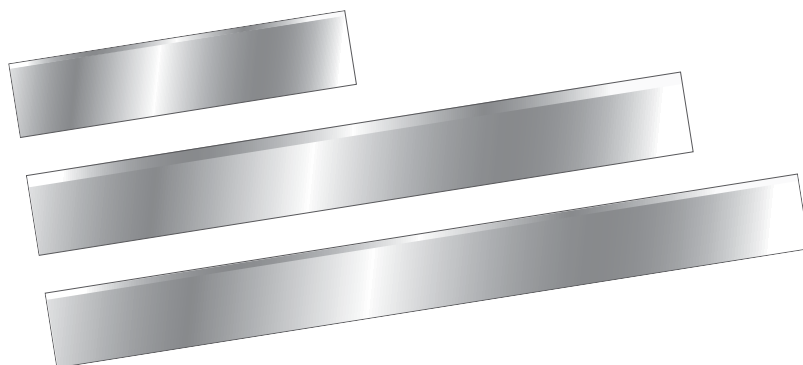
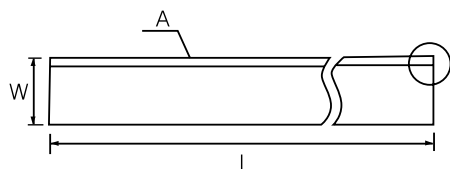


# CERAMIC GREEN SHEET KNIFE

- Material : Ultra fine WC powder ( $0.2\mu\text{m}$ )
- Thickness : minimum 0.08mm
- Tolerance : Thickness  $\pm 0.001\text{mm}$ , Edge straightness  $\pm 0.01\text{mm}$
- Application : MLCC, MLCI, CHIP VARISTER, CHIP PACKING, LTCC ...

## TYPE : F



\* SPEC(m/m)

	Min	Max	Tolerance
L	60	250	$\pm 0.2$
W	8	25	$\pm 0.01$
T	0.08	1.0	$\pm 0.002$
$\theta$	$18^\circ \sim 30^\circ$ , NORMAL= $18^\circ$		$\pm 0.5^\circ$

\* CODE

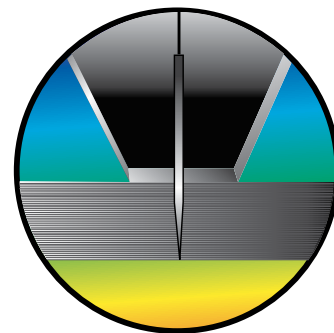
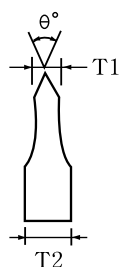
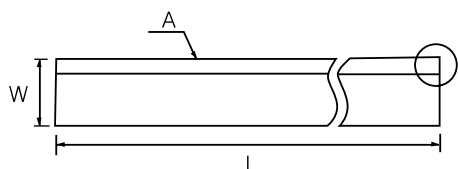
**MBF-170-22-100**

— thickness( $\mu\text{m}$ )  
— Width (mm)  
— length(mm)

\* "A" EDGE STATE

- ◎ NUMBER OF CHIPPING=0
- ◎ STRAIGHTNESS  $< 10\mu\text{m}$
- ◎ ROUGHNESS OF B:Ra  $< 0.02$

## TYPE : U



\* SPEC(m/m)

	Min	Max	Tolerance
L	60	250	$\pm 0.2$
W	8	25	$\pm 0.01$
T1	0.03	0.15	$\pm 0.005$
T2	0.25	NOLIMIT	$\pm 0.005$
$\theta$	$18^\circ \sim 30^\circ$ , NORMAL= $18^\circ$		

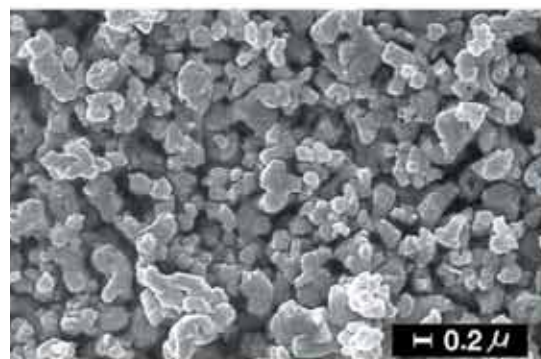
\* CODE

**MBU-170-22-400/100**

— T1( $\mu\text{m}$ )  
— T2( $\mu\text{m}$ )  
— W (mm)  
— L(mm)

