DAJA Infrared(1W)

DAJA A6 Infrared Laser Module User Manual
Model: Infrared(1W)

1. INTRODUCTION

This user manual provides essential information for the safe and effective operation of your DAJA A6 Infrared Laser Module. This module is designed for precision engraving and marking on various metal surfaces. Please read this manual thoroughly before installation and use to ensure optimal performance and safety.
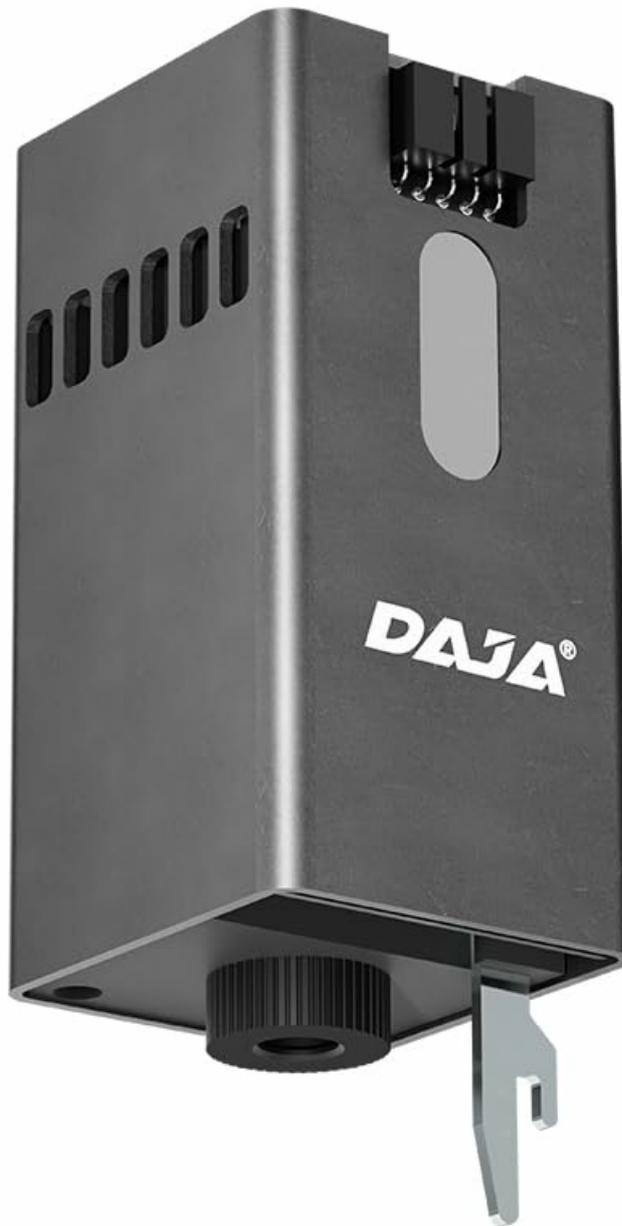
2. SAFETY INFORMATION

WARNING: LASER RADIATION. AVOID DIRECT EYE EXPOSURE TO BEAM.

- **Eye Protection:** Always wear appropriate laser safety goggles (OD 6+ at 1064nm) when the laser module is in operation. Never look directly into the laser beam or at reflections.

- **Skin Protection:** Avoid direct exposure of skin to the laser beam.

- **Ventilation:** Ensure adequate ventilation in the work area to dissipate fumes and particles generated during engraving. Some materials may produce hazardous fumes.

- **Fire Hazard:** The laser can ignite flammable materials. Keep the work area clear of combustible items. Have a fire extinguisher readily available.

- **Children and Pets:** Keep children and pets away from the laser module and work area during operation.

- **Power Supply:** Use only the specified power supply for the laser module. Ensure proper grounding.

- **Emergency Stop:** Familiarize yourself with the emergency stop procedure for your engraving machine.

