



**DISCO**

Kiru · Kezuru · Migaku Technologies



# Electroformed Bond Blades **NBC-Z SERIES**

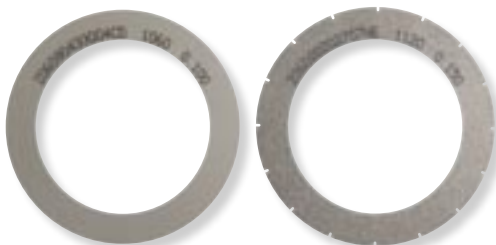
**High performance blade to support a wide range of applications**



## Superior cutting quality - Dicing Wafers to Cutting Substrates

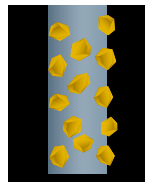
The ultra-thin, high performance NBC-Z series blades are a result of DISCO's original blade development. These blades employ electroformed bonds that realize a superb cutting quality and blade life. In addition to dicing semiconductor wafers, these blades are suitable for dicing a wide variety of semiconductor packages.

- Deep cutting and grooving are possible using super-thin blades.
- Blade thickness - 0.015 mm to 0.3 mm
- Wide range of grit sizes and bond types are available to meet application requirements
- Available for both dicing saws and slicers



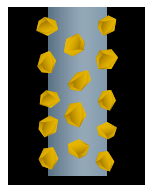
## NBC-Z Types

The structural strength of the blade allows for ultra-thin blades to be realized. They are suitable for dicing and deep grooving of narrow streets.

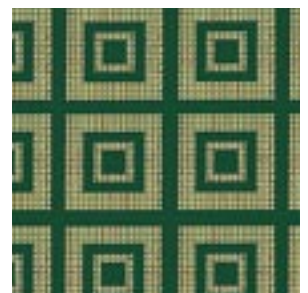


## NBC-ZB Types

By changing the lateral face of the blades, surface chipping and slanted cuts are minimized. This results in improved cutting quality.



Silicon wafer



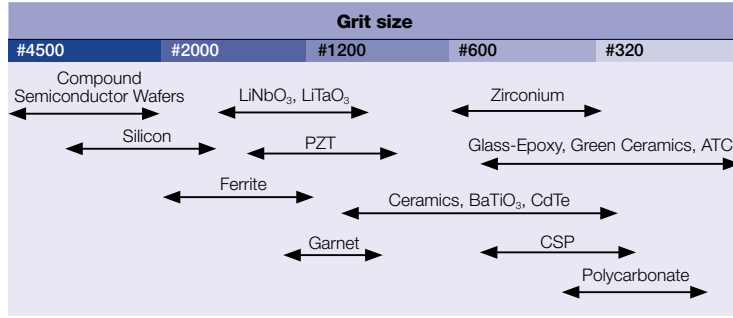
CSP

### Applications

Silicon, GaAs, GaP, LiTaO<sub>3</sub>, etc.

## Processing Data

### Application by grit size



# Electroformed Bond Blades NBC-Z SERIES



## Specifications

\*1 Products that include a special specification may be denoted with "ZBT-\*\*\*\*\*"

Type	Bond	Surface treatment	
Z	O Standard Bond	No Code	Single surface grit protruded type
ZB	J Soft Bond	L	Lapped type
		N	Increased strength type
		V	Grains protruding on both sides
			Z Type only
			ZB type only

\*1 NBC - Z 1 09 O L G2 S3 T1

56 × 0.15 × 40 × 45°

Concentration	Grit size		Thickness accuracy <sup>*2,3</sup>	Slit <sup>*4</sup>	Blade shape <sup>*5</sup>	O.D.	Thickness	I.D.	Angle
1 Low Concentration	13	#240	08 #1200	G2 ±0.005	T1				θ
2 Standard Concentration	14	#280	07 #1500	G3 ±0.002	T2				
	12	#320	06 #1700	G Optional (mm)	T3				
	28	#360	05 #2000		T4				
	11	#400	04 #3000						
	25	#500	03 #3500						
	10	#600	27 #4000						
	09	#700	02 #4500						
	21	#800	26 #4800						
	24	#1000							
				S1	No. of slits 4 Depth 1mm				
				S2	No. of slits 8 Depth 1mm				
				S3	No. of slits 16 Depth 1mm				
				Small Slit	No. of slits 60 Depth 1mm				
				Large Slit	No. of slits 12 Depth 2mm				
				S5	No. of slits 40 Depth 1mm				
				SS	Optional				

\*2 Not indicated in the case of the standard accuracy.  
\*3 Standard accuracy differs depending on the product and size.

\*4 All slit widths are 0.5 mm (except for the SS type)  
Blade thickness greater than 0.04 mm are available  
\*5 Blade thickness greater than 0.1 mm are available

### Standard blade types (under 63.5 mm outer diameter)<sup>\*6</sup>

Concentration	Thickness	Grit	0.015 ~0.020	0.020 ~0.030	0.030 ~0.040	0.040 ~0.050	0.050 ~0.060	0.060 ~0.065	0.065 ~0.075	0.075 ~0.080	0.080 ~0.100	0.100 ~0.150	0.150 ~0.160	0.160 ~0.180	0.180 ~0.200	0.200 (mm)
1 2																
		26														
		02														
		27														
		03														
		04														
		05														
		06														
		07														
		08														
		24														
		21														
		09														
		10														
		25														
		11														
		28														
		12														
		14														
		13														

\*6 Please contact a DISCO representative for details.

A lapping process is applied to the standard A types for thickness greater than 0.15 mm

### When ordering

Please contact a DISCO representative with your product needs such as type, thickness, outer and inner diameter, and quantity.

When you place the first order with us, please explain application information such as materials to cut or grind, sizes, shape, machine, type, and other specification.

We are ready to help you to determine which is our most appropriate product type for your application.

Due to improvements in our products, it is possible that product specifications may be changed without advanced notice. Please confirm the product specifications with a DISCO representative.

### To use these DISCO wheels safely...

Please read carefully and follow the instructions below to prevent any accidents or injuries.

- USE a safety cover (nozzle case, cover), equipped as a standard accessory, to avoid injury.
- DO NOT EXCEED the maximum rpm if it is specified.
- FOLLOW the instruction manual of the machine to mount wheel properly.
- DO NOT DROP OR HIT wheels. this may cause wheel breakage or injury.
- Always CHECK the wheel for chipping or any other wheel damage before starting to use the wheel. DO NOT USE the wheel if there is any damage.
- READ the operation manual of the cutting/ grinding equipment before use.
- DO NOT USE a wheel with a modified or customized equipment.
- DO NOT USE a wheel that has a different size from the one recommended for your machine.
- DO NOT USE a wheel for any other purpose than Grinding, Cutting, or Polishing.
- Always USE water or coolant to prevent wheel breakage.



## DISCO CORPORATION

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