

NDS

**GRINDING
WHEELS**

Finely Ground

**WAFER
MOUNTER**

Stable / Reliable

**CURING
SYSTEM**

Energy-saving

**DICING
SAW**

Accurate / Efficient

**WAFER
CLEANER**

Eco-friendly

**CHUCK
TABLE**

Customize

**WAFER
EXPANDER**

Auto-cutting

**DICING
BLADES**

Accurate / Fast

**CO₂
BUBBLER**

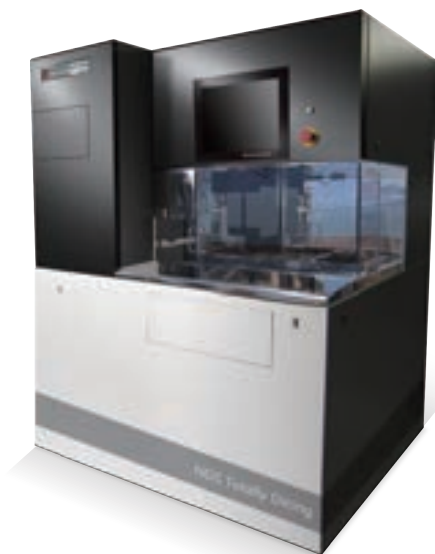
Anti-static

**DICING
TAPE**

Consistent Adhesion

SMART SOLUTION by **NDS**[®]





NANO 321

High Precision Dicing Saw

Dual Scope with Different Magnifications

Speed the automatic alignment sequences while keep the precision of positioning.

High-stiffness spindle design with low vibration

High performance air-bearing spindle provide reliable and high precision cutting quality.

Non-contact Setup

Avoid fruitless blade wearing or damage during setup. Available during cutting process to enhance cutting reliability and increase productivity.

Axial / Ring Light

Highlight the fiducial marks on workpiece with appropriate lighting.

Variety of Chuck Tables

Accommodate different kinds of table to meet customized requirements.

15" Touchscreen Display

Featuring big size touch panel with graphic user interface.

HIGH THROUGHPUT



SPECIFICATIONS

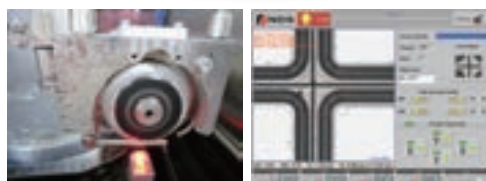
Item	Descriptions	Unit	NANO 321	
Workpiece size			Φ Max. 12"/ Max. 320 mm square	(*)
X axis	Cutting range	mm	320	
	Max. cutting speed	mm/s	0.1~600	
Y axis	Cutting range	mm	320	
	Index step	mm	0.00005	
	Positioning accuracy	mm	0.003 or less /320	(Single error)
Z axis	Max. stroke	mm	32.2	
	Moving resolution	mm	0.00005	
	Repeatability accuracy	mm	0.001	
	Max. blade size	mm	Φ60	
θ axis	Max. rotating angle	deg	360	
Spindle	Output	kW	1.8 at 60,000 min ⁻¹	
	Rated torque (30K PRM)	N · m	0.35	
	Revolution speed range	min ⁻¹	6,000~60,000	
Applicable tape frame		-	2-12-1	
Utilities	Machine dimensions	mm	1290W × 1180D × 1800H	
	Machine weight	kg	Approx. 1,200	(without transformer for overseas use)
* A special jig is required.			*Specifications are subject to change without notification.	

NANO 150G

High Precision Dicing Saw



PIONEER VISUAL CUTTER SETUP



Unique Z-axis Design

Realizes high stability.

Innovative Vacuum System

Reduces 60% air consumption.

Significantly reduce carbon footprint.

Shortening Execution time of cutter setup

VCS is faster than traditional photoelectric sensor.

Increase working proficiency and improve productivity.

Improved operability

Ergonomic sloped touch screen design provides proper visual angle and is easy to use.

SPECIFICATIONS

Item	Descriptions	Unit	NANO 150G
Workpiece Size			Max. $\Phi 6"$ or $\square 6"$
Spindle	Max. revolution speed	rpm	60000
	Max. output	kW	1.2
X axis	Cutting range	mm	160
	Speed range	mm/s	0.1 ~ 300
Y axis	Cutting range	mm	160
	Moving resolution	mm	0.000125
	Positioning accuracy	mm/mm	0.003/5
Z axis		mm/mm	0.005/160
	Max. stroke	mm	25
	Moving resolution	mm	0.00025
	Max. Blade O.D.	mm	60
θ axis	Repeatability accuracy	mm	0.001
	Max. Rotating angle	deg	360
	Resolution	sec	0.405
System	Display		15" Color LCD
	Language		Chinese/English
Utilities	Outline dimensions	mm	650W × 860D × 1580H
	Weight	kg	320

*Specifications are subject to change without notification.

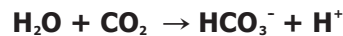
HERMES

Automatic Ultrapure Water Anti-static System

Hermes Ultrapure water antistatic system for ESD protection, developed by AVVA R&D Corp, can constantly control the ultrapure water resistivity within high precision range during dynamic flow. It can calibrate the resistivity instantly in high water flow rate situation. Easy maintenance. Zero consumables.

