



**Honeywell 300mm  
Sputtering Targets**

# Honeywell 300mm Sputtering Targets

## VARIOUS METALS AND CONFIGURATIONS



### Diffusion Bonds for 300mm

#### State-of-the-Art Diffusion Bonding Processes

Target/ Backing Plate Material	Bond Strength (ksi)	Target Grain Size ( $\mu\text{m}$ )
Al/Al Alloy	>15	<50 <sup>1</sup>
Ti/Al Alloy	>15	<10
Ti/CuCr	>30	<20
Cu/CuCr	>10	<50
Ta/Al Alloy	>16	<50
Ta/CuCr	>20	<50
Ta/CuZn	>20	<50

<sup>1</sup>ECAE Ultrafine Grain Target Available

## OVERVIEW

Honeywell Electronic Materials offers 300mm sputtering targets for the semiconductor industry with various metals, configurations and purity.

Honeywell 300mm sputtering targets offer consistent chemistry and purity combined with a sound, uniform microstructure. The advanced metallurgical design of the targets ensures optimum sputter performance and high yields.

Our state-of-the-art diffusion bonding process offers superior custom 300mm targets with lightweight, high-strength backing plates which will ease handling and greatly reduce cost of ownership.



*Honeywell Electronic Materials is one of the world's leading manufacturers of sputtering targets for the semiconductor industry.*

METAL	BONDING	GRAIN SIZE	BENEFITS
<b>Al</b>	Al-Al Alloy	<50 $\mu\text{m}$	- Al diffusion bonded to Al alloy backing plate is lighter than Al diffusion bonded to CuCr.
	ECAE <sup>®</sup> Monolithic	<1 $\mu\text{m}$	- Low particles, low arcing. - Longer target life, better film uniformity. - High-strength monolithic target for high power applications.
<b>Cu</b>	Cu-Al Alloy	<50 $\mu\text{m}$	- Fine and uniform microstructure. - Strong backing plate, with high bond strength available for high power applications.
	ECAE Cu-Al Alloy	<5 $\mu\text{m}$	- Ultrafine grained Cu and Cu alloy targets with high-strength backing plates. - Superior particle performance.
<b>Co</b>	Solder Bonding	<100 $\mu\text{m}$	- High-strength diffusion bond available.
	Co-Al Alloy	<100 $\mu\text{m}$	- High PTF ensures the stability of the sputtering process. - High PTF ensures better and higher target utilization.
<b>Ta</b>	Ta-Al Alloy	<50 $\mu\text{m}$	- High-strength Al Alloy, CuCr, CuZn backing plates available.
	Ta-Cu Alloy	<50 $\mu\text{m}$	
<b>Ti</b>	Monolithic	<10 $\mu\text{m}$	- Ti diffusion bonded to high-strength Al alloy offers stiffer and stronger backing plates compared to Ti monolithic configuration. - Ti diffusion bonded targets have a lower cost. - CuCr and CuZn backing plates available.
	Ti-Al Alloy		
	Ti-Cu Alloy		



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OUR COMMITMENT TO SUSTAINABILITY

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