

YES-G Series

(G500 and G1000)

Manual Plasma Cleaning Systems

The YES-G500 and YES-G1000 are parallel capacitive plasma systems designed to provide the optimum in plasma mode flexibility. For cleaning, stripping, and surface modification, plasma is an effective replacement for toxic chemicals and leaves no solvent residues on surfaces. Byproducts are inert and environmentally safe.

The G Series is available with 40 kHz or 13.56 MHz, and the user can choose from 5 plasma modes. Anisotropic modes include RIE and active ion trap; isotropic modes include downstream (electron free), active and downstream ion trap.

- RF Plasma with 40 kHz or 13.56 MHz
- Low pressure environment
- Downstream to aggressive plasma
- Temperature monitor
- 3 gas inputs
- Gas inputs can include more esoteric gases such as forming gas, CF4 and SF6

Applications

- Wirebond cleaning
- Encapsulate cleaning
- Flip chip underfill cleaning
- Contamination removal
- Excellent uniformity and superior control

Benefits

- · Gentle molecular level cleaning
- Clean, repeatable process
- No solvent residues
- Safe and reliable energy

Contact Us: We offer process demonstrations. If you would like to submit samples, please call us. We can run your samples and provide a detailed process report.

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G500 AND G1000 SPECIFICATIONS

