

EzLaze 3 Laser Cutting System

for Semiconductor Failure Analysis and LCD Repair



EzLaze 3 shown with power supply and remote control. Microscope, stage and stand are options.

Applications

- Cutting Metal Traces
- Removing passivation, oxide and metal layers
- Removing ITO shorts

Features

- Air-cooled architecture
 - No cooling water
 - Compact, Lightweight
 - No maintenance required
- Selectable wavelengths allow cutting and machining of a wide range of materials:
 - 1064 nm, 532 nm, 355 nm or 266 nm
- 3-axis control of cut size and orientation. From 2µm x 2µm (with 100X objective) to 50µm x 50µm (with 50X objective). Rotation through 180°.
- Simple operation via remote control box with a 6.5cm x 7.5cm LCD screen displaying menu-based commands or via RS232 interface.
- Precise energy control over a wide range.
- Internal LED spot marker.
- Compatible with most major brands of FA microscopes (Mitutoyo, Motic, Seiwa).
- 3 Operating modes:
 - Single shot
 - Continuous (1 Hz)
 - Burst (max. of 10 sec. at 5 Hz.)

Wavelengths Recommended for Cutting Common Materials

IR (1064nm)	Green (532nm)	UV3 (355nm)	UV4 (266nm)
Aluminum	Copper	Polyimide	Polyimide
	Gold	Kapton	Kapton
	Poly Silicon	Silicon	Silicon
	Aluminum	Nitride	Nitride
	Silicon Dioxide	SOG	SOG
		Silicon Dioxide	Silicon Dioxide

Standard Configuration includes

- Laser Head
- Standard Energy
- XY Shutter (Std. Resolution)
- Power Supply
- Remote Control
- 2.4m umbilical
- Video spot marker
- Foot switch

Options

- High Pulse Energy
- Rotating Shutter
- High Resolution Shutter
- Motorized Polarizer
- Horizontal Mount Laser
- Head with Robot-length
- Umbilical
- Internal Spot Marker²
- Microscope & Accessories

U.S. Patent #. 5,611,946, 5,811,751, 5,963,364, 5,703,713
Japan Patent #. 3026362



NEW WAVE
RESEARCH

Specifications

Standard Energy (Minimum Pulse Energy at Laser Aperture)

Model	1064 nm	532 nm	355 nm	266 nm
IR Only	0.5mJ			
Green Only		0.5mJ		
IR/Green	0.5 mJ	0.5mJ		
Green/UV3		0.5mJ	0.5mJ	
Green/UV4 ³		0.5mJ		0.25mJ
TriLite UV3	0.5mJ	0.5mJ	0.4mJ	

High Energy Option⁴ (Minimum Pulse Energy at Laser Aperture)

IR Only	2.2mJ			
Green Only		2.2mJ		
IR/Green	2.2mJ	2.2mJ		

Cut Size (with single pulse)

Minimum with 100X objective	2 µm x 2 µm	1 µm x 1 µm	1 µm 1 µm	2 µm x 2 µm ⁵
Maximum with 50 X objective	50 µm x 50 µm	40 µm x 40 µm	30 µm x 30 µm	30 µm x 30 µm

Physical Characteristics

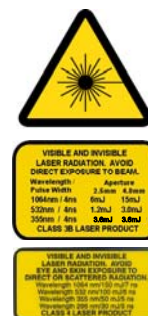
	Laser Head	Power Supply	Control Panel
Width	6.3" / 160 mm	11.4" / 290 mm	5.0" / 127 mm
Depth	3.3" / 84 mm	5.0" / 127 mm	7.0" / 178 mm
Height	12.0" / 305 mm	8.12" / 206 mm	3.25" / 83 mm
Weight	8.5 lbs. / 3.9 kg	9 lbs. / 4.1 kg	2 lbs / 0.9 kg

Operating Requirements

Temperature	70° ±10° F (21° ±5° C)
Relative Humidity	20—80% non-condensing
Voltage	100—240 VAC, 50/60 Hz
Power	100 watts for laser, 215 watts for illuminator

Notes:

- Optional rotating shutter not available for A-zoom microscope. It is also not available with the motorize polarizer.
- Internal (LED) spot marker is only compatible with the A-zoom option.
- Green/UV4 is a Class 4 laser.
- These lasers are considered to be Class 4 lasers
- With 80X NUV objective lens



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