

Control Micro LED

C μ L series

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6M+

Laser Focused on μ LED

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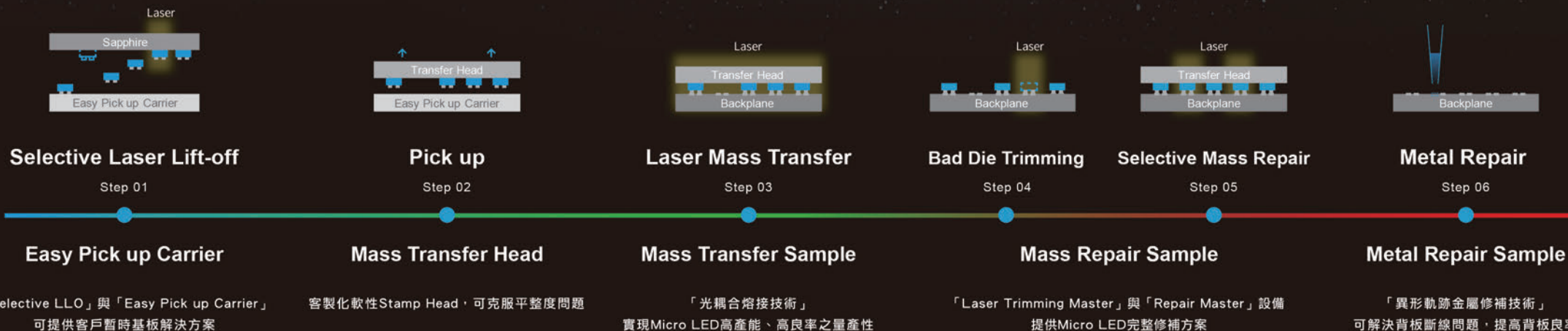
Mini LED / Micro LED

Mass Transfer / Mass Repair / Metal Repair

Momentary Process

+ Total Solution

What Control Contribute to Micro LED Process



Laser Focused on μ LED
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Final yield
100 %

Per chip process time
< 1 ms

Minimum LED size
< 15 μ m

Minimum pixel pitch
< 40 μ m

Accuracy
 $\pm 1.5 \mu$ m

Repair yield
> 99.999 %

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Mass Transfer Master

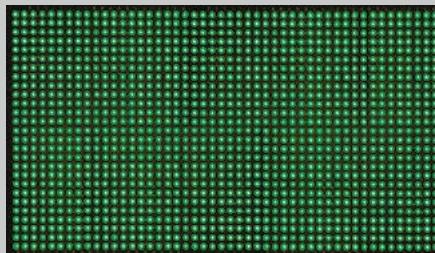
- Various array-pickup head
(Ex: 40*48 array@P0.75、160*160@P0.2)
- Selective pick & place
- Large-sized panel capacity
- Customized for any size of chip and panel



48*27 Array Mass Transfer



Yield 100%



Yield 100%



Yield 100%

Specifications

Specifications / Model		C μ L-MTM	C μ L-MTM Plus
Machine Size	Dimensions (W*L*H)	2,610*2,650*2,130 mm	2,610*2,650*2,130 mm
	Weight	8,500 kg	8,500 kg
Equipment Capacity	Degree of automation	Semi-automated	Fully-automated
	Backplane size (W*L)*1	370*470 mm(G2)	370*470 mm(G2)
	LED size	15~80 μ m	15~80 μ m
	Alignment accuracy	± 1.5 μ m	± 1.5 μ m
	Wafer size	4~8 inches	4~8 inches
Options	Automated clean system	-	●
	Multi-wafer stages	-	●
	AOI system	-	●
	Ionizer fan	-	●
Operating Conditions	Pressure source	Min. 700 kPa	Min. 700 kPa
	Negative pressure	Min. -90 kPa	Min. -90 kPa
	Vibration rating	VC-C	VC-C
	Temperature	25°C \pm 0.5	25°C \pm 0.5
	Electrical load	3P/4W 220VAC 60 Hz : 50A	3P/4W 220VAC 60 Hz : 50A

*1 Backplane size can be customized

Control Micro LED

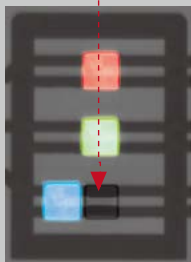
CμL series

LED Repair Master

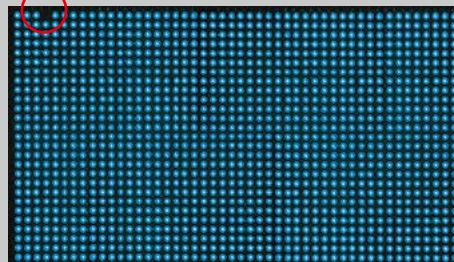
- Selective mass repair
- High alignment accuracy
- Large-sized panel capacity
- Programmable recipe



