Columbia Marking Tools

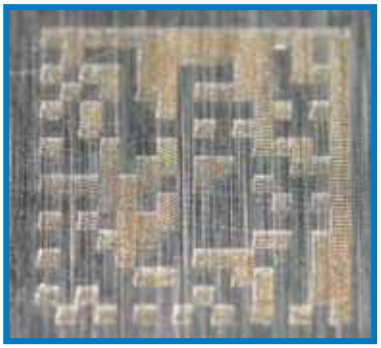
Product Bulletin

Laser Marking

For years, solid-state lasers have replaced traditional laser systems in laser marking applications. Now, Columbia Marking Tools' high power fiber laser marking systems bring the ultimate in solid state reliability and operating convenience to marking applications.

Columbia Marking Tools' fiber laser marking systems are a great leap forward in marking technology. Our fiber lasers are a better fit into your application in comparison with conventional Nd:YAG and Nd:YVO4 marking systems due to:

- Over **five (5)** times the life expectancy – up to 100,000 hours
- Mark on any metal, most plastics and other substrates
- Text, 1 & 2 dimensional bar codes, and true grayscale graphics marking
- Standard wall plug operation and high electrical efficiency
- No water cooling or TE cooling eliminating failure points
- Extended temperature range for extreme environments
- PC based with intuitive pop up help features and built in templates
- High quality focusable beam (TEMoo)
- High repetition rate
- Optimized pulse duration
- Exceptionally high reliability
- Maintenance-free operation



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Parameters Unit	Elite Mark V	Elite Mark X	Elite Mark XX
Lasant Medium	Ytterbium Fiber	Ytterbium Fiber	Ytterbium Fiber
Laser source lifetime (MTBF) Hrs	>50,000	>50,000	>50,000
Wavelength nm	1,064	1,064	1,064
Guiding beam wavelength nm	660 (red)	660 (red)	660 (red)
Mode of operation	Q-switched	Q-switched	Q-switched
Pulse Repetition Rate* kHz	20-100	20-100	20-100
Energy per pulse mJ (PRR = 20 kHz)	.25	.50	1
Output power tunability %	10-100	10-100	10-100
Typical beam quality M2	<1.5	<1.5	<1.5
Operating voltage VAC	110-230	110-230	110-230
Operating temperature ˚C (˚F)	0 + 45 (32 + 113)	0 + 45 (32 + 113)	0 + 45 (32 + 113)
Storage temperature ˚C (˚F)	-10 + 60 (14 + 140)	-10 + 60 (14 + 140)	-10 + 60 (14 + 140)
Humidity %	10-95	10-95	10-95
Warm up time min	1	1	1
Cooling	forced air/heatsink	forced air/heatsink	forced air/heatsink
Dimensions marking head mm (inches)	594(L) x 118(W) x 122(H) 23.375(L) x 4.65(W) x 4.8(H)	594(L) x 118(W) x 122(H) 23.375(L) x 4.65(W) x 4.8(H)	594(L) x 118(W) x 122(H) 23.375(L) x 4.65(W) x 4.8(H)
Dimensions laser controller mm (inches)	254(L) x 305(W) x 406(H) 10(L) x 12(W) x 16(H)	254(L) x 305(W) x 406(H) 10(L) x 12(W) x 16(H)	254(L) x 305(W) x 406(H) 10(L) x 12(W) x 16(H)
Warranty full system Yrs	2	2	2

Options:

- Lenses/marking area
  - F-100/60 mm Sq (2.4”Sq)
  - F-160/100 mm Sq (4”Sq)
  - F-254/150 mm Sq (6” Sq)
- CDRH & ANSI Z136.1 Class I Enclosures (manual and automated)
- Automation (rotary chucks, rotary dials, XY tables, conveyor loops)
- Bar code scanners

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