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GEM LASER CO., LIMITED

Green Laser Marking Machine
GEM-GL-005
Green laser marking machine, the use of semiconductor lasers as a pump source, coupled by the fiber from the end into the laser crystal. So that the pump beam into the gain medium and cavity mode space to the greatest degree of overlap, which can be high power and high beam quality laser output. The All-In-One structure, no optical pollution, power coupling loss and air cooling, makes the laser machine has high efficiency, long life and less maintenance and other properties, excellent resonant cavity and temperature control system optimization design, to achieve a high beam quality and high light conversion efficiency, no large water cooling system, compact design, stable structure, with 20,000 hours of service life.

### OVERVIEW

1. The air-cooled heat, which has the volume decreases, the whole structure is compact; (water-cooled, for the laser output is very stable models.)
2. The laser output as the base model, good beam quality, $M^2 \leq 1.2$, played fine lines, suitable for high-precision marking applications;
3. Q-device makes modulation pulse width, peak power, power stability, good impact on the material heat ablation happen.
4. The pump source using Germany modules, pump efficiency, long life, can reach 20,000 hours;
5. The laser using a sealed vacuum, easy maintenance, no need to replace the important parts.

### FEATURES

**Lasers information**
- **Laser Type**: Green Laser
- **Laser wavelength**: 532nm
- **Laser mode**: TEM00
- **Beam quality**: $M^2 \leq 1.2$
- **Output laser power**: 5w
- **Laser pulse width**: <15ns@20kHz
- **Pulse repetition rate**: 1-100 kHz
- **Output power adjustment range**: 10 - 100%
- **Output power stability**: ≤2%

**Scan head**: High speed digital scanning galvanometer
- **Scan speed**: ≤7000 mm/s
- **Marking accuracy**: 0.02 mm
- **Repeat accuracy**: ±0.003 mm
- **Marking Range**: 100*100 mm²

**Marking software system**: PCI& control System

**Cooling System**: Air-cooled

**Supported graphics formats**: PLT, PCX, DXF, BMP&etc

**GPS**: Red light positioning

**Working condition**: Temperature: 15°C - 30°C, Humidity 10-70%, Not condensation

**Power**: 220VAC, 50Hz

**Power consumed**: ≤500 W
### Device configuration list (Standard, Option)

<table>
<thead>
<tr>
<th>Item</th>
<th>Subsystem</th>
<th>Component</th>
<th>Model</th>
<th>Quantity</th>
<th>Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Laser marking head</td>
<td>High speed scanning galvanometer</td>
<td>Light Φ10mm</td>
<td>1pcs</td>
<td>China</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Galvanometer drive card</td>
<td></td>
<td>1pcs</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Scanning field mirror f=160mm</td>
<td></td>
<td>1pcs</td>
<td>China/Import</td>
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<tr>
<td></td>
<td></td>
<td>Beam expander</td>
<td>10X</td>
<td>1pcs</td>
<td>China/Import</td>
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<tr>
<td>2</td>
<td>Laser</td>
<td>Green Laser</td>
<td>pulse-532-005</td>
<td>1set</td>
<td>China</td>
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<tr>
<td>3</td>
<td>Laser marking machine cabinet</td>
<td>Cabinet</td>
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<td>1set</td>
<td>GEM</td>
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<tr>
<td>4</td>
<td>Computer&amp;software</td>
<td>Computer</td>
<td>Desktop</td>
<td>1set</td>
<td>Lenovo</td>
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<td></td>
<td></td>
<td>Software</td>
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<td>6</td>
<td>Workbench</td>
<td>Precision workstation</td>
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<td>GEM</td>
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<tr>
<td>7</td>
<td>Seat</td>
<td></td>
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</tr>
</tbody>
</table>

### Applications

It’s widely used in electrical appliances, communications, precision instruments, electronic components, electrical industry, integrated circuits, hardware tools products, auto parts, plastic products, crafts ornaments, etc.