\* "A" EDGE STATE

- ◎ NUMBER OF CHIPPING=0
- ◎ STRAIGHTNESS  $< 10\mu\text{m}$
- ◎ ROUGHNESS OF B:Ra  $< 0.02$



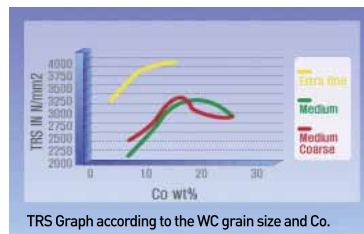
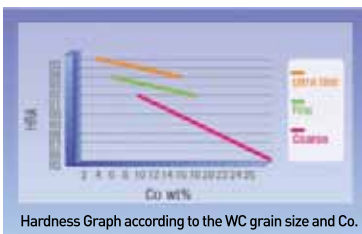
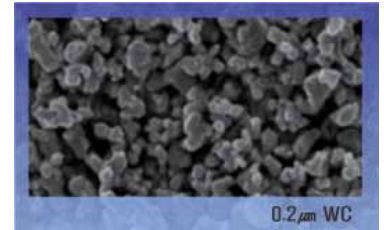
**BESA** CORP

ADD : 40, Techno-daero 2-gil, Hyeonpung-myeon, Dalseong-gun, Daegu, KOREA  
TEL : +82.53.588.0800(ref) FAX : +82.53.588.7707  
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# BESA MERIT

## Nano WC grain size

We are using WC of 0.2  $\mu\text{m}$  grain size that is high hardness and ductility, we believe this will make the blade of high performance.



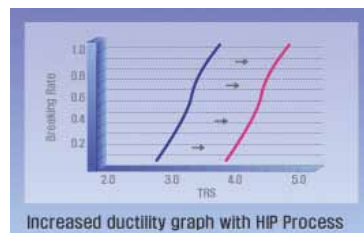
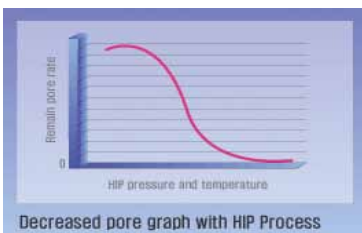
According to the WC grain size, the physical property of Tungsten Carbide would be different.

If it is Nano WC grain size, hardness and ductility would be increased.

While using the blade, we can see the nicks on the edge. Big WC grain size will make a big nick on the edge, but ours does not make the big nick as much as big WC grain size. It means the more grain size small, the less make big nick on the edge.

## HIP Process

Most of the products are produced through HIP process, HIP process can make our quality is different from other companies. The products through HIP process is showing better quality than others.



Fine porosity would be remained in Powder metallurgy of the processing for Tungsten Carbide. Although it is very minute, but it could be a role to break the product.

BESA removes a fine porosity through HIP process.

This process is progressed under the high temperature and pressure, and put the identical pressure on whole surface of product.

At this time, a fine porosity would be removed, and effected on improving high strength.

## Chipping inspection for whole blade

It is our duty and honor to make the customer satisfied with our products, In order to do this, we are checking the nicks for all of products before shipment.



Besa products from powder to completed are checked under the over 20 inspection process.

We can keep and improve our quality from strict inspection system.

We are very plesure to hear that customer is satisfied with our stabilized products.

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## ROTARY SHEAR AND SLITTER KNIFE

- Selected optimum grade
- Chip free edge state
- Ground spec by ideal tolerance
- Various type for all machine model



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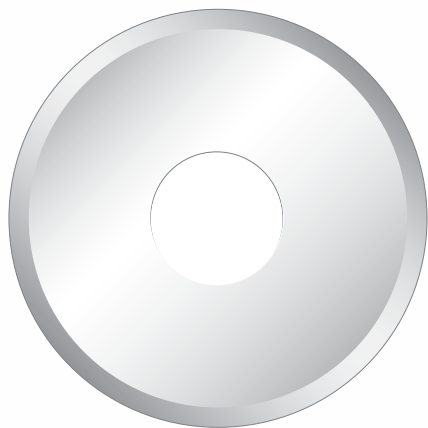
## CIRCULAR KNIFE FOR SLITTING



