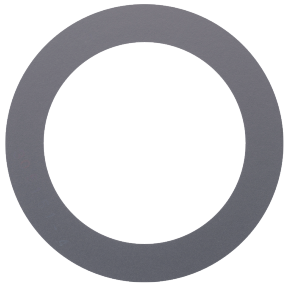


# DICING BLADES

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A wide selection of bonds for various package singulation.  
Long blade life and low blade wearing rate.



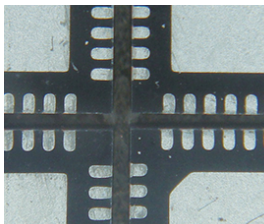


# RESIN BOND BLADE

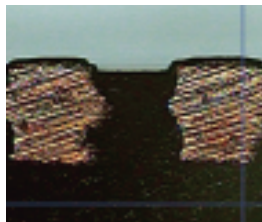
- Reduce copper burr and smear on ductile and gummy materials.
- Improve chipping, feed rate, and blade life on hard and brittle materials.
- Ultra thin blade (over 50um)

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.

## PROCESSING EXAMPLE



QFN  
50mm/sec

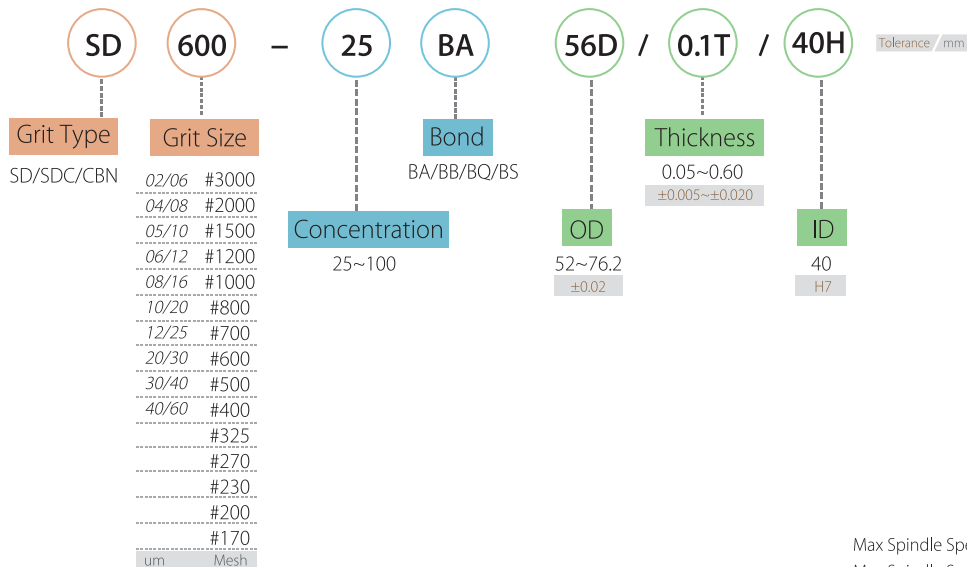


QFN  
50mm/sec

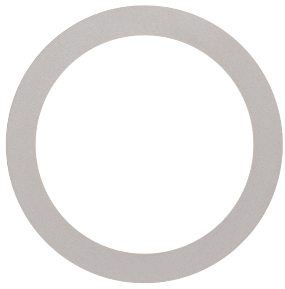
## APPLICATIONS

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

## SPECIFICATIONS



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



# ELECTRO-FORMED NICKEL BOND BLADE

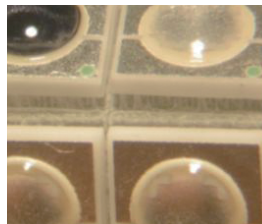
- Sophisticated electro-formed technology
- A wide selection of bonds available for various kinds of workpieces.
- Exclusive development and customized technology.

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.

