

TECHNICAL DATA SHEET

Levon[™] MA200-BE Mask Aligner

365 nm · 8-inch exposure area · 0.8–1.2 μ m exposure resolution · 0.5 μ m registration accuracy · four exposure modes



Levon[™] MA200-BE Mask Aligner — Representative Configuration

The Levon[™] MA200-BE Mask Aligner is a mask aligner with four exposure modes and an optical microscope + CCD alignment system. Image shown for reference; final configuration is confirmed in the quotation.

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SECTION I

Product Overview

Levon™ MA200-BE Mask Aligner is a mask aligner with an exposure central wavelength of 365 nm, an 8-inch exposure area, an exposure resolution of 0.8–1.2 μm and a registration accuracy of 0.5 μm .

The MA200-BE has four selectable exposure modes: hard contact, soft contact, proximity and vacuum contact. The exposure irradiance is $>30 \text{ mW/cm}^2$ (adjustable), the illuminance uniformity is $\leq 2\%$ over a 4-inch area and $\leq 3\%$ over an 8-inch area, and the exposure settings cover 0–999.9 s. On the MA200-BE, the alignment system is an optical microscope with a high-definition CCD, with a microscope magnification of 150X–720X (adjustable). The relative travel range of the wafer to the mask is X, Y: $\pm 5 \text{ mm}$ and θ : $\pm 6^\circ$. Auto-leveling and auto-focusing mechanisms are included, and the MA200-BE is equipped with wafer fragment handling capability. The MA200-BE supports reticle sizes of 5" $\times$ 5", 7" $\times$ 7", 9" $\times$ 9" and a maximum allowable working thickness (design) of 0.1–3 mm (customizable fixtures supported). The unit measures 600 $\times$ 1000 $\times$ 1620 mm (W $\times$ D $\times$ H) and is packed in a paper case.

SECTION II

Core Advantages

- **Four exposure modes** Hard contact, soft contact, proximity and vacuum contact exposure.
- **Registration accuracy** Registration accuracy of 0.5 μm ; relative travel range X, Y: $\pm 5 \text{ mm}$ and θ : $\pm 6^\circ$.
- **Auto-leveling and auto-focusing** Auto-leveling and auto-focusing mechanisms.
- **365 nm exposure** Exposure central wavelength of 365 nm with an exposure irradiance of $>30 \text{ mW/cm}^2$ (adjustable).
- **Microscope and CCD alignment** Optical microscope with a high-definition CCD; microscope magnification of 150X–720X (adjustable).
- **Wafer fragments** Equipped with wafer fragment handling capability.

SECTION III

Specifications

Technical data — MA200-BE

Specifications	
Parameter	Specification
Brand	Levon™ by ACS Material
Product Name	Levon™ MA200-BE Mask Aligner
Model	MA200-BE
SKU #	LVMA2B00
Product type	Mask aligner
Exposure area	8-inch
Supported reticle size	5" $\times$ 5", 7" $\times$ 7", 9" $\times$ 9"
Maximum allowable working thickness (design)	0.1–3 mm (customizable fixtures supported)
Wafer fragments	Wafer fragment handling capability
Leveling and focusing	Auto-leveling and auto-focusing mechanisms
Dimensions [W $\times$ D $\times$ H]	600 $\times$ 1000 $\times$ 1620 mm
Packing	Paper case
Warranty	1-year product warranty

Exposure and alignment — MA200-BE

Exposure and alignment	
Parameter	Specification
Exposure central wavelength	365 nm
Exposure resolution	0.8–1.2 μm
Exposure irradiance	$>30 \text{ mW/cm}^2$ (adjustable)
Illuminance uniformity	$\leq 2\%$ (over 4-inch area), $\leq 3\%$ (over 8-inch area)
Exposure settings	0–999.9 s
Selectable exposure modes	Hard contact, soft contact, proximity and vacuum contact

Exposure and alignment	
Parameter	Specification
Registration accuracy	0.5 μm
Relative travel range (wafer to mask)	X, Y: $\pm 5\text{ mm}$; θ : $\pm 6^\circ$
Alignment system	Optical microscope + high-definition CCD
Microscope magnification	150X–720X, adjustable

Scope of delivery

- **Standard configuration:** one MA200-BE main unit, paper case.
- **Utilities and scope** — the power input, the light source, the utilities and the scope of supply (including reticle holders and fixtures) are confirmed in the quotation.

SECTION IV

Applications

For laboratory mask alignment and exposure at 365 nm within an 8-inch exposure area, in hard contact, soft contact, proximity or vacuum contact mode, with reticles of $5'' \times 5''$, $7'' \times 7''$ or $9'' \times 9''$ and a design working thickness range of 0.1–3 mm (customizable fixtures supported). For vapor deposition on substrates up to $150 \times 150\text{ mm}$, see the VCD.

Product value: mask alignment and 365 nm exposure within an 8-inch exposure area, with a registration accuracy of 0.5 μm and four selectable exposure modes.

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