3. PRODUCT OVERVIEW

The DAJA A6 Infrared Laser Module is a compact and robust unit designed for integration with compatible laser engraving machines. Its primary components include the laser emitter, cooling vents, electrical connectors, and a focus adjustment mechanism.

This image displays the DAJA A6 Infrared Laser Module. It is a compact, rectangular device, primarily black, featuring ventilation slots along its side for heat dissipation. At the top, there are connection pins for power and data. The bottom includes a focus adjustment knob and a metal bracket for mounting or alignment.

Key Features:

- Infrared laser for effective metal marking.
- Durable metal construction.
- Integrated cooling design.
- Adjustable focus for various material thicknesses.

4. SETUP

1. **Unpacking:** Carefully remove the laser module from its packaging. Inspect for any signs of damage during transit.

2. **Mounting:** Securely mount the DAJA A6 module onto your compatible laser engraving machine according to the machine's instructions. Ensure it is stable and properly aligned.

3. **Electrical Connection:** Connect the power cable and data cable to the corresponding ports on the laser

module and your engraving machine's control board. Refer to your machine's manual for specific wiring diagrams.

4. **Software Installation:** Install any necessary drivers or software provided with your engraving machine or the DAJA module. Ensure the software recognizes the connected laser module.

5. **Initial Power On:** Power on your engraving machine. Observe the laser module for any unusual sounds or indicators.

5. OPERATING INSTRUCTIONS

1. **Material Preparation:** Place the metal material to be engraved on the machine's workbed. Ensure it is flat and securely positioned.

2. **Focus Adjustment:** Adjust the focus of the laser module. Typically, this involves rotating the focus knob at the bottom of the module until the laser spot is at its smallest and most intense point on the material surface. Consult your machine's software for focus assistance if available.

3. **Software Settings:** Open your engraving software. Load your design and set the appropriate parameters for power, speed, and passes based on the type of metal and desired engraving depth. Start with lower power settings and gradually increase if needed.

4. **Test Engraving:** Perform a small test engraving on a scrap piece of the same material to verify settings before proceeding with the final project.

5. **Start Engraving:** Once settings are optimized and safety precautions are in place, initiate the engraving process from your software. Monitor the process closely.

6. **Completion:** After engraving, allow the material to cool before handling. Power off the laser module and machine when not in use.

6. MAINTENANCE

- **Lens Cleaning:** Regularly inspect the laser lens for dust or debris. Clean gently with a lint-free cloth and specialized lens cleaning solution. Avoid abrasive materials.

- **Ventilation:** Ensure the cooling vents on the module are clear of obstructions to allow for proper heat dissipation.

- **Connections:** Periodically check all electrical connections to ensure they are secure and free from corrosion.

- **Storage:** When not in use, store the laser module in a clean, dry environment, away from direct sunlight and extreme temperatures.

7. TROUBLESHOOTING

- **No Laser Output:**
  - Check power connection to the module.
  - Verify data cable connection.
  - Ensure software settings are correct (power, enable laser).
  - Check for emergency stop activation on the machine.

- **Poor Engraving Quality:**
  - Adjust laser focus.

- Optimize power and speed settings in software.
- Clean the laser lens.
- Ensure the material is flat and stable.

- **Module Overheating:**

  - Check if cooling vents are blocked.
  - Ensure ambient temperature is within operating limits.
  - Reduce laser power or allow for cooling periods.

8. SPECIFICATIONS

Attribute	Value
Brand	DAJA
Model Number	Infrared(1W)
Material	Metal
Color	Black
Style	Laser
Item Weight	2.2 pounds (1 Kilograms)
Product Dimensions	7.87 x 5.12 x 5.12 inches
Operation Mode	Manual
Power Source	AC
Included Components	Laser module
UPC	797409076919

9. WARRANTY AND SUPPORT

Specific warranty details for the DAJA A6 Infrared Laser Module are not provided in this manual. For information regarding warranty coverage, technical support, or service, please refer to the documentation included with your purchase or visit the official DAJA website or your point of purchase.
You can visit the DAJA Store for more information:DAJA Official Store