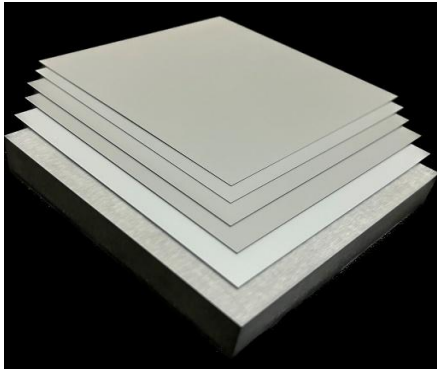


HIGH-PERFORMANCE CERAMIC SUBSTRATES FOR ELECTRONICS

用於電子的高性能陶瓷基板 | 전자 제품용 고성능 세라믹 기판

Probe Card Substrates | Advanced Laser Processing | 探針卡基板 | 先進雷射加工 | 프로브 카드 기판 | 첨단 레이저 가공

SECTION 1: PRODUCT PORTFOLIO



氮化矽 | 질화규소 |

Silicon Nitride Substrates

SECTION 2: FEATURES & ADVANTAGES (HIP Silicon Nitride)

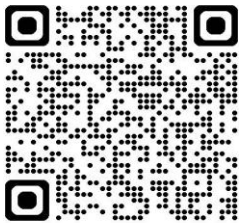
Items / 項目	English	Chinese (繁體中文)	Korean (한국어)
Application	Probe Card Substrates	探針卡用基板	프로브 카드용 기판
Processing	Ideal for fine laser processing	適用於精細雷射加工	레이저 가공에 최적
HIP Treatment	HIP-treated: Suppresses warpage Pore size $\leq 30\text{ }\mu\text{m}$	經HIP處理, 降低翹曲 氣孔尺寸 $\leq 30\text{ }\mu\text{m}$	HIP 처리로 휘어짐(Warpage) 저감 기공 크기 $30\text{ }\mu\text{m}$ 이하
Standard Size	100sq, 114sq, 150sq	標準規格: 100sq, 114sq, 150sq	표준재: 100sq, 114sq, 150sq
Thickness	0.15 - 0.4 mm	厚度: 0.15 ~ 0.4mm	두께: 0.15 ~ 0.4mm
Color & Flatness	Color: Black Flatness: $50\text{ }\mu\text{m}$	顏色: 黑色 平坦度: $50\text{ }\mu\text{m}$	색상: 블랙 평탄도: $50\text{ }\mu\text{m}$

SECTION 3: PROPERTIES & MATERIALS

(HIP Silicon Nitride)

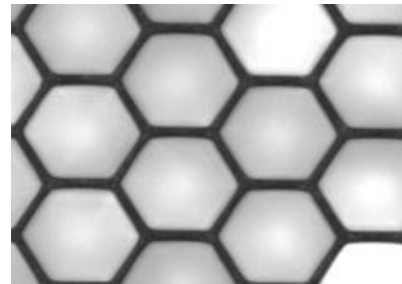
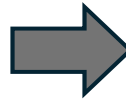
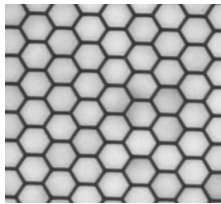
				HIP
Density		g/cm3		3.26
Water Absorption		%		0
Mechanical Characteristics	Vickers Hardness (Load 5KG)	Gpa		15
	Flexural Strength	Mpa		1000
	Compressive Strength	Mpa		3900
	Young's Modulus of Elasticity	Gpa		310
	Poisson's Ratio	-		0.28
Fracture Toughness		Mpa·m ^{1/2}		7
Thermal Characteristics	Coefficient of Thermal Expansion	40-400	*10-6/°C	2.5
	Thermal Conductivity	20 °C	W(m·K)	23
Electrical Characteristics	Volume Resistivity	20 °C	$\Omega\cdot\text{cm}$	$\geq 10^{14}$
	Dielectric Constant (1MHz)		-	

HIP Si3N4成分	
Al2O3	<10%
Y2O3	<0.5%
CaO	<1.0%
MgO	<0.1%
Na2O	<0.1%
K2O	<0.1%
Si3N4	>88%

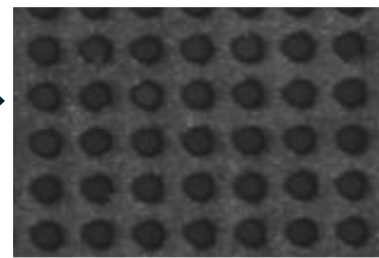
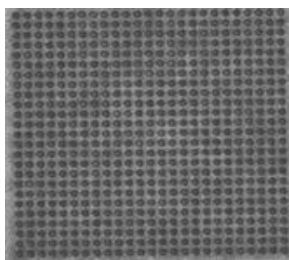


SECTION 4: ADVANCED LASER PROCESSING EXAMPLES (大規模・超精密加工例)

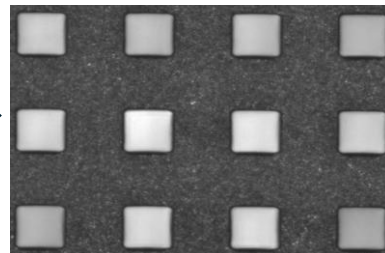
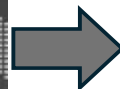
Advanced Laser Processing



Honeycomb Pattern Processing
高級雷射加工



Circular Pin Array Processing
최대 레이저 가공



Square Pin Array Processing

SECTION 5: CONTACT & SALES (お問い合わせ・海外販売諮詢・연락 및 판매)

OFYC Advance Co., Ltd. / OFYC어드밴스株式会社

6-3, Onishichou, Amagasaki-shi, Hyogo, 661-0023 Japan

TEL: +81-6-7650-7577 | FAX: +81-6-7650-7577

Email: yamamoto@ofyca.com

URL: <https://ofyca.net/>

