

Chapter 3 Ceramic Chips

第三章 陶瓷籌碼

3.1 Ceramic Chips Overview 陶瓷籌碼概述

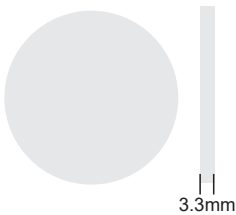
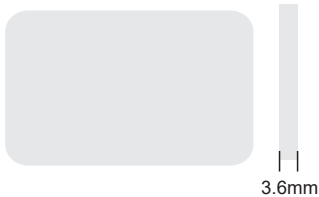
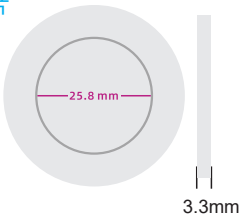
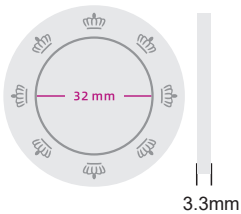
Ceramic chips are casino and high-end poker chips made from a ceramic composite material with a full-surface printed pattern. Despite the "ceramic" in their name, they are not entirely ceramic. Instead, they are a pressed mixture of high-density polymer and ceramic powder. They offer a crisp sound, high hardness, high-temperature resistance, corrosion resistance, and excellent insulation, but they are also quite brittle. They are commonly used in Texas Hold'em poker games in clubs.

陶瓷籌碼（Ceramic Chip）是一種以陶瓷復合材料為基底，通過全表面印刷實現圖案的casino及高端撲克籌碼。雖然名稱中有「陶瓷」，但其成分並非完全是陶瓷，而是高密度聚合物和陶瓷粉末混合壓制，聲音清脆，具有高硬度、耐高溫、耐腐蝕和優異絕緣性能，但脆性較大。常用於俱樂部德州撲克遊戲。

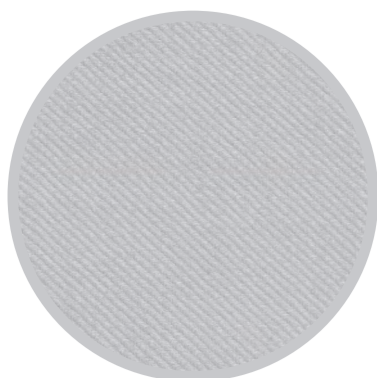
Ceramic chips come in either glossy or textured finishes, depending on the surface treatment. Glossy chips are smooth and offer low friction, while textured chips have a fabric-like texture and offer high friction. Unlike composite chips, which require inlays and patches, ceramic chips feature thermal transfer printing directly across the entire surface (front, back, and edges), enabling the creation of complex patterns, gradient colors, and high-definition text.

陶瓷籌碼表面因表面處理的不同有光面和布紋兩種，光面的籌碼表面光滑，摩擦力小；布紋的籌碼表面如同布料一樣的紋路，摩擦力較大。不同於復合材料籌碼需要嵌邊色點與貼片，陶瓷籌碼直接在整個籌碼表面（正反面和邊緣）進行熱轉印印刷，可實現復雜圖案、漸變色、高清文字。

3. 2 Ceramic chip mold and parameters 陶瓷籌碼模具與基本參數

	Size 尺寸	weight 重量
Glossy and Textured 光面與布紋		
	39mm	9.7g
	43mm	12.7g
	46mm	13.5g
	50mm	16.2g
	52mm	20g
	55mm	22g
Textured 布紋	68*42mm	26g
	80*50mm	34.2g
	85*53mm	38.6g
	95*58mm	48g
Patch 貼片		
	39mm	8g
Customize 定制		
	43mm	12g

White fabric texture effect example 白片布紋效果示例:



3. 3 Ceramic chips color and denomination

陶瓷籌碼的顏色與面額

① Notice: Any pattern, color and denomination can be made on the ceramic.

注意：可在陶瓷上制定任意圖案，顏色和面額。

3. 4 Materials and manufacturing technology 材料與制造工藝

3. 4. 1 Main material 主體材料



Actual photos of raw materials
原材料實拍圖

3. 4. 1 Manufacturing Process 制造流程

- Substrate molding: High-density polymer and ceramic powder are mixed and placed into a mold, which is then injection-molded and cut into blank sheets.

基材成型：高密度聚合物與陶瓷粉末混合置入模具，注壓成型後切割成制成空白坯片。

- Surface Treatment: The design is transferred to the chip surface, including the edge pattern, via a heat transfer process.

表面處理：通過熱轉印工藝將設計圖案轉印到籌碼表面，包括邊緣圖案。

- Curing and Inspection: The pigment is fixed under high temperature and pressure, bonding it to the substrate molecules. Each chip is inspected for size, weight, tolerance, and color.

固化與檢驗：在高溫高壓下固定顏料，使其與基材分子結合。每枚籌碼需經過尺寸、重量、公差和色彩檢查。

3. 4. 1 Printing process 印刷工藝

The printing process used for ceramic chips is thermal transfer process:

陶瓷籌碼使用的印刷工藝為熱轉印工藝：

Thermal transfer printing uses heat and pressure to transfer a pattern or material from a transfer medium to a target surface. This technology allows for fine patterns and multi-color designs, making it suitable for complex images. The transferred pattern is durable, washable, and fade-resistant.

熱轉印工藝是一種通過加熱和壓力將圖案或材料從轉印介質轉移到目標物體表面的技術。可實現精細圖案和多顏色設計，適合複雜圖像。轉移後的圖案耐磨、耐洗滌，顏色不易褪色。