

Technical Specification for Mask Aligner		
Sl. No.	Description	Specification
1	Application	UV based lithography
2	UV Source	
2.1	UV Source	LED based with no warm-up time
2.2	UV Spectral Band	350 nm-450 nm
2.3	Exposure time	0.1 s - 200 s (in increments of 0.1 second)
2.4	Exposure area	Max. 100 mm diameter
2.5	Power density (adjustable through LED current)	0.2 mW/cm ² - 20 mW/cm ²
2.6	Light divergence	< 3°
3	X-Y-θ Aligning stage	
3.1	Type of control	Mechanical, micrometer based
3.2	Accuracy	1µm or better
3.3	X-Y alignment span	Minimum 6 mm
3.4	θ alignment span	Minimum 5°
4	Z Wafer stage	
4.1	Type of control	Motorized and shall be of encoder based for precise gap and pressure control
4.2	Stage step	< 0.5 µm/step
4.3	Pressure sensing resolution	< 30 g
5	Wafer stage shall be compatible to	
5.1	Wafer/Substrate size	≤ Ø 4"
5.2	Wafer thickness	≤ 1.5 mm
6	Microscope	
6.1	Camera resolution	1920x1080, Full HD with at least 30 FPS
6.2	Auxiliary illumination	Yellow LED
6.3	Alignment technique	Top-side alignment, camera based
6.4	Motion	3 axis, independent XYZ manual stage
6.5	Magnification	Min. 80X, Max. ≥ 400X
7	Display	Minimum 7 inch Full colour touchscreen LCD
8	User control	Capacitive touchscreen for machine controls and microscope.
9	Add on Monitor for viewing	Min. 18 inch LED based screen with HDMI and VGA ports, Display Resolution:1366x768
10	Minimum feature Size	3 µm or less
11	Mask holders	Interchangeable vacuum based photomask holders for 4" Square and 5" Square photomasks. Offer should include 4" Sq. and 5" Sq. photomask holder.
12	Exposure Mode	System shall be suitable for soft contact exposure.
13	Vacuum pump	Pumping Speed: ≥ 30 L/Min Vacuum: ≥ 200 mbar
14	Power supply	220V ± 10%, 50-60 Hz, Single phase
15	Dimensions (WxLxH)	(360mm±10%)x(500mm±10%)x(500mm±10%)

16	Weight	<25 Kg
17	Warranty	3 year mandatory warranty from the date of installation.
18	Delivery Period	within 6 months from the receipt of PO
19	<ul style="list-style-type: none"> • Product catalogue shall be provided along with technical bid. • User manual and service manual of the system shall be provided along with the item. 	
20	The equipment installation at URSC and demonstration of the same by authorized supplier should be given to the user without any additional cost.	
21	Terms & Conditions	
21.1	Authorization letter from OEM shall be provided by vendor.	
21.2	Prices shall be quoted in INR only. All prices shall be quoted in price bid only.	
21.3	Systems from manufacturers for whom it is a regular/standard product only will be considered.	
21.4	References of offered system installed in India (if any) with contact details of end user must be provided.	
21.5	URSC may demand a technical presentation on the products after opening the technical bid if required at URSC for evaluation of the products. Only those offers which meets the indent specifications will be considered.	
21.6	2 nd hand or refurbished products will not be considered.	
21.7	All the technical details shall be quoted by the supplier. Point-to-point Compliance statement for the above specifications to be provided along with the quote. Indicating merely 'YES', 'NO' or 'OKAY' in the compliance statement will not be considered.	

Compliance Matrix for Mask Aligner

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