For Wire Bond Surface Preparation and Gentle Cleaning Applications

	G500 SPECIFICATIONS
HARDWARE	
Clean Room Compatibility	Class 10
Operation Temperature	20 - 100 °C
N2 Flow Rate	1.0 SCFM
Process Gas Flow Rate	0.6 X 10-3 SCFM @ 150 MTORR, 12 CFM PUMP) — 1.2 X 10-3 SCFM @ 150 MTORR, 19 CFM PUMP
Interior Chamber Dimensions	45.72 cm (W) x 45.72 cm (D) x 20.955 cm (H) — (18" x 18" x 8.25")
Chamber Process Area	700 IN2 maximum (mode dependent) OR 233 IN2 per shelf
Overall System Dimensions	59.69 cm (W) x 71.2 cm (D) x 103.81 cm (H) — (23.5" x 28.03" x 40.87") — light tower adds 27 cm to height (10.62")
Chamber Material	6061-T6 aluminum
Process Gas Inputs	3 standard, 4th optional
Mass Flow Controllers	Optional, up to 3 for gas mixing
SEMI™ Compliance	S2 compliance
SOFTWARE	62 65 mp. ma. 166
Number of Recipes	12 with load/save/loop/link capability
Range of Exposure Time	0-1200 seconds (20 minutes)
Resolution of Timer Setting	1 second
PERFORMANCE	I SCOTIO
	100 F00 watts
RF Plasma Power	100-500 watts
RF Leakage Magnetic	0.5 m from front; 0.84 mA/m, 7.06 x 10-7 A2/m2 — 0.5 m from rear; 0.35 mA/m, 1.23 x 10-7 A2/m2
RF Leakage Electrical	0.5 m from front; 2.89 V/m, 8.35 V2/m2 — 0.5 m from rear; 0.24 V/m, 0.06 V2/m2
Nitrogen Consumption (2)	O SCF idle, 6.8 SCF peak, 1.7 SCF average
Power Consumption w/Pump	375W idle, 1000W peak, 640W average
Reactant Gas Consumption	0 SCF idle, 20-50 SCCM
Heat Emission	920 watts average
ADDITIONAL	
Power Requirements	208-230V, 20 amps, 50/60 Hz, 1 phase
System Weight	147 kg (325 lbs)
	G1000 SPECIFICATIONS
	GIOUU SPECIFICATIONS
HARDWARE	GIUUU SPECIFICATIONS
	Class 10
Clean Room Compatibility	Class 10
Clean Room Compatibility Operation Temperature	Class 10 145 °C maximum
Clean Room Compatibility Operation Temperature N2 Flow Rate	Class 10 145 °C maximum 1.7 SCFM
Clean Room Compatibility Operation Temperature N2 Flow Rate Process Gas Flow Rate	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average
Clean Room Compatibility Operation Temperature N2 Flow Rate	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average 45.72 CM (W) X 45.72 CM (D) X 30.48 CM (H) — (18" x 18" x 12") 12 trays total; 13 tray slots for flexible configuration — 15" x 15" shelf size trays for different process modes
Clean Room Compatibility Operation Temperature N2 Flow Rate Process Gas Flow Rate Interior Chamber Dimensions Chamber Process Area	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average 45.72 CM (W) X 45.72 CM (D) X 30.48 CM (H) — (18" x 18" x 12") 12 trays total; 13 tray slots for flexible configuration — 15" x 15" shelf size trays for different process modes (Active, ground and floating) — Standard configuration: 4 active, 4 ground, 4 floating
Clean Room Compatibility Operation Temperature N2 Flow Rate Process Gas Flow Rate Interior Chamber Dimensions Chamber Process Area Overall System Dimensions	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average 45.72 CM (W) X 45.72 CM (D) X 30.48 CM (H) — (18" x 18" x 12") 12 trays total; 13 tray slots for flexible configuration — 15" x 15" shelf size trays for different process modes (Active, ground and floating) — Standard configuration: 4 active, 4 ground, 4 floating 59.69 cm (W) x 71.12 cm (D) x 113.284 cm (H) — (23.5" x 28" x 44.6")
Clean Room Compatibility Operation Temperature N2 Flow Rate Process Gas Flow Rate Interior Chamber Dimensions Chamber Process Area Overall System Dimensions Chamber Material	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average 45.72 CM (W) X 45.72 CM (D) X 30.48 CM (H) — (18" x 18" x 12") 12 trays total; 13 tray slots for flexible configuration — 15" x 15" shelf size trays for different process modes (Active, ground and floating) — Standard configuration: 4 active, 4 ground, 4 floating 59.69 cm (W) x 71.12 cm (D) x 113.284 cm (H) — (23.5" x 28" x 44.6") 6061-T6 aluminum
