

High Precision ESD Safe Peek Wafer Vacuum Suction Pen For 8 Inch Semiconductor And Photovoltaic Substrate Handling

Item Number: PL-CP115



Introduction

High-performance ESD-safe PEEK wafer vacuum suction pen designed for precision semiconductor and photovoltaic 8-inch wafer handling. This customizable solution offers superior chemical resistance and mechanical durability for critical cleanroom environments and delicate substrate transfer processes.

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Application	Description	Key Benefit
Wafer Inspection	Manual transfer of 8-inch silicon wafers to and from optical or SEM inspection stations.	Minimal contact area reduces risk of surface defect generation.
Photovoltaic Cell Sorting	Handling and sorting of high-efficiency solar cells during the assembly and testing phases.	Prevents micro-cracks and maintains cell efficiency through gentle vacuum grip.
Wet Bench Processing	Transferring substrates between chemical baths or rinsing stations in wet chemistry environments.	Outstanding resistance to harsh process chemicals and moisture.
Thin-Film Deposition	Placing and removing substrates from PVD/CVD vacuum chambers or load locks.	High thermal stability allows for handling after high-temperature deposition cycles.
Cleanroom R&D	General substrate handling in advanced materials research and development facilities.	Maintains strict ISO cleanliness standards by minimizing particulate shedding.
Die Bonding Prep	Manual positioning of wafers for dicing or subsequent die bonding operations.	ESD-safe properties prevent latent defects in sensitive micro-circuits.
LED Substrate Handling	Precision manipulation of sapphire or SiC substrates during LED chip manufacturing.	Secure grip on hard, polished surfaces without slippage or scratching.

Specification Category	PL-CP115 Specification Detail
Model Identification	PL-CP115 Series
Primary Material	High-Performance ESD-Safe PEEK
Substrate Compatibility	Fully Customizable (Optimized for 8-inch/200mm wafers)
Surface Resistance	Customizable to specified ESD-safe ranges (e.g., $10^6 - 10^9 \Omega$)
Operating Temperature Range	Customized based on process requirements
Chemical Compatibility	Universal (Highly resistant to most acids, bases, and solvents)
Vacuum Connection Type	Bespoke sizing to match facility vacuum lines or portable pumps
Tip Configuration	Custom shapes (flat, curved, multi-point) available upon request
Cleanroom Rating	Compatible with ISO Class 3 - 8 (Application dependent)
Manufacturing Method	Precision CNC Machined to Bespoke Specifications
Handle Dimensions	Ergonomically tailored to client preferences