

200MM / 8" DICING SYSTEM

FROM PROTOTYPE TO PRODUCTION  
AND EVERYTHING IN BETWEEN

TOTAL FLEXIBILITY, TOTAL CONTROL



## *nanoace 200*

### *GET MORE OUT*

From the latest wafer designs to ceramic components and everything in between. With cut depths of up to 13mm, the *nanoace 200* has all your dicing requirements covered.

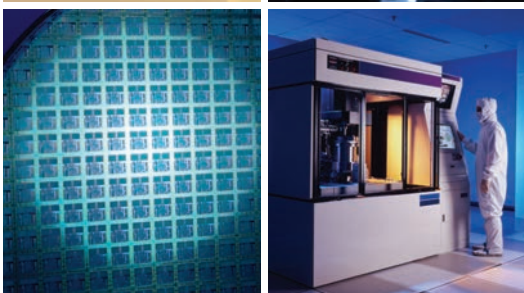
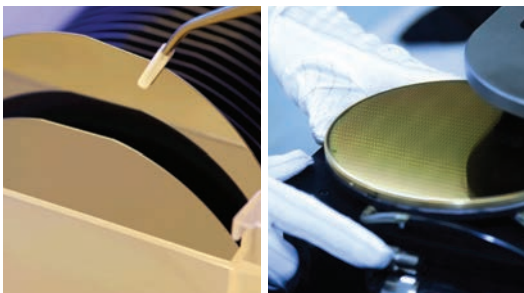
### *THE ULTIMATE IN SYSTEM PRODUCTIVITY*

Need fast turnarounds?

Short run work?

Need to dice a wide range of jobs?

A diverse workload needn't be inefficient with easy work loading, quick tool changes, fast program entry.



ENGINEERED TODAY FOR THE TECHNOLOGY OF TOMORROW

Chelworth Industrial Estate, Cricklade, Swindon, Wiltshire, UK, SN6 6HE Tel: +44 (0)1793 751160 [www.loadpoint-dicing.com](http://www.loadpoint-dicing.com)

# nanoace 200

The **nanoace 200** is a micro dicing system that covers all aspects of dicing and scribing wafers and substrates. Fitted with Loadpoint's NanoControl, it has the flexibility for prototype trials and small batch runs and the automatic processes for larger production runs.

Materials processed include: Ceramic, FR3/FR4, GaAs, Germanium, Glass, InP, LED's, Lithium Niobate and Tantalate, ceramic and QFN, Piezo electrics, PZT, Quartz, sapphire and silicon amongst others.

## Loadpoint Expertise

Every Loadpoint system incorporates a Loadpoint air bearing spindle that has been continuously developed over 40 years. Our customers trust Loadpoint to help them develop class-leading products. We have helped many customers develop task orientated solutions for ultrasound scanners, inkjet printers, SAW filters, MEMS devices and a whole range of silicon based products.

### Micromachining solutions for:

SEMICONDUCTORS	OPTICAL
ELECTRONICS	MEDICAL
FERRO-ELECTRONICS	SOLAR
OPTO-ELECTRONICS	SONAR

## STANDARD PACKAGE

### NanoControl

- Windows based operating software
- Fast program entry even for complex cutting patterns

### Vision & Alignment system

- Monocular video alignment system with pattern recognition
- Full 17" / 430mm monitor for alignment, data entry and machine monitoring
- Continuous live display of X,Y,Z and theta co-ordinates
- Z autofocus set up of alignment image, with offset option for depth of cut

### Tooling

- Standard wheel carrier with 50 to 76.2mm diameter blade capacity
- Three direction coolant delivery; main blade coolant jet, blade side wash bars and wafer flood jets
- Plain wafer vacuum chuck, 200mm dia capacity
- Accelerometer based Z datum set, off-chuck height sensing system

### Loadpoint Air Bearing Spindle

- Very low vibration improves the cut quality and reduces chipping
- DC brushless drive 1.2kW or 3kW, 3,000 to 60,000 rev per minute
- Theta ( $\theta$ ) axis bearing rotary table with high resolution direct drive

### Capacity

- X,Y,Z = 260 x 260 x 13mm
- Continuous rotation theta axis
- 50 - 76.2mm, hubbed and hubless  
100mm / 4" blade option available for 16mm thick work piece capability

### Vision and alignment system

Manual and automatic alignment modes:

- Pattern Recognition System (PRS)
- 2 point alignment with programmable off-set for off-cut alignment
- Manual and automatic (option) kerf and chipping measurement
- 17" LCD monitor

### System Productivity

Off-chuck height sensing system ensures constant depth of cut, blade dressing routines add consistency of cut, BBD (broken blade detection) minimises machine downtime.

### Work holding

Standard packages include adaptable plain wafer chuck for use with wax and substrate mounting systems and film frames. Loadpoint also manufacture standard and custom chucks for all standard tape ring and film frame mounting systems, with optional ceramic inserts for improved component support. Other custom designs inc. tape defined vacuum channels, mechanical vices, and designs to customer requirements.

## OPERATIONAL SPECIFICATION

Work capacity (X, Y, Z)	260 x 260 x 13mm*
Blade Capacity	50 - 76.2mm dia.*
X, Y, Z Axis Drives	DC Brushless
Y Index Range	0.0001 - 275mm
Y Index Resolution	0.0001mm
X Axis Range	0.1 - 275mm
X Axis Feed Rate	300mm per sec
Z Axis Resolution	0.0001mm
Theta Axis Drive	Direct drive torque motor with rotary encoder
Theta Axis Range	360°(Continuous rotation)
Theta Axis Speed	90° per sec
Theta Axis Resolution	0.00004°
Spindle Drive	DC Brushless
Spindle Speed Range	3,000 - 60,000 rev per min
Spindle Power	1.2kW, 1.8kW or 2.4kW

\*Optional extensions to work area and blade capacity to suit customer applications are available.



**LOADPOINT**  
MICRO-MACHINING SOLUTIONS

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