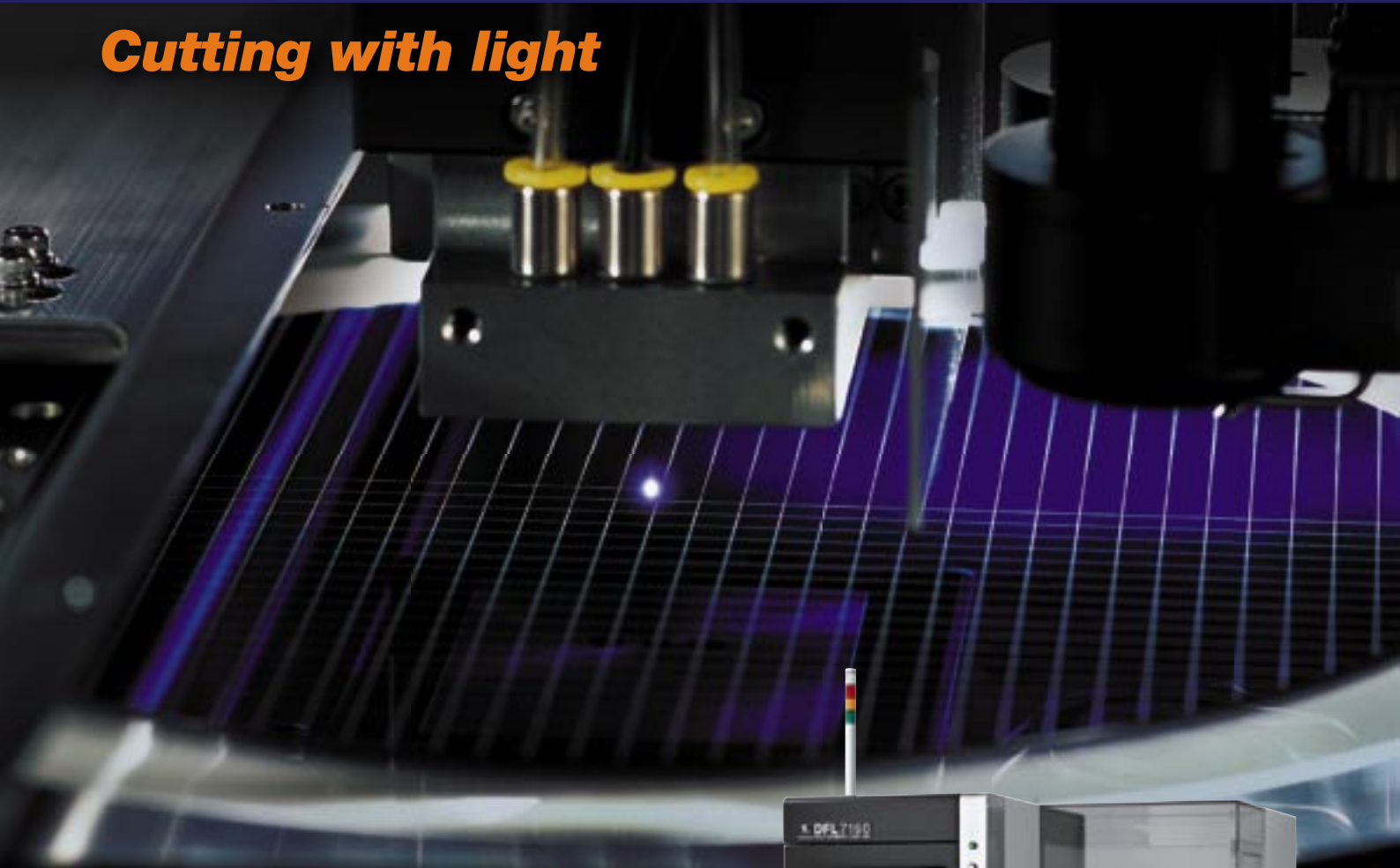


Fully Automatic Laser Saw

DFL7160

Cutting with light



Increased Throughput

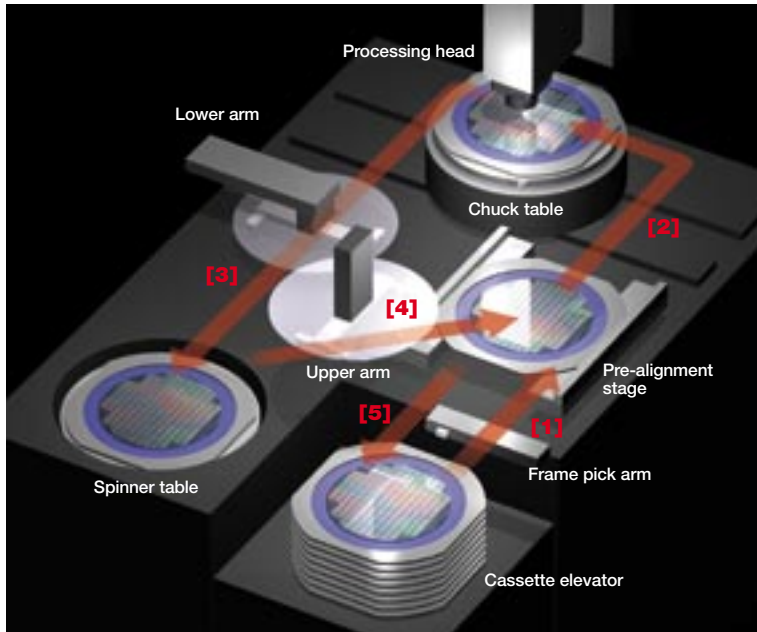
The DFL7160 utilizes short pulse laser technology to groove dicing streets without heat damage. Dicing Low-k and Cu wafers have proven to be a significant bottleneck due to difficulties achieving acceptable cut quality with a blade dicing process. By first laser grooving the dicing streets, you can improve dicing throughput without severe chipping, delamination, and film peeling.