100×15×0.35, 12°



72×50×25



63×19×0.3, 15°



60×10×0.5, 4.6° 16°



50×10×0.5, 10°

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# SLITTING SEPERATOR FILM

## \*APPLICATION AND KNIFE SPECIFICATION\*

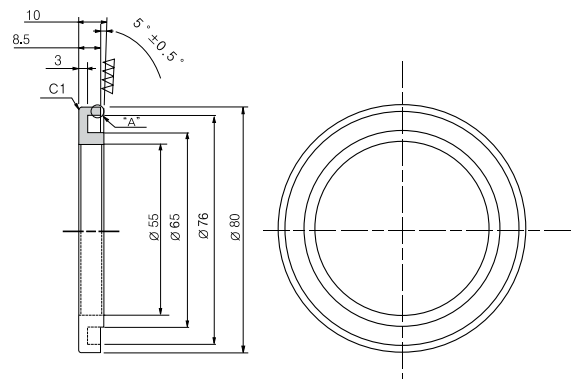
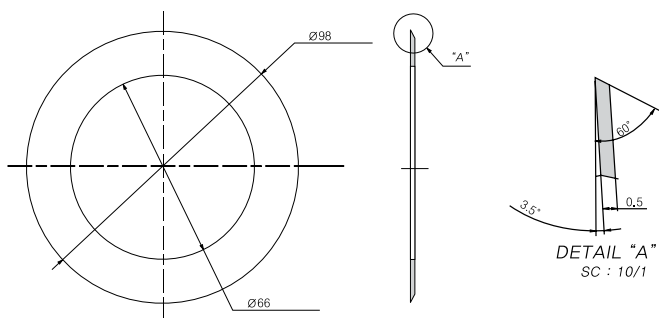


Rechargeable battery

LIBS(Lithium Ion Battery Seperator) : Seperator for Mobile Battery

CCS(Ceramic Coating Separator) : Seperator for Electric Vehicle Battery

## CIRCULAR KNIFE FOR SLITTING



\*Blade could be made as customer's requested.

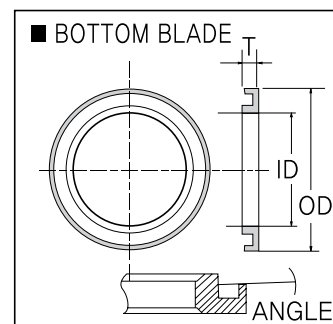
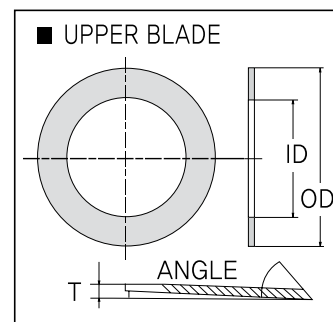
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# SLITTING COPPER FOIL AND ALUMINIUM FOIL



No	UPPER BLADE	OD	ID	T	ANGLE
1	RKT080019003A	80	19	0.5	20°
2	RKT080066011A	98	66	0.7	45°
3	RKT080066021A				60°
4	RKT100065025A				
5	RKT100065016A	100	65	1	90°
6	RKT108075001A	108	75	0.7	45°
7	RKT108075002A				60°
8	RKT118080001A	118	80	0.8	45°
9	RKT118080002A				60°
10	RKT130070003A	130	88	1	30°
11	RKT130088006A	130	88		45°
12	RKT130088007A	130	88	3	1°
13	RKT130080001R	130	80	1	45°
14	RKT130080003A	130	80		10° 60°



No	BOTTOM BLADE	OD	ID	T	ANGLE
1	RKT080055002A	80	55	10(8)	5°
2	RKT086060001A	86	60	10	
3	RKT092065001A	92	65		
4	RKT130070002A	130	70	3	90°
5	RKT130088003A			5	

※ The above is showing our standard specification for the knife, and we also can make the blade as customer's requested.

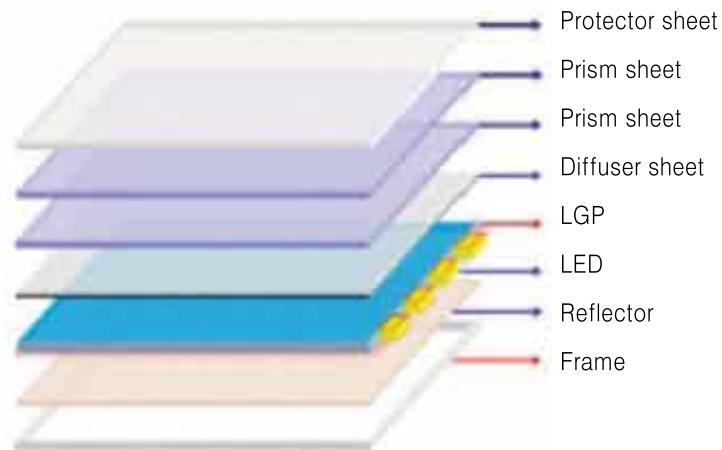
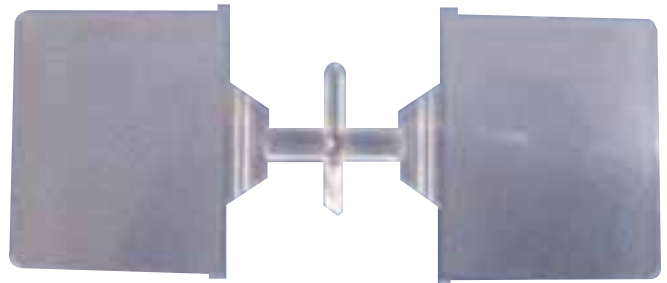
- Parallelism : 5μm
- Flatness : 5μm
- Concentricity : 10μm

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## PRODUCTS GROUP (Knife For LGP)

We can make the knife for LGP cutting based on customer's requested.



