

# Gold Plated 304Ss Stainless Steel 2032 Coin Cell Cases With Spacers And Wave Springs

Item Number: FZ05



## Introduction

Engineered for advanced battery research, these premium gold plated 304 stainless steel 2032 coin cell cases feature matching spacers and wave springs. Plasma sputtered coatings provide exceptional corrosion resistance and electrochemical stability for demanding high voltage laboratory testing and research workflows.

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| Application                                  | Description                                                                                                 | Key Benefit                                                                                              |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| High-Voltage Lithium-Ion R&D                 | Testing high-voltage cathode materials (e.g., LNMO, HV-LCO, NMC811) exceeding 4.2V vs. Li/Li+               | Suppresses anodic dissolution and parasitic electrolyte oxidation at elevated potentials.                |
| Solid-State Battery Research                 | Assembling and testing solid electrolyte pellets and composite sulfide/oxide/polymer systems                | Delivers uniform axial pressure and low contact impedance across rigid solid-solid interfaces.           |
| Sodium-Ion & Potassium-Ion Cells             | Investigating alkali-metal battery chemistries and non-aqueous electrolyte formulations                     | Provides chemical inertness against corrosive electrolyte salts and aggressive reaction byproducts.      |
| Electrochemical Impedance Spectroscopy (EIS) | Conducting precise fundamental impedance, interfacial resistance, and kinetic transport studies             | Eliminates native oxide-layer impedance artifacts to provide clean, accurate baseline Nyquist plots.     |
| Supercapacitor & Hybrid Systems              | Characterizing high-rate electrical double-layer capacitors (EDLC) and pseudocapacitive electrode materials | Minimizes equivalent series resistance (ESR) through high-conductivity gold contact surfaces.            |
| Corrosive Electrolyte Additive Screening     | Evaluating novel fluorinated solvents, highly concentrated electrolytes, and ionic liquids                  | Plasma-sputtered gold barrier prevents substrate pitting and chemical degradation over extended cycling. |

| Parameter                       | Specification (Item: FZ05)                                               |
|---------------------------------|--------------------------------------------------------------------------|
| Cell Format                     | CR2032 Standard (20 mm Diameter × 3.2 mm Height)                         |
| Primary Substrate Material      | AISI 304 Stainless Steel (304SS)                                         |
| Surface Treatment Process       | High-Adhesion Plasma Sputtering                                          |
| Standard Plating Material       | Gold (Au)                                                                |
| Plating Layer Thickness         | 300 Å – 500 Å (30 nm – 50 nm)                                            |
| Optional Custom Metallization   | Aluminum (Al), Platinum (Pt), Silver (Ag)                                |
| Sealing Gasket Material         | High-Density Polypropylene (PP) O-Ring (Negative Cap)                    |
| Coin Cell Case Weight           | 0.12 oz (~3.4 g per set)                                                 |
| Spacer Disc Dimensions          | 15.5 mm Diameter × 0.5 mm Thickness (Custom thickness available)         |
| Spacer Surface Finish           | Plasma-Sputtered Gold Plated                                             |
| Spacer Net Weight               | 0.10 oz (~2.8 g)                                                         |
| Curved / Wave Spring Dimensions | 14.5 mm O.D. × 10.25 mm I.D. × (1.2 ± 0.05) mm Height × 0.3 mm Thickness |

| Parameter                 | Specification (Item: FZ05)                                         |
|---------------------------|--------------------------------------------------------------------|
| Conical Spring Dimensions | 15.4 mm Outer Diameter × (1.2 ± 0.03) mm Height × 0.2 mm Thickness |
| Spring Surface Finish     | Plasma-Sputtered Gold Plated                                       |
| Spring Net Weight         | 0.10 oz (~2.8 g)                                                   |
| Standard Packaging Unit   | Sealed Cleanroom Moisture-Barrier Pack (10 Sets / Bag)             |