Clean Room Compatibility Operation Temperature N2 Flow Rate Process Gas Flow Rate Interior Chamber Dimensions Chamber Process Area Overall System Dimensions Chamber Material Process Gas Inputs	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average 45.72 CM (W) X 45.72 CM (D) X 30.48 CM (H) — (18" x 18" x 12") 12 trays total; 13 tray slots for flexible configuration — 15" x 15" shelf size trays for different process modes (Active, ground and floating) — Standard configuration: 4 active, 4 ground, 4 floating 59.69 cm (W) x 71.12 cm (D) x 113.284 cm (H) — (23.5" x 28" x 44.6") 6061-T6 aluminum 3 standard, 4th optional
Clean Room Compatibility Operation Temperature N2 Flow Rate Process Gas Flow Rate Interior Chamber Dimensions Chamber Process Area Overall System Dimensions Chamber Material Process Gas Inputs Mass Flow Controllers	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average 45.72 CM (W) X 45.72 CM (D) X 30.48 CM (H) — (18" x 18" x 12") 12 trays total; 13 tray slots for flexible configuration — 15" x 15" shelf size trays for different process modes (Active, ground and floating) — Standard configuration: 4 active, 4 ground, 4 floating 59.69 cm (W) x 71.12 cm (D) x 113.284 cm (H) — (23.5" x 28" x 44.6") 6061-T6 aluminum 3 standard, 4th optional Optional, up to 3 for gas mixing
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Clean Room Compatibility Operation Temperature N2 Flow Rate Process Gas Flow Rate Interior Chamber Dimensions Chamber Process Area Overall System Dimensions Chamber Material Process Gas Inputs Mass Flow Controllers SEMI™ Compliance SOFTWARE Number of Recipes	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average 45.72 CM (W) X 45.72 CM (D) X 30.48 CM (H) — (18" x 18" x 12") 12 trays total; 13 tray slots for flexible configuration — 15" x 15" shelf size trays for different process modes (Active, ground and floating) — Standard configuration: 4 active, 4 ground, 4 floating 59.69 cm (W) x 71.12 cm (D) x 113.284 cm (H) — (23.5" x 28" x 44.6") 6061-T6 aluminum 3 standard, 4th optional Optional, up to 3 for gas mixing S2/S8 12 with load/save/loop/link capability
Clean Room Compatibility Operation Temperature N2 Flow Rate Process Gas Flow Rate Interior Chamber Dimensions Chamber Process Area Overall System Dimensions Chamber Material Process Gas Inputs Mass Flow Controllers SEMI™ Compliance SOFTWARE Number of Recipes Range of Exposure Time	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average 45.72 CM (W) X 45.72 CM (D) X 30.48 CM (H) — (18" x 18" x 12") 12 trays total; 13 tray slots for flexible configuration — 15" x 15" shelf size trays for different process modes (Active, ground and floating) — Standard configuration: 4 active, 4 ground, 4 floating 59.69 cm (W) x 71.12 cm (D) x 113.284 cm (H) — (23.5" x 28" x 44.6") 6061-T6 aluminum 3 standard, 4th optional Optional, up to 3 for gas mixing S2/S8 12 with load/save/loop/link capability 0-1200 seconds (20 minutes)
Clean Room Compatibility Operation Temperature N2 Flow Rate Process Gas Flow Rate Interior Chamber Dimensions Chamber Process Area Overall System Dimensions Chamber Material Process Gas Inputs Mass Flow Controllers SEMI™ Compliance SOFTWARE Number of Recipes Range of Exposure Time Resolution of Timer Setting	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average 45.72 CM (W) X 45.72 CM (D) X 30.48 CM (H) — (18" x 18" x 12") 12 trays total; 13 tray slots for flexible configuration — 15" x 15" shelf size trays for different process modes (Active, ground and floating) — Standard configuration: 4 active, 4 ground, 4 floating 59.69 cm (W) x 71.12 cm (D) x 113.284 cm (H) — (23.5" x 28" x 44.6") 6061-T6 aluminum 3 standard, 4th optional Optional, up to 3 for gas mixing S2/S8 12 with load/save/loop/link capability
Clean Room Compatibility Operation Temperature N2 Flow Rate Process Gas Flow Rate Interior Chamber Dimensions Chamber Process Area Overall System Dimensions Chamber Material Process Gas Inputs Mass Flow Controllers SEMI™ Compliance SOFTWARE Number of Recipes Range of Exposure Time Resolution of Timer Setting PERFORMANCE	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average 45.72 CM (W) X 45.72 CM (D) X 30.48 CM (H) — (18" x 18" x 12") 12 trays total; 13 tray slots for flexible configuration — 15" x 15" shelf size trays for different process modes (Active, ground and floating) — Standard configuration: 4 active, 4 ground, 4 floating 59.69 cm (W) x 71.12 cm (D) x 113.284 cm (H) — (23.5" x 28" x 44.6") 6061-T6 aluminum 3 standard, 4th optional Optional, up to 3 for gas mixing S2/S8 12 with load/save/loop/link capability 0-1200 seconds (20 minutes) 1 second