Established Platform

The DFL7160 utilizes the well-established DFD6361 saw platform. With vast experience in the critical areas of alignment, handling, and cleaning, Disco delivers cutting-edge technology on a familiar platform. The DFL7160 employs an LCD touch screen graphical user interface, which is intuitive and easy to use.

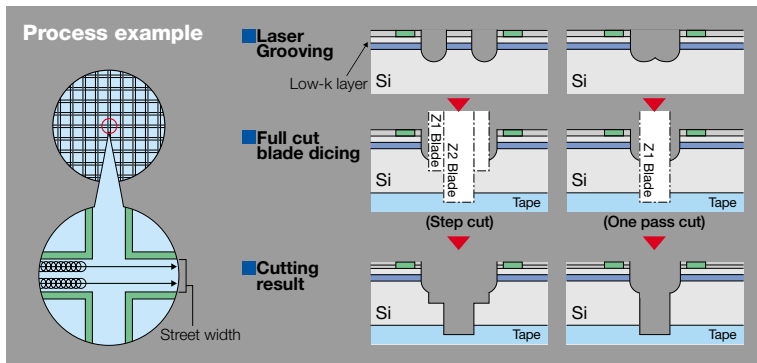


Fully Automatic Laser Saw DFL7160



DFL7160 Workpiece Flow System

- [1] Frame pick arm moves workpiece out of cassette to pre-alignment stage →
- [2] After centering at pre-alignment stage, upper arm moves workpiece to chuck table → **grooving** →
- [3] Lower arm moves workpiece to spinner table → **cleaning & drying** →
- [4] Upper arm moves workpiece to pre-alignment stage →
- [5] Frame pick arm returns workpiece to cassette



LCD touch screen

DFL7160 Specifications

Workpiece Size	mm	Max. ø300
X-axis (Chuck table) Processing range	mm	310
Max. processing speed	mm/s	600
Y-axis (Chuck table) Processing range	mm	310
Index step	mm	0.0001
Index positioning accuracy	mm	0.003/310 (Single error)0.002/5
Scale resolution	mm	0.0001
Z-axis Input range for lens height	mm	-2,000 to 5,000
Moving resolution	mm	0.00005
Repeatability accuracy	mm	0.002
θ-axis (Chuck table) Max. rotating angle	deg.	380
<small>(Z0° in the positive (+) direction and 0° in the negative (-) direction from the initial position)</small>		
Applicable Tape Frame	-	2-8-1, 2-12
Utilities Power supply	kW	200 to 240 VAC ± 10%, 3-phase (60/50 Hz)
Power consumption		
When processing	kW	1.2 (for reference)
During warm-up	kW	1.1 (for reference)
Max. power	kVA	6.9
Air pressure	MPa	0.5 ~ 0.8
Air max. consumption	L/min(ANR)	275.0
Clean air Pressure	MPa	0.5 ~ 0.8
Clean air Max. consumption	L/min(ANR)	200.0
Water pressure(Spinner)	MPa	0.3 ~ 0.4
Water max. flow rate(Spinner)	L/min	1.0
Exhaust duct capacity	m ³ /min	5.0
Machine dimensions (W x D x H)	mm	1,200 x 1,550 x 1,800
Machine weight	kg	Approx. 1,750 (without transformer for overseas use) Approx. 1,870 (with transformer for overseas use)

Environmental conditions

- Use clean, oil-free air at a dew point of -15 °C or less. (Use a residual oil: 0.1 ppm. Filtration rating: 0.01 μm/99.5 % or more).
- Keep room temperature fluctuations within ±1 °C of the set value. (Set value should be between 20 ~ 25 °C).
- Keep cleaning water 2 °C above room temperature. (fluctuations within 1 °C over one hour).
- The machines should be used in an environment, free from external vibration. Do not install machine near a ventilation opening, heat generation equipment or oil mist generating parts.
- This machine uses water. In case of water leakage, please install the machine on the floor with sufficient waterproofing and drainage treatments.
- All the pressures are described using a gauge pressure.
- The above specifications may change due to technical modifications. Please confirm when placing your order.
- For further information please contact your local sales representatives.



Laser Safety

- This product uses invisible light. Please handle with extreme care.
- Avoid eye or skin exposure to direct or scattered laser light.
- Do not place shiny objects such as metals in the laser path.

- The Laser used in the DFL7160 corresponds to a Class 4 laser under CDRH or IEC standards, however it meets safety standards so that it can be used as a Class 1 laser product (CDRH: 21 CFR1040, Performance Standards for Laser Products Source, IEC Publ.60825-1: Safety of laser products Part 1)

- Before using the machine, thoroughly read the manual and follow the instructions set forth in the manual.
- Never attempt to modify or repair the machine in a manner not approved by DISCO.

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