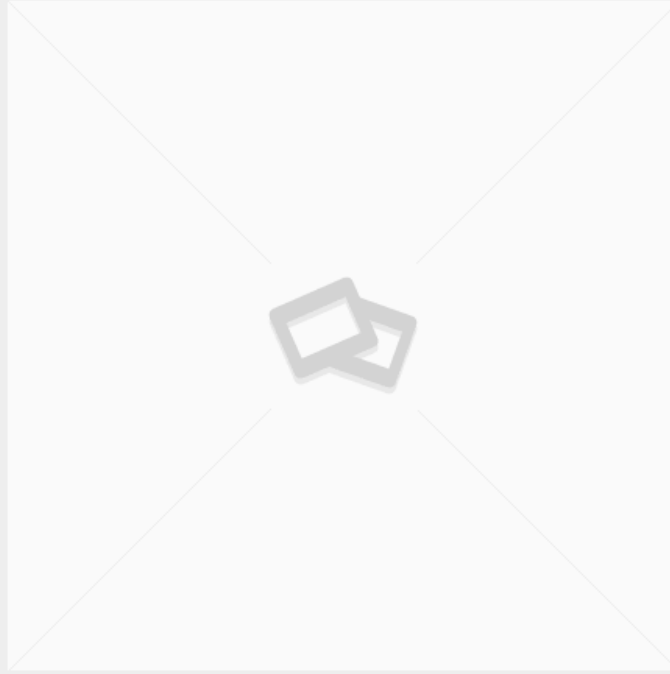


PRECAUTIONS FOR USING LASER TUBES

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The laser tube is made of glass and is fragile. During installation and use, excessive local force should be avoided.

Category: [Laser Cutter News](#)





laser tube

Generally speaking, the key to semiconductor lasers is the service life of laser diodes, generally more than 1 hour, the service life of communication laser diodes will be longer, the service life of solid-state lasers will be more limited, and frequency doubling crystals.

Precautions for using laser tubes

1. When using, please connect the cooling water first, adjust the position of the outlet pipe by adopting the principle of low inlet and high outlet, make sure that the cooling water fills the cooling pipe and there are no air bubbles in the pipe, and then turn on the power. Requirements: Use soft water (distilled water or pure water) for the cooling water, and the temperature of the cooling water should be controlled within the range of 25°C-30°C. It should not be too high or too low, especially in summer. Once the water temperature is found to be too high, the cooling water should be replaced or stopped in time. Rest for a period of time: the cooling water must not freeze, especially after the laser stops, the cooling water must not be stored in the laser tube, so as not to freeze the cooling water and cause it to burst. (Special attention: users who use AC power must ground the cooling water tank);

2. The two supporting points of the laser tube should be at $1/4$ of the total length of the laser tube to ensure that the cooling water flow rate is 2L-4L/min; The power drops; the cooling water return port must be submerged by the water tank, otherwise the cooling water in the laser tube will be unsatisfactory every time it is closed.

3. Pay attention to protect the laser output window, avoid the smoke generated during the working process (including the process of debugging the optical path) from splashing on the surface of the output window, prevent the outer surface of the output window from being polluted, and reduce the power. At this time, gently wipe the outer surface of the output window with absorbent cotton or silk cloth dipped in absolute alcohol;

In the debugging process, adjust the laser support point or rotate the laser side to achieve the best output effect, and then fix the laser.

4. Please note: avoid dust accumulation near the high-voltage electrodes, keep it dry, and keep the high-voltage end away from metal as much as possible to prevent high-voltage ignition and discharge.

5. During the use of the laser, scale cannot form in the cooling tube, so as not to cause blockage of the cooling water and poor heat dissipation. Once found, the cooling tube can be cleaned with 20% dilute hydrochloric acid to remove scale.

Lasers are made of glass and are fragile. When installing and using, avoid local force.

6. The reasonable application of the laser tube saves laser energy, and the best working current of the laser tube is 16mA.

Laser machine is the general term for laser engraving machine, laser cutting machine and laser marking machine. The laser machine uses its high-temperature working principle to act on the surface of the processed material, and draws the pattern and text required by the customer according to the graphics input into the machine.