Purpose of CO₂ Bubbler

Preventing ESD during the dicing or grinding process.
Preventing ESD when ultrapure water flows through the pipes.

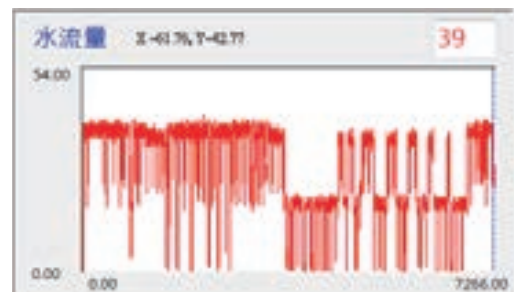


APPLICATION

- Wafer Dicing/ Wafer Grinding/ Laser Grooving/ Scrubber/ Water Jet Cleaning/ Stripper cleaning
- Water Jet Cleaning/ HPMJ

MONITORING PERFORMANCE

EC250S Monitoring 2 sets of dicers.



WORLD NO.1

SPECIFICATIONS

CO₂ + Surfactant Machine

Item	Unit		
Ideal Range	MΩ-cm	0.1~1.0	(^{*1})
Ideal Target	MΩ-cm	One/ Multiple	
		0.3~0.7	(^{*2})
Static Flow	MΩ-cm	±0.05	(^{*3})
Dynamic Flow	MΩ-cm	±0.3	
Capacity	Lpm	5~30/40/50	(^{*4})
Air Intake		Variable high-pressure active system	
Parameter Setting		Six parameters	
Regulatory Element		World Patent Control system	
Consumables Costs		No	
Lead Time		4 Weeks	
Pipeline Design		HPVC Pipe	
Monitoring		Resistivity/ Water flow / Temperature / Water Pressure	
Alert Setting		Resistivity/ Temperature	
Display		7" Touch Panel	
Size	cm	40 x 70 x 127	

^{*}Specifications are subject to change without notification.

^{*}Other series, with no surfactant connecting, are also available upon request.

^{*1} ^{*2} Standard units: Customized units for special resistivity are available upon request.

^{*3} Constant water flow for more than 10 mins.

^{*4} Maximum operation flow rate +10% Lpm



NDS 412CSW-NB

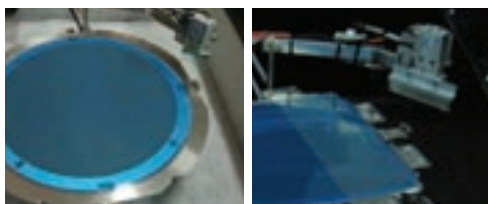
Wafer cleaner

Applicable to 8 , 12 inch wafer.

For cleaning and drying after dicing.

- Atomizing cleaning with nozzle
- 10 sets of cleaning programs
- User-friendly interface / PLC control
- Rapid cleaning
- Customized solution for cleaner with solvent and brushes are also available upon request

10 PROGRAMMABLE RECIPES



SPECIFICATIONS

Item	Unit	NDS 412CSW-NB
Workpiece	inch	12 / 8
Cleaning Method		Atomizing Cleaning
Spinner Velocity	rpm	100-3000
Time Setup	sec	0-999
Size	mm	950W x 600D x 1200H
Weight	kg	170
Power		Single Phase AC220V 50/60Hz

*Specifications are subject to change without notification.



NDS 506/508CS

Wafer Expander

Accommodates 4" to 6" wafer expanding

- Temperature control for better expansion of tape (within $\pm 5^{\circ}\text{C}$)
- Adjustable expansion
- Auto-cutting function
- Customized size is upon request

EASY OPERATION



NDS 208CSV NDS 212CSV

Semi-automatic Wafer Mounter

Applicable to 8, 12 inch wafer
Good mounting performance
Easy maintenance

AUTOMATICALLY LAMINATED



- Stable laminating process
- Saving tape consumption
- User-friendly interface
- Adjustable tape tension
- Sensor installed to secure safe operation
- Pressure shown in the monitor for better control

SPECIFICATIONS

Item	Unit	NDS 208CSV	NDS 212CSV
Air Pressure	Mpa	0.4~0.6 Mpa(4~6 kg/cm²) Ø8	Max 0.4~0.6(4~6 kg/cm²) Ø8
Power		AC220V 50/60Hz	AC220V 50/60Hz
Size	mm	630W × 1320D × 770H	730W × 1320D × 770H
Weight	kg	250	300

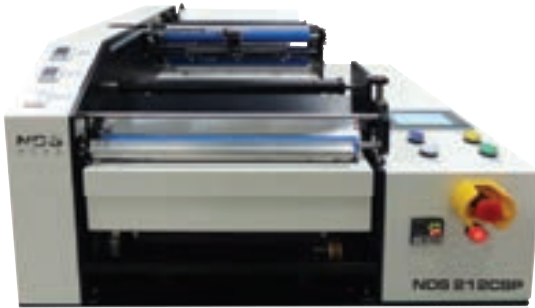
*Specifications are subject to change without notification.

