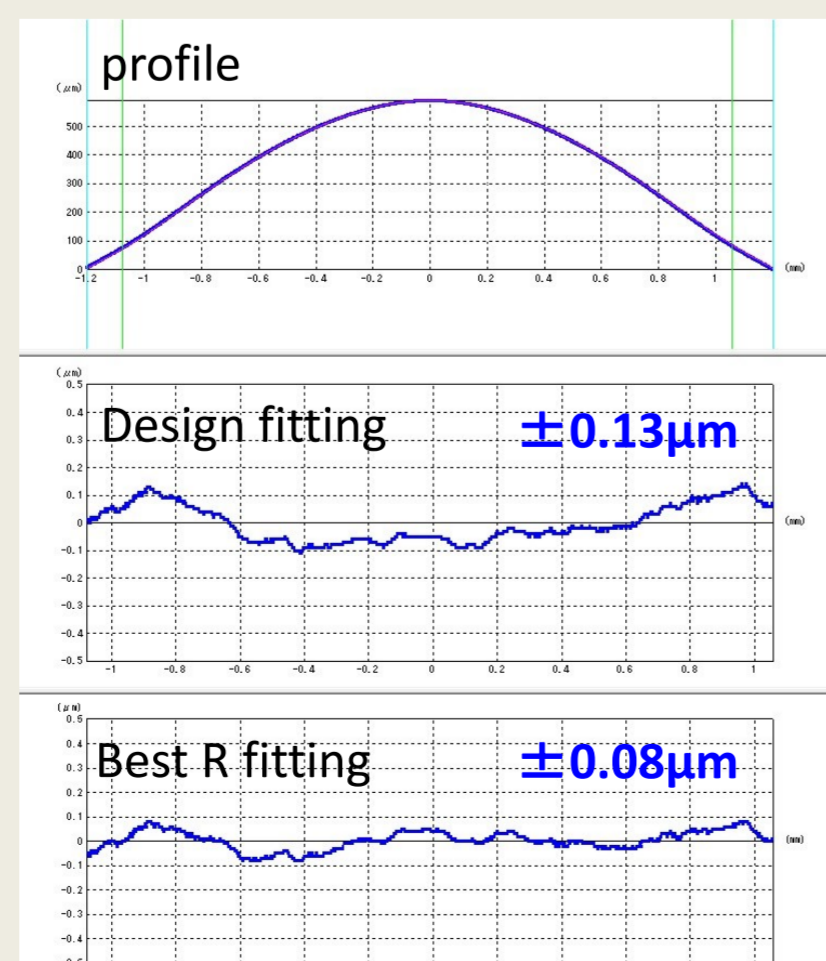


Aspherical lens

Micro aspherical lens

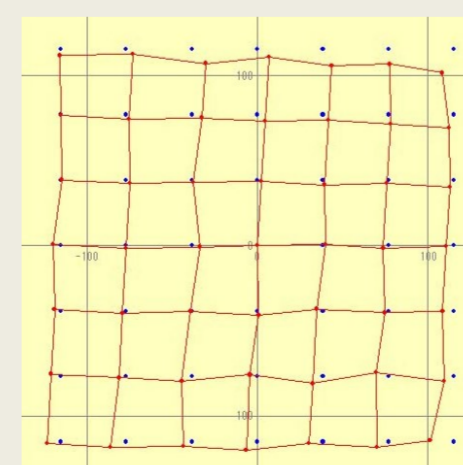


2D form deviation

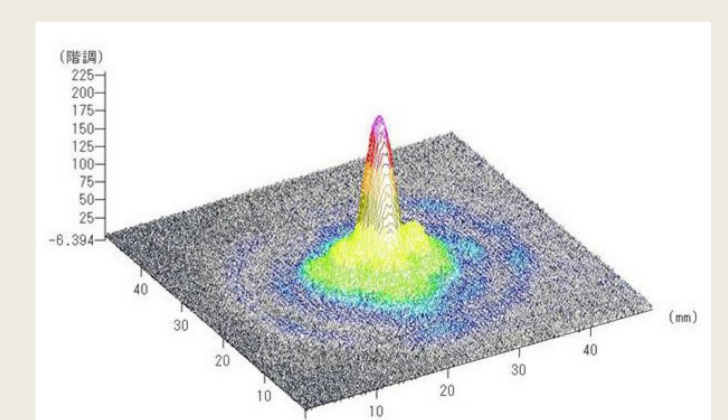


Optical characteristic

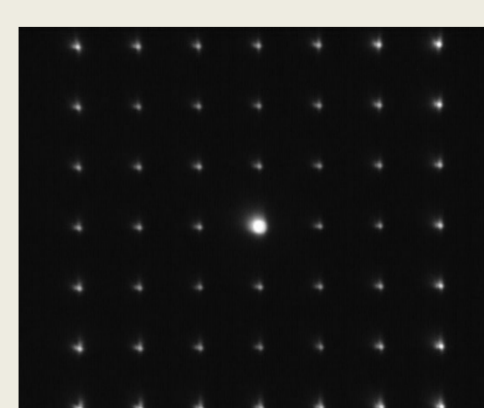
Focal position displacement



Spot profile



Distortion aberration



MTF