Clean Room Compatibility Operation Temperature N2 Flow Rate Process Gas Flow Rate Interior Chamber Dimensions Chamber Process Area Overall System Dimensions Chamber Material Process Gas Inputs Mass Flow Controllers SEMI™ Compliance SOFTWARE Number of Recipes Range of Exposure Time Resolution of Timer Setting PERFORMANCE RF Plasma Power	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average 45.72 CM (W) X 45.72 CM (D) X 30.48 CM (H) — (18" x 18" x 12") 12 trays total; 13 tray slots for flexible configuration — 15" x 15" shelf size trays for different process modes (Active, ground and floating) — Standard configuration: 4 active, 4 ground, 4 floating 59.69 cm (W) x 71.12 cm (D) x 113.284 cm (H) — (23.5" x 28" x 44.6") 6061-T6 aluminum 3 standard, 4th optional Optional, up to 3 for gas mixing S2/S8 12 with load/save/loop/link capability 0-1200 seconds (20 minutes) 1 second 0-1000 watts @ 550 VAC, selectable power
Clean Room Compatibility Operation Temperature N2 Flow Rate Process Gas Flow Rate Interior Chamber Dimensions Chamber Process Area Overall System Dimensions Chamber Material Process Gas Inputs Mass Flow Controllers SEMI™ Compliance SOFTWARE Number of Recipes Range of Exposure Time Resolution of Timer Setting PERFORMANCE RF Plasma Power RF Leakage Magnetic	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average 45.72 CM (W) X 45.72 CM (D) X 30.48 CM (H) — (18° x 18° x 12°) 12 trays total: 13 tray slots for flexible configuration — 15° x 15° shelf size trays for different process modes (Active, ground and floating) — Standard configuration: 4 active, 4 ground, 4 floating 59.69 cm (W) x 71.12 cm (D) x 113.284 cm (H) — (23.5° x 28° x 44.6°) 6061-T6 aluminum 3 standard, 4th optional Optional, up to 3 for gas mixing 52/S8 12 with load/save/loop/link capability 0-1200 seconds (20 minutes) 1 second 0-1000 watts @ 550 VAC, selectable power 0.6 mA/m, 4.15 x 10-7 A2/m2 Average
Clean Room Compatibility Operation Temperature N2 Flow Rate Process Gas Flow Rate Interior Chamber Dimensions Chamber Process Area Overall System Dimensions Chamber Material Process Gas Inputs Mass Flow Controllers SEMI™ Compliance SOFTWARE Number of Recipes Range of Exposure Time Resolution of Timer Setting PERFORMANCE RF Plasma Power RF Leakage Magnetic RF Leakage Electrical	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average 45.72 CM (W) X 45.72 CM (D) X 30.48 CM (H) — (18" x 18" x 12") 12 trays total; 13 tray slots for flexible configuration — 15" x 15" shelf size trays for different process modes (Active, ground and floating) — Standard configuration: 4 active, 4 ground, 4 floating 59.69 cm (W) x 71.12 cm (D) x 113.284 cm (H) — (23.5" x 28" x 44.6") 6061-T6 aluminum 3 standard, 4th optional Optional, up to 3 for gas mixing 52/S8 12 with load/save/loop/link capability 0-1200 seconds (20 minutes) 1 second 0-1000 watts @ 550 VAC, selectable power 0.6 mA/m, 4.15 x 10-7 A2/m2 Average 1.6 V/m, 4.2 V2/m2 Average
Clean Room Compatibility Operation Temperature N2 Flow Rate Process Gas Flow Rate Interior Chamber Dimensions Chamber Process Area Overall System Dimensions Chamber Material Process Gas Inputs Mass Flow Controllers SEMI™ Compliance SOFTWARE Number of Recipes Range of Exposure Time Resolution of Timer Setting PERFORMANCE RF Plasma Power RF Leakage Magnetic RF Leakage Electrical Nitrogen Consumption	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average 45.72 CM (W) X 45.72 CM (D) X 30.48 CM (H) — (18" x 18" x 12") 12 trays total; 13 tray slots for flexible configuration — 15" x 15" shelf size trays for different process modes (Active, ground and floating) — Standard configuration: 4 active, 4 ground, 4 floating 59.69 cm (W) x 71.12 cm (D) x 113.284 cm (H) — (23.5" x 28" x 44.6") 6061-T6 aluminum 3 standard, 4th optional Optional, up to 3 for gas mixing 52/S8 12 with load/save/loop/link capability 0-1200 seconds (20 minutes) 1 second 0-1000 watts @ 550 VAC, selectable power 0.6 mA/m, 4.15 x 10-7 A2/m2 Average 1.6 V/m, 4.2 V2/m2 Average 0 SCF idle, 6.8 SCF peak, 1.7 SCF average