NDS 212CSP

Semi-automatic Wafer Mounter

Applicable to 8, 12 inch wafer
Compact design, Easy operation

- Desktop design
- Temperature controlled heating system
- Tape tension control



FOR PRECUT TAPE

SPECIFICATIONS

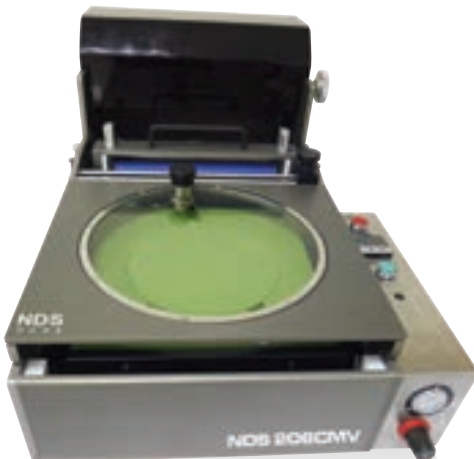
Item	Unit	NDS 212CSP
Air Pressure		0.4~0.6 Mpa (4~6 kg/cm ²)
Pipe		Ø8
Power		AC220V 50/60Hz
Temperature Range		RT~ 150°C
Size	mm	800W × 930D × 580 H
Weight	kg	150

*Specifications are subject to change without notification.

NDS Manual Wafer Mounter 206/208/212CMV

Applicable to 6, 8, 12 inch wafer

- Built-in linear roller to avoid dust
- Adjustable pressure to control the roller
- Robust design



BUBBLE-FREE LAMINATION

SPECIFICATIONS

Item	NDS 206/208/212CMV
Workpiece	6"/ 8"/ 12"
Power	AC110V or AC220V 50/60Hz
Pipe	Ø8
Pressure	0.4~0.6 Mpa(4~6kg/cm ²)

*Specifications are subject to change without notification.



UNIFORM IRRADIATION

NDS 312CFL

Fully-automatic LED UV Curing System

Fully-automatic UV curing machine for wafer, glass and other materials.

Applicable to wafer size from 8" to 12" with cassette for loading, and unloading.

- Fast curing
- Zero mercury, no ozone, environmentally-safe
- Power saving for standby mode
- Good heat dissipation
- Options: SECS/ GEM, history recording, marking



SPECIFICATIONS

Item	Unit	NDS 312CFL
Workpiece	Inch	12/8
Power		Single or three phase 220V 50/60Hz
UV Wavelength	nm	375
Size	mm	760W x 1300D x 1870H
Weight	kg	400
UV Intensity	mW/cm ²	100~180

*Specifications are subject to change without notification.



UNIFORM IRRADIATION

NDS 312CSL

Standalone LED UV Curing System

- Compact design
- PLC-controlled
- Equipped with intensity sensor

SPECIFICATIONS

Item	Unit	NDS 312CSL
Workpiece	Inch	6~12
Power		AC 220V 50/60Hz
UV Wavelength	nm	375
Size	mm	730W x 680D x 1000H
Weight	kg	150
UV Intensity	mW/cm ²	100~180

*Specifications are subject to change without notification.



LAMP FAULT DETECTION

NDS 312CSM

Low-pressure Mercury Curing System

Desktop Manual Curing System

- UV lamp intensity sensor
- Overheating protection
- Lamp lifespan monitor

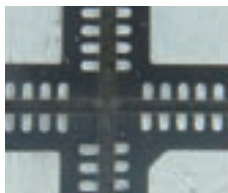
SPECIFICATIONS

Item	Unit	NDS 312CSM
Workpiece	Inch	12/8
UV Wavelength	nm	365
Size	mm	600W x 650D x 230H
Weight	kg	35
UV Intensity	mW/cm ²	15~18

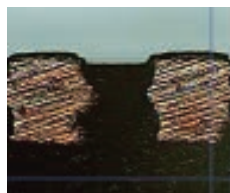
*Specifications are subject to change without notification.



SELF-SHARPENING



QFN
50 mm/sec



QFN
50 mm/sec

Resin Bond Blade

SGS

Resin bond blade, with the characteristic of free-cutting and self-sharpening, can efficiently improve cut quality and efficiency on ductile and gummy materials such as QFNs and coppers and on hard-and-brittle materials such as glass and ceramics.

- Reduce copper burr and smear on ductile and gummy materials.
- Improve chipping, feed rate, and blade life on hard and brittle materials. Ultra thin blade (over 50um)

APPLICATION

QFNs, Glass for CIS Modules and Opticals, Ceramics, Quartz for Optical Fiber Communication, Splitter, IR-Cut Filter

SPECIFICATIONS

Suggested Max Spindle Speed: 35,000~40,000rpm Max Spindle Speed for Special Resin Bond Blade: 30,000rpm
Blade thickness 0.09~0.8mm depending on blade formulation

Tolerance / mm

SD	600	—	25	BA	56D	/	0.1T	/	40H
Grit Type	Grit Size		Concentration	Bond	OD		Thickness		ID
SD/SDC/CBN	02/06 #3000 04/08 #2000 05/10 #1500 06/12 #1200 08/16 #1000 10/20 #800 12/25 #700 20/30 #600 30/40 #500 40/60 #400 #325 #270 #230 #200 #170		25~100	BA/BB/BQ/BS	52~76.2 ±0.02		0.05~0.60 ±0.005~±0.020		40 H7
	um								
	Mesh								

Electro-formed Nickel Bond Blade

SGS



**GOOD QUALITY
LOW WEAR RATE**



EMCLED
80 mm/sec



HPLED
40/60 DHT 15 mm/sec

Electro-formed Nickel bond blade, featured by ultra thin, high strength and stiffness, is extremely rigid. It can give high endurance and robust properties during cutting process while maintaining very low blade wearing rate.

