

Laser System for Ceramic Applications_

CR20XX



Benefits

- Flexible platform design with highest degree of customization for various application
- Automated vision system for precision alignment and scaling, offset, trapezoidal and rotation compensation
- Flexible chuck design
- Laser platform for Standalone / Inline / Automation
- Industrial 4.0 ready
- Reliable operation in 24/7 industrial production

Specifications

Laser Sources & optical System

	CR2000	CR2010	CR2020
Type	green Picosecond	green Picosecond	IR Picosecond
Wavelength	532 nm	532 nm	1064 nm
Average Power	> 50 W	> 50 W	> 170 W
Field Size	80 mm x 80 mm	80 mm x 80 mm	190 mm x 190 mm
Substrate Size	up to 250 mm x 250 mm (10"x10")	120 mm x 120 mm (4.5"x4.5") 100 mm x 100mm (4" x 4") 50 mm x 50mm (2" x 2")	155 mm x 205 mm (6"x8")
Max. Thickness	5 mm	3 mm	5 mm
Accuracy	< ± 15 µm (3 sigma)	< ±10 µm (3 sigma)	< ± 25 µm (3 sigma)
Repeatability	< ± 2 µm	< ±2 µm	< ± 2 µm
Scan Speed (High End)	5,0 m/s	5,0 m/s	5,0 m/s
Scan Speed Premium	30 m/s	30 m/s	45 m/s

Material

- AL₂O₃, AlN, Si₃N₄, ZTA - ZrO₂ stabilized alumina substrates - DCB, AMB substrates - HTCC , LTCC substrates

Laser Processes

- Scribing - Full-Cut - Cavities - Drilling - Marking

Options

- High volume automation with 12 boxes - Automation for up to 10 cassettes - SMEMA-Interface for third party automation - MES/ OPC UA interface - Marking functionality - Integration of up to 2 Laser sources - Multi substrate chuck - CAD Post Processor (dxf., dwg, gerber)

Utility Requirements

Power	400 VAC, 3P/N/PE, 60 Hz
Power consumption (peak / average)*	12 kVA / 9 kVA
Fuses at customer site	32 A per phase, slow
Compressed Dry Air (CDA)	min. 6 bar/ max. 8 bar
Cooling water supply	Min. 12 l/min - max flow 20 l/min (20°C +/- 2 K)
Extraction system	Min. 500m3/h

Dimensions

Width x Depth x Height	1650 mm x 2150 mm x 1920 mm
Height with front door open	2700 mm
Weight	3200 kg