



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

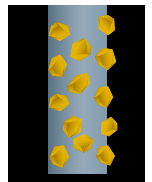
The ultra-thin, high performance NBC-Z series blades are a result of DISCO's original blade development. These blades employ electroformed bonds that realize a superb cutting quality and blade life. In addition to dicing semiconductor wafers, these blades are suitable for dicing a wide variety of semiconductor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

- Deep cutting and grooving are possible using ultra-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



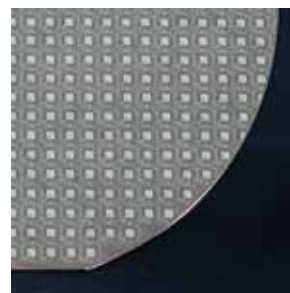
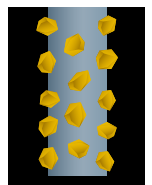
NBC-Z Types

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.

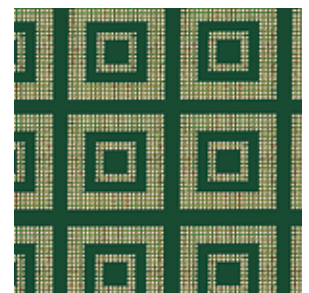


NBC-ZB Types

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



Silicon wafer



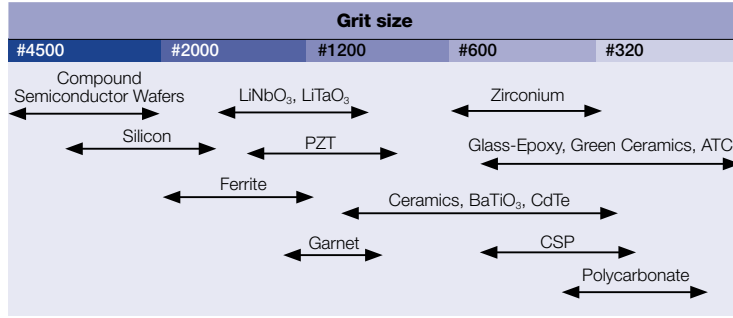
CSP

Applications

Silicon, GaAs, GaP, LiTaO₃, etc.

Processing Data

Application by grit size



Electroformed Bond Blades NBC-Z SERIES



Specifications

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

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

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

56 x 0.15 x 40 x 45°

Concentration	Grit size	Thickness accuracy ^{2,3}	Slit ⁴	Blade shape ⁵	O.D.	Thickness	I.D.	Angle
1 Low Concentration	13 #240 08 #1200	G2 ±0.005	S1 No. of slits 4 Depth 1mm	T1				θ
2 Standard Concentration	14 #280 07 #1500	G3 ±0.002	S2 No. of slits 8 Depth 1mm	T2				
	12 #320 06 #1700	G Optional (mm)	S3 No. of slits 16 Depth 1mm	T3				
	28 #360 05 #2000		S4 Small No. of slits 60 Depth 1mm	T4				
	11 #400 04 #3000		S4 Large No. of slits 12 Depth 2mm					
	25 #500 03 #3500		S5 No. of slits 40 Depth 1mm					
	10 #600 27 #4000		SS Optional					
	09 #700 02 #4500							
	21 #800 26 #4800							
	24 #1000							

*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)⁶

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) ~0.300
1 2	26	Available for Z type only													
	02	Available for Z type only													
	27	Available for Z type only													
	03	Available for Z type only													
	04	Available for Z type only													
	05	Available for Z type only													
	06	Available for Z type only													
	07	Available for Z type only		Available for ZB type only											
	08	Available for Z type only		Available for ZB type only											
	24	Available for both O and J bond		Available for both O and J bond											
	21	Available for both O and J bond		Available for both O and J bond											
	09	Available for both O and J bond		Available for both O and J bond											
	10	Available for both O and J bond		Available for both O and J bond											
	25	Available for both O and J bond		Available for both O and J bond											
	11	Available for both O and J bond		Available for both O and J bond											
	28	Available for both O and J bond		Available for both O and J bond											
	12	Available for both O and J bond		Available for both O and J bond											
	14	Available for both O and J bond		Available for both O and J bond											
	13	Available for O bond only		Available for O bond only											

*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 blades and wheels (hereafter precision tooling) 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 specified rpm limit indicated on the precision tooling.
- FOLLOW the instruction manual of the equipment to mount the precision tooling properly.
- DO NOT DROP OR HIT the precision tooling. This may cause damage or injury.
- Always CHECK the precision tooling for chipping or any other damage before starting to use it. DO NOT USE the tooling if there is any damage.
- READ the operation manual of the cutting/grinding equipment before use.
- DO NOT USE the precision tooling with modified or customized equipment.
- DO NOT USE precision tooling that has a different size from the one recommended for your equipment.
- DO NOT USE the precision tooling for any other purpose than grinding, cutting, or polishing.
- Always USE water or coolant to prevent precision tooling damage.



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