- Sophisticated electro-formed technology
- A wide selection of bonds available for various kinds of workpieces.

APPLICATION

EMC LED, Chip LED, WLCSP, Compound, Silicon, Magnetics, Ceramics, Materials required ultra thin blade.

SPECIFICATIONS

Max Spindle Speed: 37,000~38,000rpm
Blade thickness 0.025~0.3mm depending on blade formulation

Tolerance / mm

20/30	AA	56D	0.1T	40H	1w	2d	16N
Grit Size	Bond	OD	Thickness	ID	Slit Width	Slit Depth	No. of Slit
01/03 #5000	DM <i>Soft</i>	49~115	0.025~0.25	25.4/40/88.9	0.5mm	1mm	8N
02/04 #4000	FB	+0.05	<0.3 ±0.01	H6/H7	1mm	2mm	16N
02/06 #3000	BB		<0.1 ±0.005		2mm		32N
04/06 #2500	AA <i>Hard</i>		<0.4 ±0.003		5mm		64N
04/08 #2000							
05/10 #1500							
06/12 #1200							
08/16 #1000							
08/20 #900							
10/20 #800							
12/25 #700							
20/30 #600							
30/40 #500							
40/60 #400							
#325							
um Mesh							

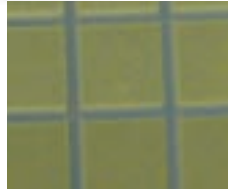
Metal Bond Blade



**HIGH STIFFNESS
LONG BLADE LIFE**



Glass
5 mm/sec



Phosphor Film/Sheet
100 mm/sec

Metal bond blade, sintered and mold pressed under high temp. and pressure, has high rigidity and long blade life. With higher wear-resistance, balanced blade wearing profile, and higher stiffness, the metal bond blades can effectively reduce cutting defects such as slant cut and PKG size/profile issues while providing very long blade life.

- A wide selection of bonds available for various semiconductor packages such as BGAs as well as for glass and quartz cutting
- Ultra thin blade (over 45um).

APPLICATION

Sapphire, BGAs(BGA, LGA, CSP, SiP, MCP, EMMC, uSD card), Glass for CIS Modules and Opticals, Quartz, MLCC, Ceramics

SPECIFICATIONS

Max Spindle Speed: 40,000rpm

Blade thickness 0.075~0.35mm depending on blade formulation

Tolerance / mm

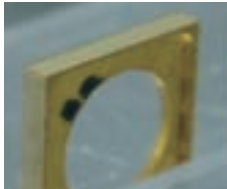
SD	600	—	25	MH	56D	/ 0.15T	/ 40H
Grit Type	Grit Size		Concentration	Bond	OD	Thickness	ID
SD/CBN	02/06 #3000		15~125	MH Soft	50.8~125	0.10~0.35	40/55/75/88.9
	04/08 #2000			MS	+0.1/-0	±0.003~±0.020	H6
	05/10 #1500			M43			
	06/12 #1200			M18 Hard			
	08/16 #1000						
	10/20 #800						
	12/25 #700						
	20/30 #600						
	30/40 #500						
	40/60 #400						
	- #325						
	- #270						
	- #230						
	- #200						
	um Mesh						

Vitrified Bond Blade

Vitrified bond blade with high rigidity and cutting capability is able to keep the straightness on the entry and exit point and precision of work dimension during high-loading process. Consequently, this kind of blade realizes advanced machining on hard materials such as crystals and sapphires.

- Porous type.
- Realize high quality process on hard materials like Sapphire.

ELECTRICAL CONDUCTIVITY AVAILABLE



LED Chip on Board
6 mm/sec



PBGA Plastic Ball Grid Array Package
100 mm/sec

APPLICATION

Hard and Brittle Materials (Crystal, Sapphire, Ceramic)

SPECIFICATIONS

Max Spindle Speed: 30,000~32,000rpm

Blade thickness 0.01~1mm depending on blade formulation

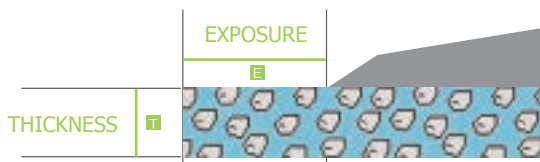
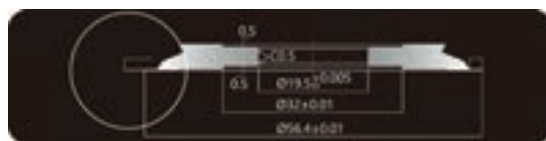
Tolerance / mm

SD	600	J	25	N01	56D	0.15T	40H
	Grit Size	Hardness		Bond		Thickness	
	02/06 #3000	G~S		N01~N10		0.07~0.6	
	04/08 #2000					±0.003~±0.020	
	05/10 #1500						
	06/12 #1200						
	08/16 #1000						
	10/20 #800						
	12/25 #700						
	20/30 #600						
	30/40 #500						
	40/60 #400						
	#325						
	#270						
	#230						
	#200						
	#170						
	um Mesh						
Grit Type			Concentration		OD		ID
SD/CBN			25~125		49~125		25.4/40/88.9
					±0.02		H7



Hub blade is applied on silicon wafer and compound semiconductor wafer cutting. Micrometer electro-formed technology provides higher process quality.

