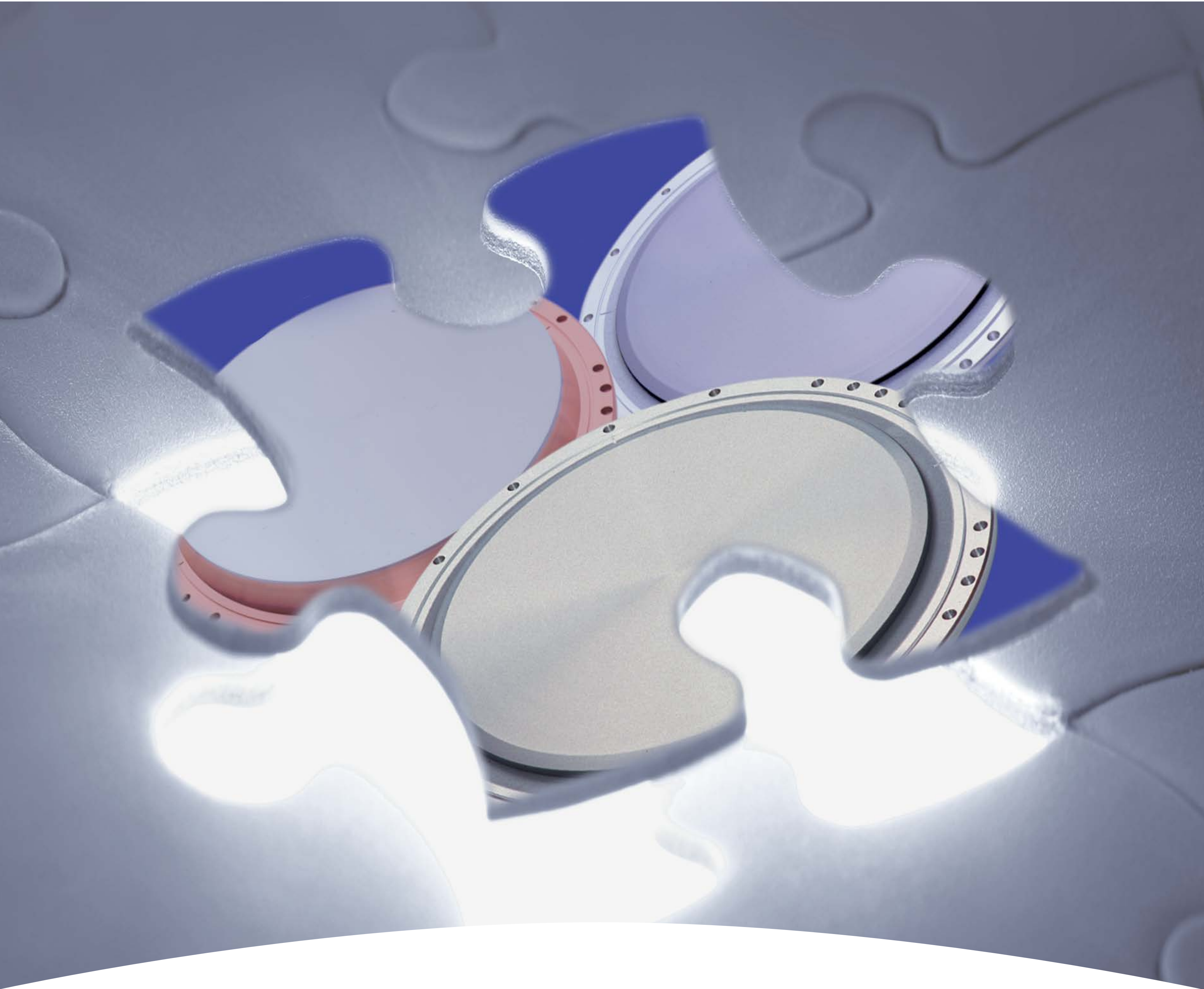
PVD Targets

Honeywell



Honeywell 300mm Sputtering Targets

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VARIOUS METALS AND CONFIGURATIONS

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
Al	Al-Al Alloy	<50µm	- Al diffusion bonded to Al alloy backing plate is lighter than Al diffusion bonded to CuCr.
	ECAE®* Monolithic	<1µm	- Low particles, low arcing. - Longer target life, better film uniformity. - High-strength monolithic target for high power applications.
Cu	Cu-Al Alloy	<50µm	- Fine and uniform microstructure. - Strong backing plate, with high bond strength available for high power applications.
	ECAE Cu-Al Alloy	<5µm	- Ultrafine grained Cu and Cu alloy targets with high-strength backing plates. - Superior particle performance.
Co	Solder Bonding	<100µm	
	Co-Al Alloy	<100µm	- High-strength diffusion bond available.
	Pass Thru Flux (PTF)		- High PTF ensures the stability of the sputtering process. - High PTF ensures better and higher target utilization.
Ta	Ta-Al Alloy Ta-Cu Alloy	<50µm <50µm	- High-strength Al Alloy, CuCr, CuZn backing plates available.
Ti	Monolithic	<10µm	- Ti diffusion bonded to high-strength Al alloy offers stiffer and stronger backing plates compared to Ti monolithic configuration.
	Ti-Al Alloy Ti-Cu Alloy		- Ti diffusion bonded targets have a lower cost. - CuCr and CuZn backing plates available.

Diffusion Bonds for 300mm

State-of-the-Art Diffusion Bonding Processes

Target/ Backing Plate Material	Bond Strength (ksi)	Target Grain Size (µm)
Al/Al Alloy	>15	<50[1]
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

[1]ECAE Ultrafine Grain Target Available

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