

EMERALD SERIES

PULSED HEAT TECHNOLOGY FLAT PANEL BONDING AND REPAIR APPLICATIONS

- *Small to large LCD/PDP panels*
- *Supporting all TAB/COG/Flex sizes*
- *Fine pitch alignment*
- *ACF Tacking, Heat Seal Bonding and Hot Bar Soldering all in one system*



Emerald-65PH

UNITEK EAPRO offers a full product line of LCD/PDP Bonding and Repair systems. The Emerald Series are designed for a wide variety TAB/COG/Flex sizes and can handle panel sizes ranging from 1" up to 65". The Emerald highly flexible system can be used for ACF Tacking, ACF Final Bonding and Hot Bar Soldering.

Main Features:

- Uniflow[®] pulse-heated control with graphical data output and remote programming provides targeted heating and precision temperature control.
- High precision pneumatic bonding head, with adjustable force, ensures consistent process results.
- Dual Look-Up cameras for fine pitch alignment down to 30 microns. Track and marker recognition while Hot Bar is on top of the bonding position.
- Flipper X-Y-Z-Phi module for accurate positioning of the TAB/COG/Flex.
- Multiple thermode dimensions are available.
- Quick Connect Block enables fast and easy thermode change.



Options include:

- High precision motorized bonding head upgrade package.
- High force range upgrade package.
- PDP upgrade package including dual Look-Down cameras and metal support block.
- COG upgrade package including chip holder.
- Screen splitter function with PC.
- Manual or automatic interposer system.



SYSTEM SPECIFICATIONS	EMERALD-25PH	EMERALD-45PH	EMERALD-65PH
Dimensions Height x Width x Depth mm Inches	2050 x 1200 x 900 80.7 x 47.2 x 35.4	2050 x 2250 x 1405 80.7 x 88.6 x 55.3	2050 x 3050 x 1705 80.7 x 120.1 x 67.1
Weight Kg (Lbs)	600 (1323)	650 (1433)	650 (1433)
Panel sizes mm (Inches)	25.4 – 635 (1 – 25)	25.4 – 1143 (1 – 45)	25.4 – 1651 (1 – 65)
TAB sizes minimum L x W mm (Inches) TAB sizes maximum L x W mm (Inches) Chip (COG) sizes minimum L x W mm (Inches) Chip (COG) sizes maximum L x W mm (Inches) Flex sizes minimum L x W mm (Inches) Flex sizes maximum L x W mm (Inches) Customized shapes	8 x 5 (0.31 x 0.20) 150 x 66 (5.91 x 2.60) 5 x 1 (0.20 x 0.04) 50 x 10 (1.97 x 0.40) 8 x 5 (0.31 x 0.20) 150 x 50 (5.91 x 1.97) customized shapes and sizes out of min/max on request		
Product Handling Standard Optional	PHS-25 PHS-45 PHS-65	PHS-45 PHS-65	PHS-65
Thermode (Hot Bar) Type Thermocouple type Temperature Controller	Thermo-Plane Thermode K-type Uniflow® Power Supply		
Air supply bar (PSI)	6 – 8 (80 – 100), dry and filtered air		
Power consumption	16A, 230VAC, 50/60 Hz 16A, 110VAC, 50/60 Hz (Hot Bar ≤ 60 mm)		
Operating temperature °C (°F)	15 – 40 (60 – 104)		

BONDING HEAD SPECIFICATIONS					
Features / Head Module	SH500	PH500	SH1250	PH1250	BH2500
Head actuation method	Pneumatic	Motorized	Pneumatic	Motorized	Pneumatic
Bonding Force	Adjustable	Programmable	Adjustable	Programmable	Adjustable
Force Range N Lbs	20 – 500 4 – 110		20 – 1250 4 – 276		20 – 2500 4 – 552
Hot Bar Stroke mm (Inches)	25 (0.98)				
Hot Bar Sizes L min – L max mm (Inches) W min – W max mm (Inches)	4 – 150 (0.16 – 5.9) 1 – 5 (0.04 – 0.20)				

UNIFLOW® PULSED HEAT SPECIFICATION	
Temperature range preheat °C (°F)	60 – 300 (140 – 572)
Temperature range heat °C (°F)	60 – 600 (140 – 1112)
Time period preheat seconds	0 to 99.9 or continuous
Time period rise time seconds	0 to 9.9 (0.1 second increments)
Time period heat time seconds	0.1 to 99.9 (0.1 second increments)
Temperature accuracy	± 2 % of reading or ± 6 °C, whichever is greater
Temperature repeatability	± 1 % of reading
Programmable heat profiles	Fifteen (15) non-volatile memory
Dedicated input relays	24Vac / 0.3Amp
Communication ports	RS-232, RS-485

Your local Representative

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