- Precise control of diamond distribution.
- Ultra high-speed separation filters for diamond grain in high precision.
- Well-proportioned diamond distribution on surface reduces back side chipping.

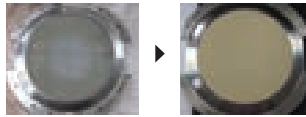
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Chuck Table

We customize porous ceramic vacuum tables of various sizes, either in round or square shape, magnetic or non-magnetic.

Short lead time for producing new chuck tables or replacing ceramic. Reliable flatness, good porosity and high accuracy.



Dressing Board

Functioned to expose diamonds and to improve dicing quality. A wide selection of dressing boards for different applications. High efficiency of dressing and easy operation.



Precut Board

- Lower the operation time
- Dressing tools for hub blades
- Lower the cost of precutting process

SPECIFICATIONS

Girt Size	Electro-formed Nickel Bond Blade	Metal Bond Blade	Resin Bond Blade	Vitrified Bond Blade	Hub Bond Blade
WA200	325-400	-	200-230	200-230	-
WA400	400-600	325	270-325	270-325	-
GC600	500-700	400-800	400-500	400-500	-
GC800	700-1000	600-1000	600-700	600-700	-
GC1000	800-1000	800-1300	800-1000	800-1000	-
GC2000	1200-1300	1000-2000	-	-	1700
GC3000	-	-	-	-	1800-3000
GC4000	-	-	-	-	3200-4200
GC5000	-	-	-	-	4200-5000

*Specifications are subject to change without notification.

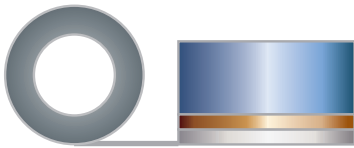


EXCELLENT HEAT-RESISTANT

Heat-Resistant Dicing Tape

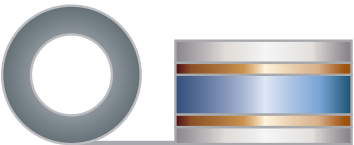
HUV-S7000 / D7000

HUV-S7000 / D7000 Series, different from usual dicing tapes, uses heat-resistant UV curable adhesives which can endure up to 190°C in the process.



HUV-S7000 Series

Single-sided tape with single coated UV curable adhesive



HUV-D7125-30

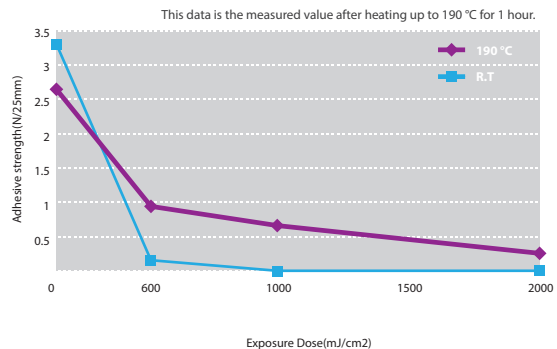
Double-sided tape with double coated UV curable adhesive



HUV-D7125-30/10

Double-sided tape with one side of non-UV and other side of UV curable adhesive

TESTING GRAPH



TESTING CONDITION

- Test specification: HUV-S7050-20A2 (special PET base film 50 um + adhesive layer 20um)
- Test object: Glass
- Peel angle: 180 degree
- Peel speed: 300mm/min



VARIETY OF UV TAPES

PO Base Tape

Series HUV-S4000

Single-sided dicing tape with UV cured adhesive. Anti-static types also available.

Soft

Suitable for the workpiece with gap difference

Expandable

Suitable for die expanding with good mounting performance.

Application

Capacitor / Ceramic /PCB/PPTC/QFN/CCL/LED/Glass ...

PET Base Tape

Series HUV-S1000 / 3000

Single-sided and double sided are available with UV cured adhesive.

Good detachability after UV irradiation

Less Chipping

Mainly used on mounted substrate for dicing process with chipping concern.

Application

Glass/ Ceramic

PVC Base Tape

Series HUV-S5000

UV/ Non-UV

Easy to peel off

Expandable

Application

Wafer / PCB

Thermal Release Tape

Series STD-D / STE-D / STE-S

The thermal release tape is heated to a certain temperature so that the film of workpiece can be peeled off easily.

Suitable for temporary fixing

Customized

One-side thermal release adhesive layer and one-side thermal resistant release type are available upon request.

Item	Specification	Detach Temperature (SUS)	Coated Type	Total Thickness (um)	Base Film material	Base Film Thickness	A/B Adhesive Thickness	A/B Layer Adhesion
STD-D Series	STD-D3100-LHR15/TB35	190°Cx2min	Double	150	PET	100	15/35	0.2/6.5
	STD-D3188-TB35/LHR15	170°C~200°Cx120sec	Double	238	PET	188	35/15	9.5/1
STE-D series	STE-D3050TD-30/30	190°Cx2min	Double	110	PET	50	30/30	6.5/6.5
STE-S Series	STE-S3075TA-30	90°Cx50sec	Single	105	PET	75	30	6.2
	STE-S3100TA-30	90°Cx25sec	Single	130	PET	100	30	7.8
	STE-S3100TC-30	120°Cx25sec	Single	130	PET	100	30	6.5
	STE-S3188TB-35	170°Cx120sec	Single	223	PET	188	35	9.4

*Specifications are subject to change without notification.