## PROCESSING EXAMPLE



HPLED  
40/60DHT 12mm/sec

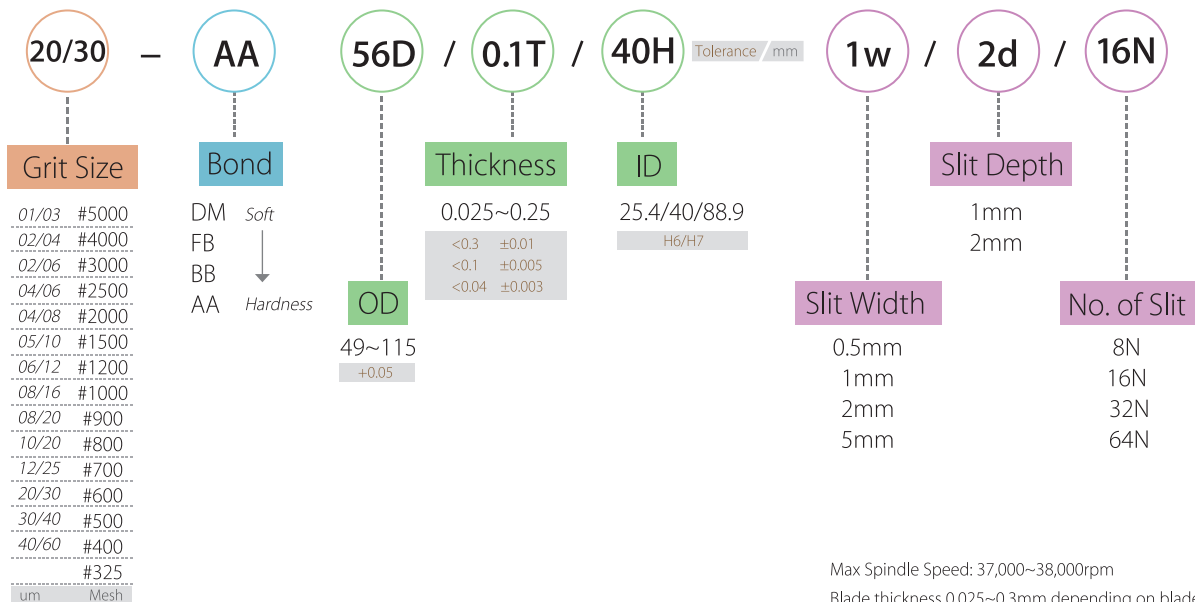


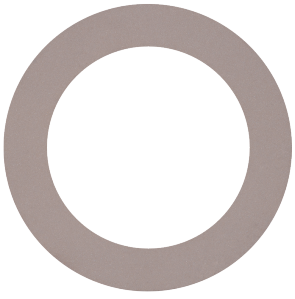
HPLED  
40/60DHT 15mm/sec

## APPLICATIONS

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

## SPECIFICATIONS



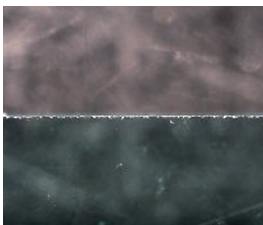


# METAL BOND BLADE

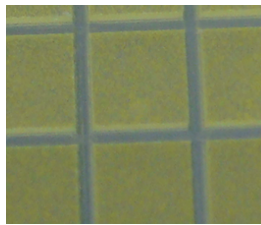
- A wide selection of bonds available for various semiconductor packages such as BGAs as well as for glass and quartz cutting
- Ultra thin blade (over 45um).

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.

## PROCESSING EXAMPLE



Glass  
5 mm/sec

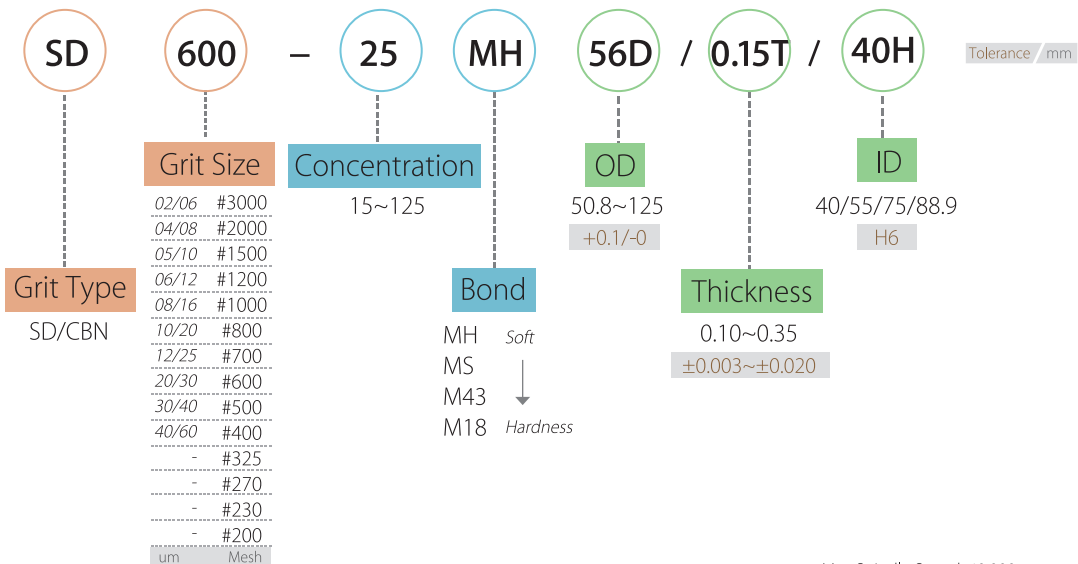


Phosphor Film/Sheet  
100 mm/sec

## APPLICATIONS

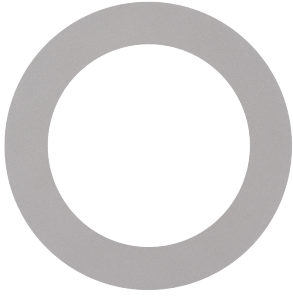
Sapphire, BGAs(BGA, LGA, CSP, SiP, MCP, EMMC, uSD card), Glass for CIS Modules and Opticals, Quartz, MLCC, Ceramics