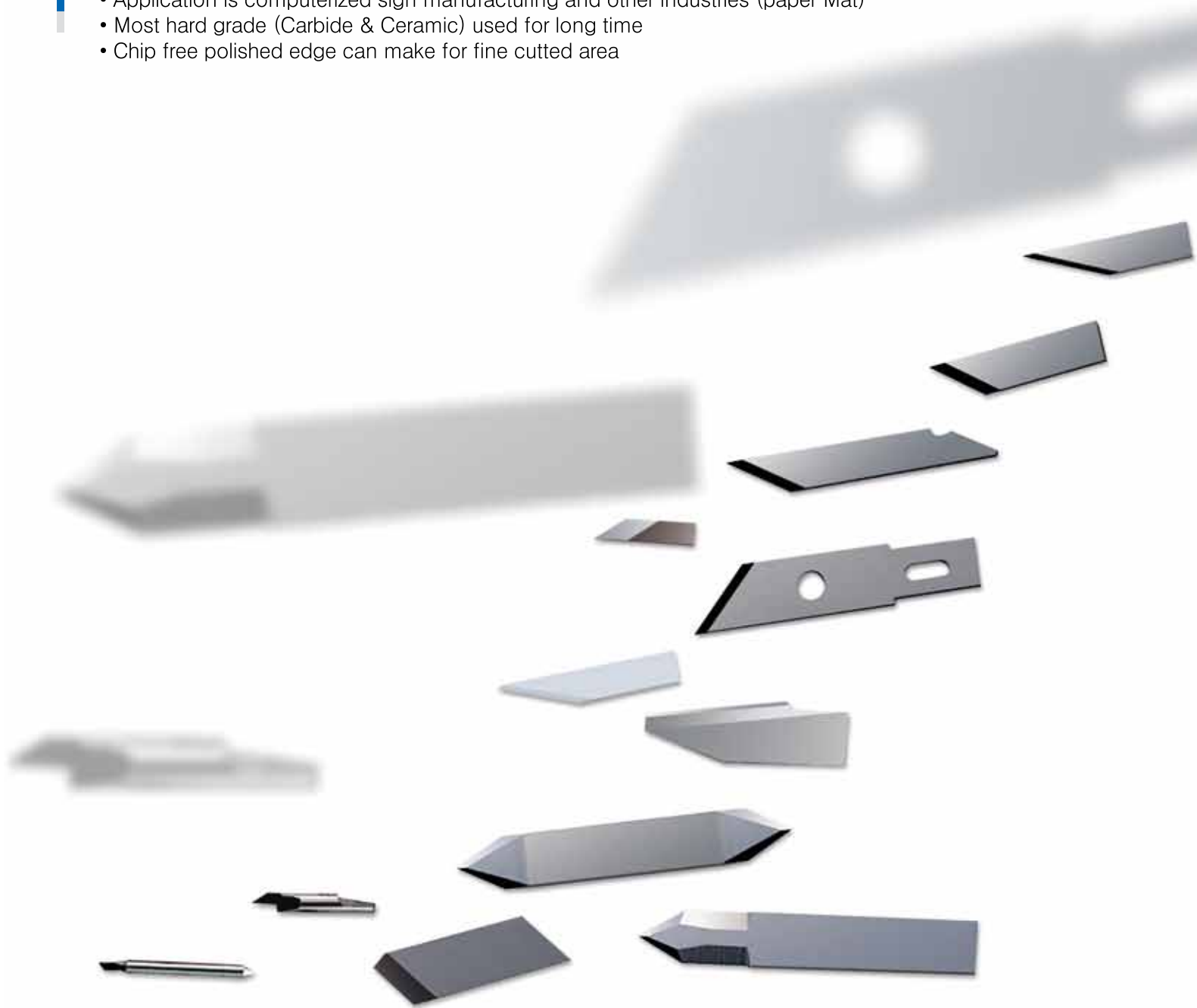
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# MAT CUTTER & PLOTTER KNIFE

- Application is computerized sign manufacturing and other industries (paper Mat)
- Most hard grade (Carbide & Ceramic) used for long time
- Chip free polished edge can make for fine cutted area



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