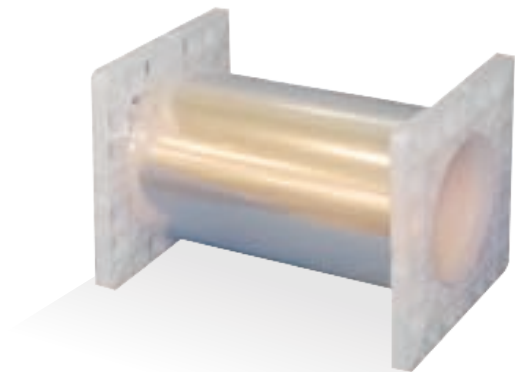
Chemical Resistant Tape

Series SDC



Special tape resistant to acid

Part No	Coated Type	Acrylic Type	Total Thickness	Base Film			Adhesive Layer		Adhesive Strength
				Material	Color	Thickness	Material	Thickness	
SDC-S3050T-25PY	Single	non-UV	75	PET	Transparent	50	Acrylic	25	11.8
SDC-S5080VCRT-25PW	Single	non-UV	105	PVC	Transparent	80	Vinyl Chloride	25	1.0

*Specifications are subject to change without notification.



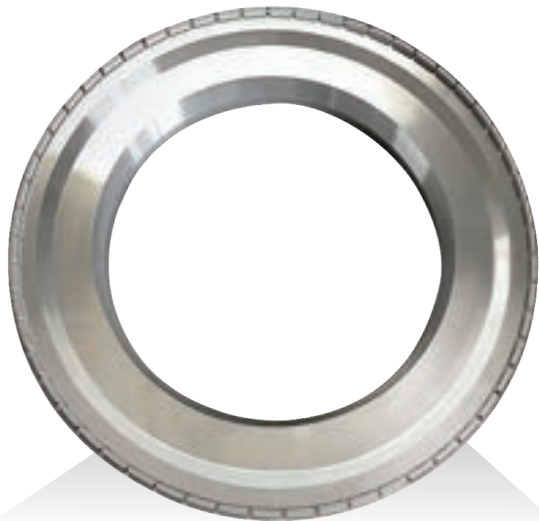
SPECIFICATIONS

Product Name		Coated Type	Acrylic Type	Total Thickness	Base Film			Adhesive Layer		Adhesive Strength		Holding Power	Tensile Strength		Tensile Elongation	
Item	Part No				Material	Color	Thickness	Material	Thickness	Before	After		MD	TD	MD	TD
				μm			μm		μm	N/25mm		mm	MPa	MPa	%	%
HUV-D1000	D1075-10	Double	UV	95	PET	Transparent	75	Acrylic	10/10	7	0.2	0	160	220	300	200
HUV-S3000 Series	S3100-10	Single	UV	110	PET	Transparent	100	Acrylic	10	12	0.2	0	220	280	320	260
	S3100-25	Single	UV	125	PET	Transparent	100	Acrylic	25	20	0.2	0	220	280	320	260
	S3125-20	Single	UV	145	PET	Transparent	125	Acrylic	20	14	0.2	0	280	330	370	240
	S3188-10	Single	UV	198	PET	Transparent	188	Acrylic	10	9	0.2	0	330	380	330	270
	S3188-30	Single	UV	218	PET	Transparent	188	Acrylic	30	20	0.3	0	330	380	330	270
HUV-S4000 Series	S4080-10	Single	UV	90	PO	Clear	80	Acrylic	10	7	0.4	0	40	30	1300	1400
	S4080-20	Single	UV	100	PO	Clear	80	Acrylic	20	11	0.4	0	40	30	1300	1400
	S4080-30	Single	UV	110	PO	Clear	80	Acrylic	30	13	0.4	0	40	30	1300	1400
	S4100-10	Single	UV	110	PO	Clear	100	Acrylic	10	8	0.4	0	50	40	1400	1500
	S4100-20	Single	UV	120	PO	Clear	100	Acrylic	20	11	0.4	0	50	40	1400	1500
	S4100-30	Single	UV	130	PO	Clear	100	Acrylic	30	14	0.4	0	50	40	1400	1500
	S4150-10	Single	UV	160	PO	Clear	150	Acrylic	10	9	0.3	0	30	25	1400	1500
	S4150-20	Single	UV	170	PO	Clear	150	Acrylic	20	11	0.4	0	30	25	1400	1500
	S4150-30	Single	UV	180	PO	Clear	150	Acrylic	30	14	0.4	0	30	25	1400	1500
SUV-S5000 Series	SUV-S5080-10 	Single	UV	90	PVC	Transparent	80	Acrylic	10	4.5	0.2	0	-	-	-	-
	SUV-S5080ET-15 	Single	UV	95	PVC	Transparent	80	Acrylic	15	3	0.15	0	-	-	-	-
SDC-S5000 Series	S5070B-10	Single	non-UV	80	PVC	Blue	70	Acrylic	10	1.0	-	-	-	-	-	-
	S5080T-15PW	Single	non-UV	95	PVC	Transparent	80	Acrylic	15	5	-	-	-	-	-	-
	S5100HST-25PG	Single	non-UV	125	PVC	Transparent	100	Acrylic	25	20	-	-	-	-	-	-
HUV-S7000 Series	S7050-20A2	Single	UV	70	Special PET	Transparent	100	Heat Resistant Acrylic	20	3	0.2	-	-	-	-	-
	S7125-30A2	Single	UV	155	Special PET	Transparent	125	Heat Resistant Acrylic	30	3	0.2	-	-	-	-	-
HUV-D7000 Series	D7050-20A2	Double	UV	90	Special PET	Transparent	50	Heat Resistant Acrylic	20/20	3	0.2	-	-	-	-	-
	D7125-30A2	Double	UV	185	Special PET	Transparent	125	Heat Resistant Acrylic	30/30	3	0.2	-	-	-	-	-
	D7125-30A2/10	Double	non-UV/UV	165	Special PET	Transparent	125	Heat Resistant Acrylic	30/10 (non-UV)	3/6 (non-UV)	0.2	-	-	-	-	-