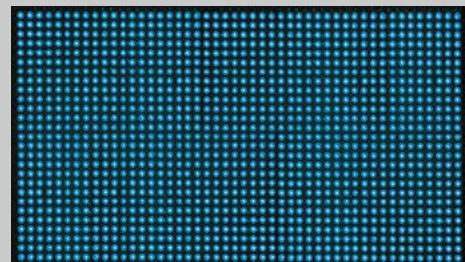
RGB LED Repair



Bad die



Before



After

Specifications

Specifications / Model		CμL-LRM	CμL-LRM Plus
Machine Size	Dimensions (W*L*H)	2,610*2,650*2,130 mm	2,610*2,650*2,130 mm
	Weight	8,500 kg	8,500 kg
Equipment Capacity	Degree of automation	Semi-automated	Fully-automated
	Backplane size (W*L)*1	370*470 mm(G2)	370*470 mm(G2)
	LED size	15~80 μm	15~80 μm
	Alignment accuracy	±1.5 μm	±1.5 μm
	Wafer size	4~8 inches	4~8 inches
Options	Light on system	-	●
	AOI system	-	●
	Automated clean system	-	●
	Multi-wafer stages	-	●
	Ionizer fan	-	●
Operating Conditions	Pressure source	Min. 700 kPa	Min. 700 kPa
	Negative pressure	Min. -90 kPa	Min. -90 kPa
	Vibration rating	VC-C	VC-C
	Temperature	25°C±0.5	25°C±0.5
	Electrical load	3P/4W 220VAC 60 Hz : 50A	3P/4W 220VAC 60 Hz : 50A

*1 Backplane size can be customized

Control Micro LED

C μ L series



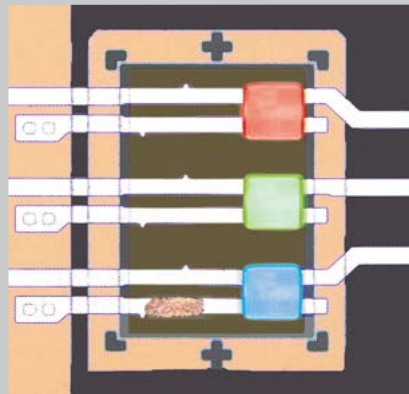
Metal Repair Master

- High-precision shaped path repair
- Forming low-resistance metal (copper) wire
- Integrating AOI and 3D laser shaping
- For open and short metal defects

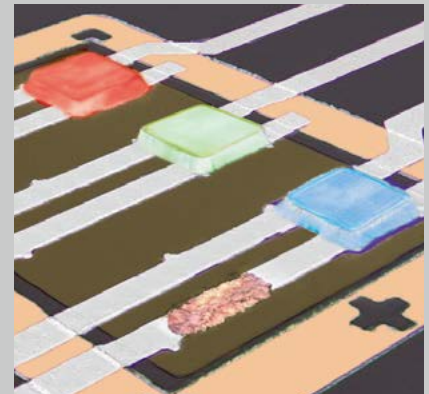
Metal Repair



Shaped path



Applications for Micro LED backplane



Specifications

	Specifications / Model	C μ L-MRM	C μ L-MRM Plus
Machine Size	Dimensions (W*L*H)	1,600*1,500*2,000 mm	1,600*1,500*2,000 mm
	Weight	1,650 kg	1,650 kg
Equipment Capacity	Backplane size (W*L)* ¹	370*470 mm(G2)	370*470 mm(G2)
	Processing precision	±2 μ m	±2 μ m
Options	Metal laser shaping system	-	●
	AOI system	-	●
	Auto defect repair	-	●
Operating Conditions	Pressure source	Min. 700 kPa	Min. 700 kPa
	Negative pressure	Min. -80 kPa	Min. -80 kPa
	Environment vibration	VC-C	VC-C
	Temperature	25°C±0.5	25°C±0.5
	Electrical load	3P/4W 220VAC 60 Hz : 50A	3P/4W 220VAC 60 Hz : 50A

*1 Backplane size can be customized

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Laser Trimming Master

- Trimming / Removing NG LED
- Reshaping short circuit
- Laser processing size(Min.): $\leq 1 \mu\text{m}$
- Ultrashort processing time



Trimming NG LED

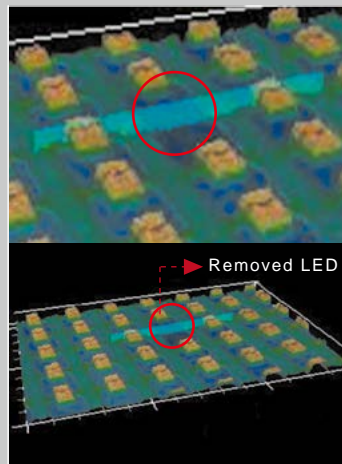


Before



After

Removing NG LED



3D



Profile

Specifications

	Specifications / Model	C μ L-LTM	C μ L-LTM Plus
Machine Size	Dimensions (W*L*H)	1,600*1,500*2,000 mm	1,600*1,500*2,000 mm
	Weight	1,650 kg	1,650 kg
Equipment Capacity	Backplane size (W*L)*1	370*470 mm(G2)	370*470 mm(G2)
	Processing precision	$\pm 2 \mu\text{m}$	$\pm 2 \mu\text{m}$
	Laser wavelength	515 nm/257 nm	515 nm/257 nm
Options	Light on system	-	●
	AOI system	-	●
	Auto defect repair	-	●
Operating Conditions	Pressure source	Min. 700 kPa	Min. 700 kPa
	Negative pressure	Min. -80 kPa	Min. -80 kPa
	Vibration rating	VC-C	VC-C
	Temperature	25°C \pm 0.5	25°C \pm 0.5
	Electrical load	3P/4W 220VAC 60 Hz : 50A	3P/4W 220VAC 60 Hz : 50A

*1 Backplane size can be customized

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Laser Trimming Master



Mass Transfer Master



LED Repair Master



Metal Repair Master



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