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Clean Room Compatibility Operation Temperature N2 Flow Rate Process Gas Flow Rate Interior Chamber Dimensions Chamber Process Area Overall System Dimensions Chamber Material Process Gas Inputs Mass Flow Controllers SEMI™ Compliance SOFTWARE Number of Recipes Range of Exposure Time Resolution of Timer Setting PERFORMANCE RF Plasma Power RF Leakage Magnetic RF Leakage Electrical Nitrogen Consumption	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average 45.72 CM (W) X 45.72 CM (D) X 30.48 CM (H) — (18" x 18" x 12") 12 trays total; 13 tray slots for flexible configuration — 15" x 15" shelf size trays for different process modes (Active, ground and floating) — Standard configuration: 4 active, 4 ground, 4 floating 59.69 cm (W) x 71.12 cm (D) x 113.284 cm (H) — (23.5" x 28" x 44.6") 6061-T6 aluminum 3 standard, 4th optional Optional, up to 3 for gas mixing 52/S8 12 with load/save/loop/link capability 0-1200 seconds (20 minutes) 1 second 0-1000 watts @ 550 VAC, selectable power 0.6 mA/m, 4.15 x 10-7 A2/m2 Average 1.6 V/m, 4.2 V2/m2 Average 0 SCF idle, 6.8 SCF peak, 1.7 SCF average
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Clean Room Compatibility Operation Temperature N2 Flow Rate Process Gas Flow Rate Interior Chamber Dimensions Chamber Process Area Overall System Dimensions Chamber Material Process Gas Inputs Mass Flow Controllers SEMI™ Compliance SOFTWARE Number of Recipes Range of Exposure Time Resolution of Timer Setting PERFORMANCE RF Plasma Power RF Leakage Magnetic RF Leakage Electrical Nitrogen Consumption Power Consumption w/Pump Reactant Gas Consumption	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average 45.72 CM (W) X 45.72 CM (D) X 30.48 CM (H) — (18" x 18" x 12") 12 trays total; 13 tray slots for flexible configuration — 15" x 15" shelf size trays for different process modes (Active, ground and floating) — Standard configuration: 4 active, 4 ground, 4 floating 59.69 cm (W) x 71.12 cm (D) x 113.284 cm (H) — (23.5" x 28" x 44.6") 6061-T6 aluminum 3 standard, 4th optional Optional, up to 3 for gas mixing 52/S8 12 with load/save/loop/link capability 0-1200 seconds (20 minutes) 1 second 0-1000 watts @ 550 VAC, selectable power 0.6 mA/m, 4.15 x 10-7 A2/m2 Average 1.6 V/m, 4.2 V2/m2 Average 0 SCF idle, 6.8 SCF peak, 1.7 SCF average 375W idle, 1000W peak, 640W average 0 SCF idle, 20-50 SCCM
Clean Room Compatibility Operation Temperature N2 Flow Rate Process Gas Flow Rate Interior Chamber Dimensions Chamber Process Area Overall System Dimensions Chamber Material Process Gas Inputs Mass Flow Controllers SEMI™ Compliance SOFTWARE Number of Recipes Range of Exposure Time Resolution of Timer Setting PERFORMANCE RF Plasma Power RF Leakage Magnetic RF Leakage Electrical Nitrogen Consumption Power Consumption Heat Emission	Class 10 145 °C maximum 1.7 SCFM 20-50 SCCM average 45.72 CM (W) X 45.72 CM (D) X 30.48 CM (H) — (18" x 18" x 12") 12 trays total; 13 tray slots for flexible configuration — 15" x 15" shelf size trays for different process modes (Active, ground and floating) — Standard configuration: 4 active, 4 ground, 4 floating 59.69 cm (W) x 71.12 cm (D) x 113.284 cm (H) — (23.5" x 28" x 44.6") 6061-T6 aluminum 3 standard, 4th optional Optional, up to 3 for gas mixing 52/S8 12 with load/save/loop/link capability 0-1200 seconds (20 minutes) 1 second 0-1000 watts @ 550 VAC, selectable power 0.6 mA/m, 4.15 x 10-7 A2/m2 Average 1.6 V/m, 4.2 V2/m2 Average 0 SCF idle, 6.8 SCF peak, 1.7 SCF average 375W idle, 1000W peak, 640W average 0 SCF idle, 20-50 SCCM