*Specifications are subject to change without notification.

SUGGESTIONS FOR UV TAPE STORAGE

- Protected from UV exposure
- Put in storage at 23°C ±5°C and in humidity lower than 70% RH
- Six months shelf life



**BEST CHOICE FOR
WAFER THINNING**

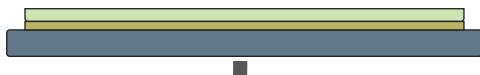
Original: 12" 775um



After Coarse Grinding SD400V-SD600V
Remain Target 120um



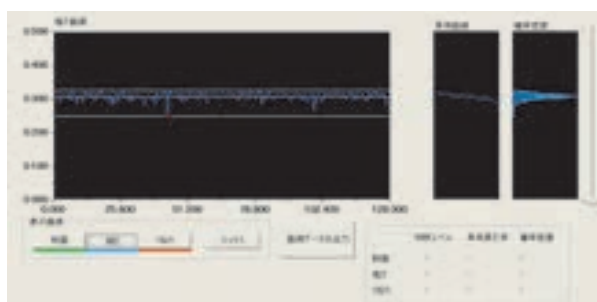
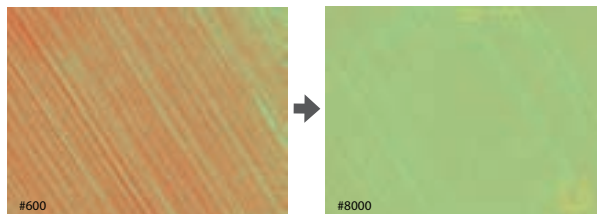
After Coarse Grinding SD2000V-SD5000V
Remain Target 60um



After Fine Grinding SD8000V-SD30000V
Remain Target 30um



Grinding Wheel for Si Wafer



GRINDING PARAMETERS

Item	Unit	Z1			Z2		
Spindle Speed	rpm	4800			1700		
Worktable Speed	rpm	200	100	100	300	300	300
Feed Rate	um/s	1	3	1	0.3	0.2	0.2

TEST RESULTS

Unit	Ra	Ry	Rz	Sm	S	tp
um	0.006	0.078	0.052	2.495	2.058	0.000

GENERAL PROCESSING CONDITIONS

Item	Present Stage
Wafer Size	6" / 8" / 12"
Target Thickness	50um
Feed Rate Process Time	#400-#600: ~100um/min #2000-#5000: 30~50um/min #8000: 20~30um/min #15000: ~20um/min #30000: ~20um/min
Roughness	Ra ≤ 2nm
Wheel Life	> ~5000pcs

*Specifications are subject to change without notification.

Grinding Wheel for Sapphire Wafer

High self-sharpening, non-dressing

Traditional sapphire wafer grinding process requires frequent dressing, and it needs to do dressing with every single wafer. However, our special vitrified bonded grinding wheel can continue grinding without any dressing during processing.

Able to grind the wafer at very high speed feed rate

High performance of wheel sharpness will be realized. Our SD 270VT / SD 325 VT wheel can feed 200um/min and it can reduce much processing time.

Lower grinding ratio

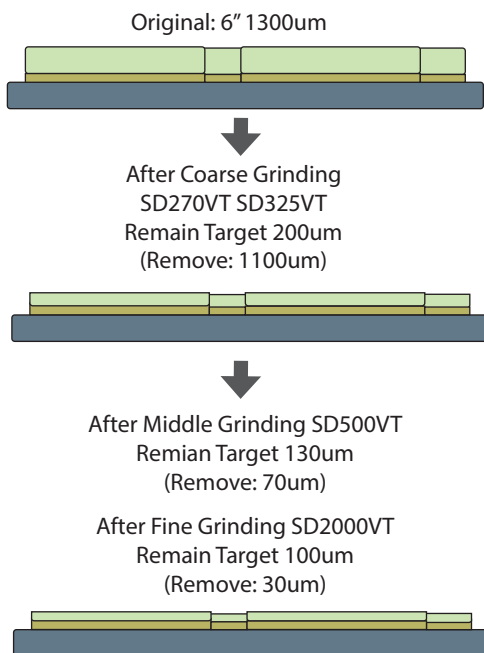
With our special bond recipe, the grinding ratio of SD270VT and SD325VT is reduced by 10% and the grinding wheels have better wear resistance. Machine idling time and grinding process cost will be decreased.

