

# UG Series Green Laser Marking Systems

**Green Laser Marking System delivers Fast, Clean, Permanent Marking of Materials that are Hard or Impossible to Mark with Regular Laser Marking Systems**



Gold Jewelry



Key Chains



Engraved Lighters

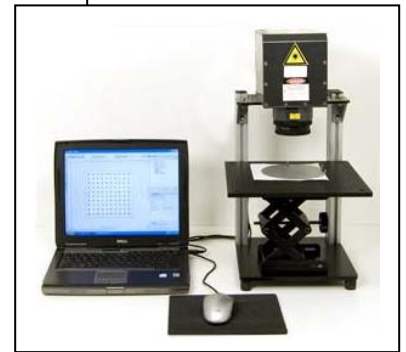


Silver Pendants

## APPLICATIONS

Green Laser  
Marking System

# UG-2 & UG-5



Our green laser marking system delivers fast clean permanent marking of materials that are hard or impossible to mark with regular laser marking systems. This includes highly reflective metals: silver and gold; semiconductors: including silicon, gallium arsenide and germanium, and rubbers such as silicone.

### Marking

Green Laser Marker is excellent for marking highly reflective metals, silicon, and soft plastics. This compact, turnkey marking system is efficient, reliable, and easily integrated into manufacturing and production operations.

- Powerful Intuitive Software
- Batch Part Processing
- Fixturing Kits
- Class I Enclosures
- Fits Your Workflow

### Productivity

- 3 Year Warranty
- No Maintenance
- Space Saving Design

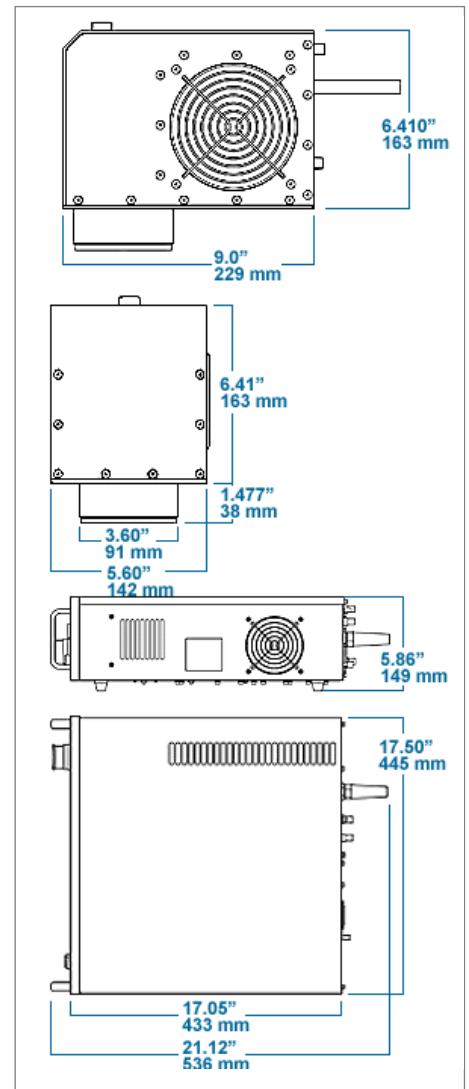
### Materials

- Silicon
- Metals - Especially Highly Reflective
- Plastics - Especially Soft Plastics
- Graphite
- Carbide
- Ceramics
- Composites

Our Laser's High Power Density and Extremely Fast Pulse rate allow Precision Marking without heating the surrounding Part. Great for Marking sensitive Electronics or Munitions.

| Marker Head                    |   |
|--------------------------------|---|
| Laser Source Built-in          | Diode Pumped Nd:YVO <sub>4</sub>        |
| Wavelength                     | 532nm                                   |
| Laser Source Output            | 2, 5 W<br>@ 35 kHz, average power       |
| Peak Power                     | Up to 20 kW                             |
| Q-switch pulse width           | ~14 ns @ 10kHz                          |
| <b>100mm F-Theta Lens:</b>     |   |
| Beam Spot Diameter             | ~20 μm                                  |
| Max Marking Area               | 2.36 x 2.36" 60 x 60mm                  |
| <b>163mm F-Theta Lens</b>      |   |
| Beam Spot Diameter             | ~30 μm                                  |
| Max Marking Area               | 3.94 x 3.94" 100 x 100mm                |
| <b>254mm F-Theta Lens:</b>     |   |
| Beam Spot Diameter             | ~40 μm                                  |
| Max Marking Area               | 5.91 x 5.91" 150 x 150mm                |
| Optional Lenses (focal length) | 100, 163, 254 mm                        |
| Cooling System                 | Thermoelectric/ Air                     |
| Operational Temp Range*        | ~ 50–95° F ~10-35° C                    |
| Operational Humidity Range*    | 80% non-condensing                      |
| Weight                         | 14.33 lbs 6.5kg                         |
| Dimensions LxWxH**             | 9.0 x 5.6 x 6.41"<br>229 x 142 x 163 mm |

| Controller                  |                              |
|-----------------------------|------------------------------|
| Operational Temp Range      | ~ 50° – 95° F ~10-35° C      |
| Operational Humidity Range* | 80% non-condensing           |
| Power Source                | AC 100 - 240V<br>6A, 50/60Hz |
| Consumption Power           | <500 W nominal               |



### COMPARISON CHART OF LASER MARKING TECHNOLOGIES

| SPECIFICATIONS                | Nd:YVO <sub>4</sub><br>(U-10,U-15) | Nd:YVO <sub>4</sub><br>(U-5G) | CO <sub>2</sub> | Nd:YAG<br>(Flash-lamp) | Nd:YAG<br>(Diode-pumped) |
|-------------------------------|------------------------------------|-------------------------------|-----------------|------------------------|--------------------------|
| Wavelength                    | 1064nm                             | 532nm                         | 10.6μm          | 1064nm                 | 1064nm                   |
| Power (W)                     | 10,15                              | 6                             | 10 - 100        | 50 ~ 100+              | 3 ~ 20+                  |
| Marking Spot (micron)         | 30-70                              | 20-40                         | 300             | 50-100                 | 50-100                   |
| Resolution DPI(Dots Per Inch) | 846                                | 1,270                         | 84              | 508-254                | 508-254                  |
| Energy Efficiency             | High                               | High                          | Medium          | Low                    | Medium                   |
| Cooling Efficiency            | High                               | High                          | Medium          | Low                    | High                     |
| Peak Power                    | High                               | High                          | Low             | High                   | High                     |
| Operating Cost                | Very Low                           | Very Low                      | Medium          | High                   | Low                      |
| Maintenance Intervals(hrs)    | 30,000+                            | 30,000+                       | < 5,000         | 300 -1,000             | 10,000+                  |

#### APPLICATIONS

|                            |   |   |   |   |   |
|----------------------------|---|---|---|---|---|
| Metals                     | • | • |   | • | • |
| Metals (High Reflectivity) | • | • |   |   |   |
| Silicon                    |   | • |   |   |   |
| Plastic                    | • | • |   | • | • |
| Composites                 | • | • |   |   |   |
| Ceramics                   | • | • |   | • |   |
| Rubber                     | • | • | • | • | • |
| Wood/Paper                 |   |   | • |   |   |
| Glass                      |   | • | • |   |   |
| Leather                    | • | • | • |   |   |

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\* Units stated at maximum output parameters without F-Theta lens.

\*\* Allow a minimum of 2" (5 cm) of open space around the Marker Head and Controller for a free air circulation. Additionally, ensure at least 4" (10 cm) of open space at the rear of the controller and marker head for cable attachment and maintenance access.