## SPECIFICATIONS



Max Spindle Speed: 40,000rpm

Blade thickness 0.075~0.35mm depending on blade formulation

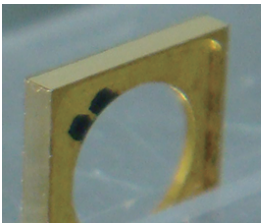


# VITRIFIED BOND BLADE

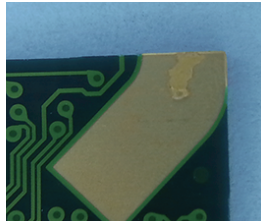
- Initiative conductive vitrified bond
- Porosity material
- Realizes high quality process on high hardness materials like crystals and sapphires

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.

## PROCESSING EXAMPLE



LED Chip on Board  
6 mm/sec

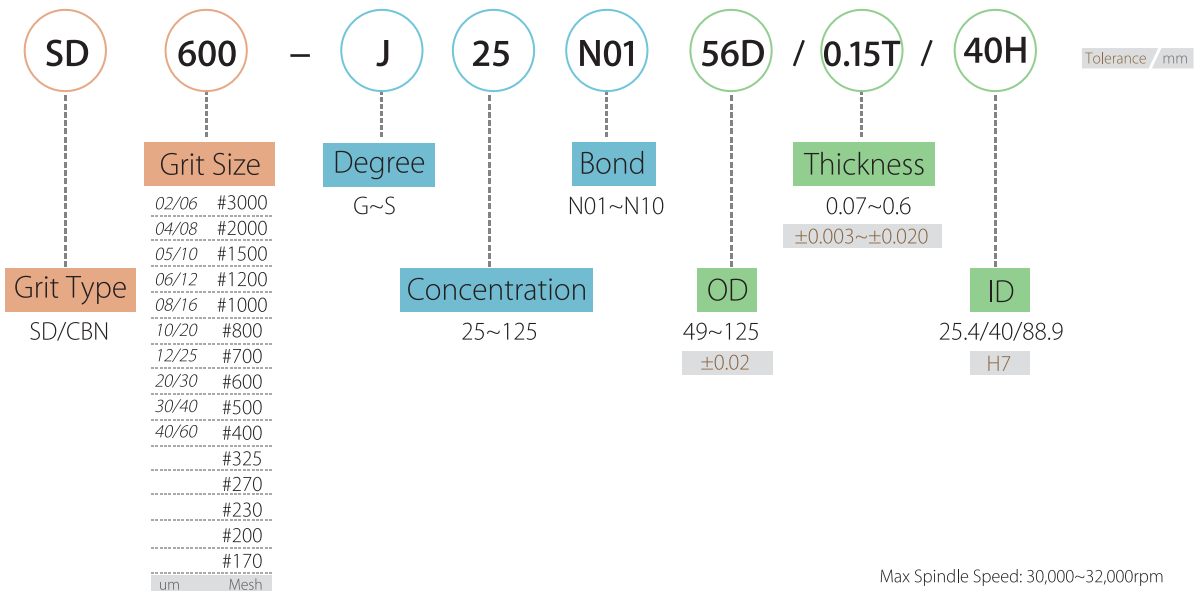


PBGA Plastic Ball  
Grid Array Package  
100 mm/sec

## APPLICATIONS

Hard and Brittle Materials (Crystal, Sapphire, Ceramic)

## SPECIFICATIONS



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

Blade thickness 0.01~1mm depending on blade formulation



# HUB BLADE

- 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.

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

## EXPOSURE



## SPECIFICATIONS

0103	—	HH	E3	/	T15	/	70
Grit Size		Bond	Exposure		Thickness		Concentration
0/3 0003		HH <i>Hard</i>	E3 0.380-0.510				130-110 <i>High</i>
1/3 0103		HS <i>Middle</i>	E5 0.510-0.640				110-90 <i>Middle High</i>
2/4 0204		HL <i>Soft</i>	E6 0.640-0.760				90-70 <i>Middle</i>
2/6 0206		HX <i>Special</i>	E7 0.760-0.890				70-50 <i>Middle Low</i>
3/6 0305			E9 0.890-1.020				50-30 <i>Low</i>
4/6 0406			E10 1.020-1.150				mm
4/8 0408			mm				
um							