
GLOSSARY OF TECHNICAL TERMS

This glossary of technical terms contains explanations of certain technical terms used in this document. As such, these terms and their meanings may not correspond to standard industry meanings or usage of these terms and may not be comparable to similar terms adopted by other companies.

“ashing equipment”	systems that use plasma to completely remove photoresist or organic residues from semiconductor wafer surfaces after lithography or etching
“BT”	bismaleimide Triazine, a high-performance thermosetting resin material used primarily as a substrate or dielectric layer in printed circuit boards (PCBs) and semiconductor packaging due to its excellent thermal stability, mechanical strength, and low dielectric constant
“CCP”	Capacitively Coupled Plasma, a fundamental method for generating plasma used in critical fabrication processes like etching and deposition (including PECVD)
“etching equipment”	systems that use chemical, plasma, or reactive ion processes to selectively remove material from semiconductor wafer surfaces, used to transfer patterns from photoresist onto underlying thin films
“FPC”	flexible printed circuit board, a printed circuit board fabricated on a flexible polymer substrate that can bend, fold, or twist, used to provide electrical connections in compact or dynamically moving semiconductor devices and electronic assemblies
“IGBT”	Insulated Gate Bipolar Transistor, a high-efficiency power semiconductor device widely used in applications requiring high voltage/current switching with low losses
“LED”	light-emitting diode, a semiconductor device that emits light when an electric current passes through it, due to the process of electroluminescence occurring at the p-n junction
“monocrystalline silicon”	a form of silicon material consisting of a continuous and unbroken crystal lattice with no grain boundaries, used as the foundational substrate for manufacturing high-performance semiconductor devices
“PCB”	printed circuit board, a flat board made from insulating material, typically fiberglass or composite epoxy, onto which conductive pathways (traces) are etched or printed to connect and support electronic components such as chips, resistors, capacitors, and connectors

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“PECVD”	Plasma-Enhanced Chemical Vapor Deposition, a method to “paint” very thin layers of insulating or functional materials onto silicon wafers during chip making
“plasma descum equipment”	systems that use plasma to remove residual photoresist or contaminants from semiconductor wafer surfaces after lithography, ensuring clean features and precise pattern transfer for subsequent processes
“plasma desmear equipment”	systems that use plasma to chemically and physically remove resin smear and drilling residues from through-holes or microvias in PCBs, enhancing surface activation and ensuring reliable copper plating adhesion
“plasma processing equipment”	specialized systems that generate and control plasma to induce physical sputtering or chemical reactions on material surfaces
“photoelectric solar energy”	the generation of electrical power by converting sunlight directly into electricity using semiconductor materials through the photovoltaic effect
“photoresist”	a light-sensitive polymer material applied to a semiconductor wafer surface to form a patterned coating during photolithography, enabling selective etching or doping of the underlying layers
“PI”	Polyimide, a high-performance polymer material used in semiconductor manufacturing as an insulating layer, stress buffer, or protective coating due to its excellent thermal stability, chemical resistance, and dielectric properties
“polycrystalline silicon”	a form of silicon material composed of multiple small silicon crystals or grains, with grain boundaries separating them, commonly used as a raw material for semiconductor device fabrication and in thin-film applications
“polymer”	a large molecule composed of repeating structural units (monomers), used in semiconductor manufacturing as insulating materials, photoresists, passivation layers, adhesives, or flexible substrates due to their versatile chemical and physical properties
“PTFE”	Polytetrafluoroethylene, a high-performance fluoropolymer material characterized by excellent chemical resistance, low dielectric constant, and high thermal stability, used in semiconductor manufacturing primarily as an insulating material, protective coating, or in components requiring chemical inertness

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“silicon dioxide”	a dielectric (insulating) material commonly used in semiconductor fabrication for electrical insulation, surface passivation, masking, and as a gate oxide, typically formed by thermal oxidation or chemical vapor deposition (CVD) of silicon
“silicon nitride”	a hard, chemically stable dielectric material used in semiconductor manufacturing for insulation, surface passivation, diffusion barriers, and mechanical protection, typically deposited using chemical vapor deposition (CVD)
“silicon oxide”	an insulating material formed by the oxidation of silicon, widely used as a dielectric layer, masking layer, or surface passivation layer in semiconductor device fabrication
“silicon oxynitride”	a dielectric material composed of silicon, oxygen, and nitrogen, used in semiconductor manufacturing as a tunable insulator or barrier layer, offering properties between those of silicon dioxide (SiO_2) and silicon nitride (Si_3N_4)
“Smart Feeder”	a fully automated equipment specifically designed to load and unload PCB panels for plasma desmear equipment, facilitating the workflow connection between preceding and subsequent processes