



YES-VertaCure

High-Volume Automated System for Polyimide Vacuum Cure



Chosen by the world's largest companies, the YES-VertaCure is a production-proven platform that accommodates 200mm/300mm wafers with automated processing for up to two process modules inside an integrated Class 1 mini-environment. The VertaCure 1PM and 2PM systems accommodate 50 and 100 wafers respectively.

The Vacuum Cure Advantage

- 3.5 hours vs. 8+ hours for atmospheric
- Laminar flow reduces/eliminates particles
- More complete cure (5x less outgassing)
- Less film stress and low wafer warpage
- 1.6x to 2x less power and N2 consumption
- Much lower capital cost, 2-3x lower CoO

COMMON APPLICATIONS

- Polyimide, BCB and PBO cure
- Low temp polymer cure
- Copper anneal
- Wafer to wafer bonding anneal

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.

Yield Engineering Systems, Inc.

Call: **1-510-954-6889** (worldwide) or **1-888-YES-3637** (US toll free)

www.yieldengineering.com



VertaCure

SPECIFICATIONS

	SPECIFICATIONS	REMARKS	
PERFORMANCE	Environment Cleanness	Class 100	
	EFEM Cleanness	Class 100	
	Max Temp	<450° C	
	WiW Temp Uniformity	+/-1.5° C below 250°C and +/- 2.5°C above 250°C of dwell temp	Stabilization time for both scenarios is less than 15 minutes.
	Ramp-rate	Minimum 8.0 °C/min from 150 to 450 °C	
	Ramp-down	Minimum 3.2 °C/min from 450 to 150 °C	
	Up-time	≥ 98 %	
	MTTR	≤ 4 hours	
	MTBF	≥ 500 hrs	
	Warpage	≤ 3mm one side	
HARDWARE	Wafer Breakage	Maximum breakage rate < 50 ppm	
	Wafer Size	□300 mm, □200 mm, □150 mm, □100 mm,	8inch wafer thickness @450-900um, 12inch wafer thickness @760um
	Load Port Quantity	□2, □4, □Other open cassette adapter for 200mm / 300mm FOUP	
	Process Gas Type	N2 Gas – preheated	
	MFC	1 N2 Calibrated MFC	
	Max Flow	50 SLM	
	Pump	Customer provided	Same or equivalent to Ebara EV-A06 21 CFM recommended
	Clean Exhaust	Chamber cooling air mixed w/ambient air	To reduce exhaust temperature below safe exposure limits. Heat exhaust only; no process gases or effluents present in exhaust. Max. flow rate is 2000 SCFM with Exhaust Temp of ≤40°C
	Pump Exhaust	Scrubber – Max Flow 21 CFM	
	ESD	SEMI S2 and S8 compliance	
	Chamber	Stainless steel chamber SUS 316L	
	Process Module	50 wafers for 1 (for VertaCure 1PM); 100 wafers for 2 (for VertaCure 2PM)	
	O2 Concentration by a O2 monitor	<10 ppm within 20 minutes of process initiation	Continuous monitoring of process chamber vacuum exhaust oxygen concentration to verify oxygen performance. O2 values are saved to process log and also may be accessed via SECS/GEM interface.
	Communication Standard	SECS (HSMS-SS)	
	GUI	Graphic user interface with touch panel Serial RS-232C, parallel I/O	
	Windows	Windows 8.1+	
	Warranty	12 months after the acceptance for non-consumable only	

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