

**AFOSA Series**



**ALTIX**  
**AUTOMA-TECH™**

Smart imaging solutions

**For Rigid and Flexible Printed Circuit Board**



### System features

- Panel size up to 610x762 mm (24"x30")
- Panel thickness up to 4mm
- 5 or 8kW Collimated Light
- Automatic dual glass / glass tray
- Fully automatic camera positioning
- 2 to 4 CCD cameras
- Auto-alignment re-check
- Laser / Micro via alignment capability
- Artwork changing time < 2 minutes
- ALTIX Imaging Suite
- Telemaintenance system
- 15" touch screen

**Semi - Automatic Double Sided Exposer**

***with fully Automatic Alignment by CCD Cameras  
Innerlayer - Outerlayer - Soldermask***

## Main characteristics of the AFOSA i/ ie/ ies

Machine description	Semi automatic panel handling with fully automatic alignment by CCD	
<b>Applications</b>	i	for inner layer exposure
	ie	for inner & outer layer exposure
	ies	for inner, outer layer & solder mask exposure
<b>Panel size</b>	254x254 mm (10" x 10") to 559x660.5 mm (22" x 26") / 610x762 mm (24" x 30")	
<b>Panel thickness</b>	50µm to 4mm	
<b>Tray system</b>	Automatic dual glass / glass tray	
<b>Repeatability</b>	±5µm on glass to glass orientation *	
<b>Alignment</b>	By 2 or 4 CCD cameras from the lower side	
<b>Alignment Accuracy</b>	±10µm Artwork to Artwork *	
	±20µm Artwork to Panel (for ie & ies types only) *	
<b>Vacuum level</b>	Up to 2500 mmH <sub>2</sub> O with regulation	
<b>Exposure modes</b>	Energy or time	
<b>Cycle time</b>	> 2 panels/min for I/L (depending on Operator and Parameters)	
<b>Air cleanliness</b>	HEPA Filter class 100	
<b>H-M-Interface</b>	15" touch screen with event logging and on-line troubleshooting	
<b>Languages</b>	English, Chinese, German, French & Others	

Light Engines	Collimated 5kW	Collimated 8kW
<b>Resolution<sup>(1)</sup></b>	Down to 0.6mils (15µm)	
<b>Initial Intensity<sup>(2,3,4)</sup></b>	21mW/cm <sup>2</sup> @ 365nm	35mW/cm <sup>2</sup> @ 365nm
<b>Lamp amount</b>	1 short arc lamp and sliding mirror for double sided exposure	
<b>Uniformity<sup>(2,5)</sup></b>	> 85%	
<b>Half collimation angle</b>	1.5° max	
<b>Declination angle</b>	1°	
<b>Image area</b>	Customizable up to 559x660.5 mm (22" x 26") or 610x762 mm (24" x 30")	
<b>Lamp cooling</b>	Air cooled / Closed Loop Lamp Cooling System (CLLC)	

(1) Depending on process variables (2) For an image area / panel size of 21" x 24" (3) Power density measured under the Glass without Artwork (4) measured by a UV meter IL 1400 (International Light) and a UV cell referenced XRL140B (5) according to  $I_{min}/I_{max} \times 100\%$

General Utilities	Collimated 5kW	Collimated 8kW
<b>Power supply</b>	220/400/480V, 3 Phases, 50Hz	
<b>Power consumption</b>	7.5kW	10.5kW
<b>Air supply</b>	6-7bar – 1.5m <sup>3</sup> /min	
<b>Water supply</b>	15 – 30l/min @ 7bar	20 – 46l/min @ 7bar
	needed with CLLC option	
<b>Exhaust</b>	1100Nm <sup>3</sup> /h	1100Nm <sup>3</sup> /h
<b>Machine weight</b>	2200kg	2200kg
<b>Dimensions [mm]</b>	<b>W:</b>	1641
	<b>D:</b>	3377
	<b>H:</b>	2080 (2126*)
		2080 (2304*)

(\*) with CLLC option

### Options

Panel size up to 610x762 mm (24" x 30")

This option allows exposing panel size larger than the standard size of 559x660.5 mm (22" x 26") and up to 610x762 mm (24" x 30")

Closed Loop Lamp Cooling system (CLLC)

No need to draw out air from the clean room in order to help cool the lamps, and no exhaust will be produced during the cooling process.

Dry-film-covered target holes

Illumination and vision software upgrades which help determine the center of a drilled hole covered by concave dry-film layers

Laser / Micro via alignment mode

Hardware and software enhancement for µ-vias detection used along with the standard fiducials for alignment purposes

Modem & Tele-maintenance

This option allows service personnel to check the machine condition and performance remotely

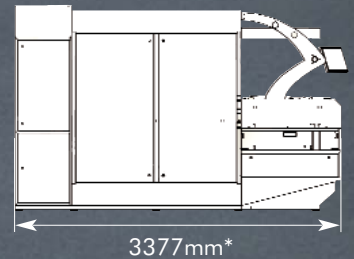
## Imaging with us !

# AFOSA

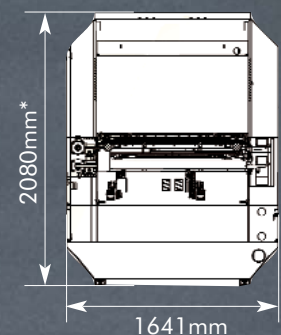
## Collimated Light 5kW / 8kW



Side view



Front view



\* Values for AFOSA collimated light 5 kW



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