UC INSTRUMENTS CORP. CA6052 Desktop Laser Marking System

Technical Specifications Ver 1.01
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CA6052 Desktop Laser Marking System

The UC INSTRUMENTS CORP. CA6052 is an end-pumped YAG all solid-state air-cooled laser marking system. The high power of laser is enclosed in a Class I safety structure with the marking laser proof glass as window through which it is no harm to observe marking processing. In addition, it has a safety interlock to stop marking in case the enclosure door is accidently opened. This system has the features of high peak power with a 10 ns pulse duration, compact dimensions and high fine precise marking lines, allowing the marking system to have similar performance to fiber laser systems and leading to wide variety of laser marking applications (e.g., diamond, metal, steel, IC, plastics, package, logo).

The marking system has a high power but invisible infrared laser beam, thus an additional visible lower power guide laser is integrated in the system by coaxially superimposing the guide beam on the marking infrared beam to readily provide navigation for the marking laser beam. With the visible guide light, it is convenient for users to know where the marking laser beam aims at, and to adjust the operation parameters for achieving excellent performance.

**Features:**

- High peak power
- Short pulse duration
- High fine precise marking lines
- Air-cooled and compact structure
- Stable performance
- Easy to use with user friendly operation interface
- High compatible software

**Applications:**

- Metals and metal oxides
- Integrated circuits (IC)
- Diamonds
- ABS materials (e.g., electrical appliances shell)
- Inks (e.g., translucent keys, printing products)
- Epoxy resins (e.g., electronic components, packaging, insulation layer)
CA6052 Specifications

<table>
<thead>
<tr>
<th>Model#</th>
<th>CA6052</th>
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</thead>
<tbody>
<tr>
<td>Laser wavelength</td>
<td>1064 nm</td>
</tr>
<tr>
<td>Laser peak power</td>
<td>~30 kW</td>
</tr>
<tr>
<td>Pulse width</td>
<td>10 ns</td>
</tr>
<tr>
<td>Repetition frequency</td>
<td>~10 kHz</td>
</tr>
<tr>
<td>Workable marking area *</td>
<td>70 mm x70 mm / 110 mm x110 mm</td>
</tr>
<tr>
<td>Marking depth</td>
<td>≤0.5 mm</td>
</tr>
<tr>
<td>Maximum marking line speed</td>
<td>7000 mm/s</td>
</tr>
<tr>
<td>Minimum marking line width</td>
<td>≤0.02 mm</td>
</tr>
<tr>
<td>Power consumption</td>
<td>≤0.3 kW</td>
</tr>
<tr>
<td>Power requirement</td>
<td>110/220 (VAC/50Hz)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>500 mm x 400 mm x 504 mm</td>
</tr>
<tr>
<td>Laser guide light</td>
<td>&lt;5mW@635nm</td>
</tr>
</tbody>
</table>

*Note: the workable marking area can be greater when customers have special request.*

Marking Examples:

- Precious metal
- Steel
- Aluminum oxide
- Brass
- Plastics
- Plastics
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UC INSTRUMENTS CORP. provides high performance, high value, affordable instrument solutions for our customers. Our extensive support sources can help you choose right UC INSTRUMENTS CORP.'s products for your specific applications and apply them successfully. Every instrument/system we sell has a global warranty. All of our instruments are with at least 18 months factory warranty.

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