Customized grinding wheels for any application

The high torque of spindle and rigidity of equipment for the grinding of sapphire wafer are generally required, so it is necessary to choose appropriate bond for each type of machine. We are able to offer the most appropriate grinding wheel for your machine and processing. We have 3w/4w/5w and long chip type for improving wear resistance. You can choose the most suitable spec wheel from our wide selection of specifications.



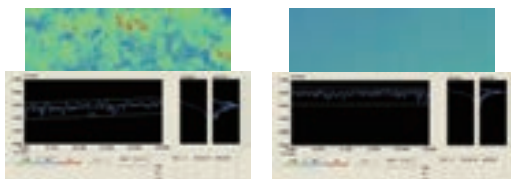
**NO NEED TO DO
INLINE DRESSING**



COARSE GRINDING

Center

Vitrified #325 Feed Rate 200um/min



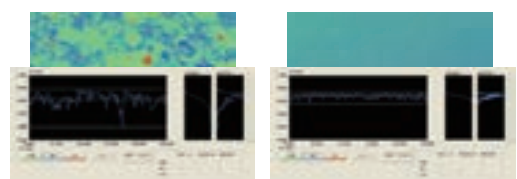
Ra: 218nm

Ra: 20nm

FINE GRINDING

Edge

Vitrified #2000 Feed Rate 30um/min



Ra: 346nm

Ra: 19nm

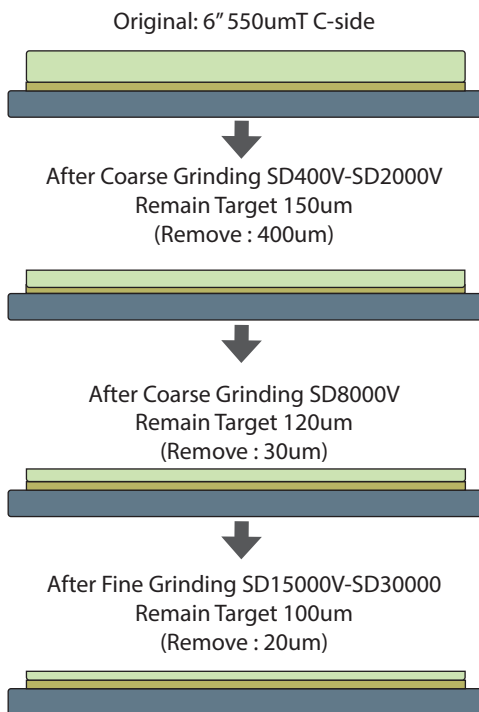
Grinding Wheel for SiC Wafer

Vitrified Bond

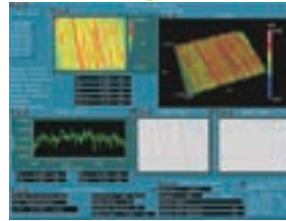
- Pores Bond Type / High grinding performance is realized.
- The bond hardness can be adjusted finely.
- Super high-speed processing for hard-to-cut materials is realized.



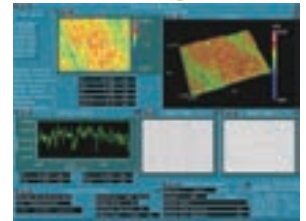
THINNING SOLUTION FOR HARD-TO-CUT MATERIAL



Edge VT#15000 Ra 0.731nm



Center VT#15000 Ra 1.127nm



GENERAL PROCESSING CONDITIONS

Item	Present Stage
Wafer Size	3" / 4" / 6"
Target Thickness	50um
Feed Rate Process Time	#400: ~100um/min #2000: ~50um/min #8000: ~30um/min #15000: ~20um/min #30000: ~20um/min
Roughness	Ra ≤ 0.5~2nm
Wheel Life	> 1000pcs

*Specifications are subject to change without notification.

APPLICATION



- Grinding wheels for all grinding machines.
- Depending on the thickness and roughness required by customers.
we offer customized grit sizes and recommended process.

Sapphire

Process	Chip	Grit Size
Fine	3W-17L	#1000-#1500-#2000
Middle	4W/5W-36L/17L	#500-#600-#800
Rough	4W/5W-36L/17L	#230-#270-#325

SiC

Process	Chip	Grit Size
Fine	3W-17L	#15000
Middle	3W-17L	#8000
Rough	3W/4W-17L	#400-#500

GaN

Process	Chip	Grit Size
Fine	3W-17L	#15000
Middle	3W-17L	#8000
Rough	3W-17L	#400-#500

Resin+Cu

Process	Chip	Grit Size
Fine	3W/4W-17L	#2000-#4000
Middle	3W/4W-17L	#2000-#4000
Rough	3W/4W-17L	#2000-#4000

Si

Process	Chip	Grit Size
Fine	2W/3W-17L	#8000-#15000-#30000
Middle	2W/3W-17L	#2000-#4000-#6000
Rough	2W/3W-17L	#325-#400-#500

SPECIFICATIONS

