

## Z2 CO<sub>2</sub> lasers Tube



Mark & model : Z2, The product is featured as small size and good model, higher power rate compared with the laser tube of similar length and longer service time, which is suitable for laser marking, laser cutting and laser engraving.

Origin : Asia and Pacific Area China

Quality standard : International

H.S.Classification : Machinery & Electronics Electr.Element 8541  
Semiconductor devices; light-emitting diodes etc.; parts thereof

### 1.Installation Requirement

Make sure to follow the operation instruction of model Z2 as shown in the illustration. The dedicated power DY10 should be equipped. The positive pole of laser tube is in high voltage (the ignition voltage is 19kv). It may cause the following consequence when it is failed to follow the instruction: Arcing; the inner tube will be punctured by electricity and may cause water leakage.

### 2.Operation conditions

Water cooling: using purified water; 2 to 5 liter/minute;

water temperature: 10°C-40°C.The operating environment: temperature 2-40°C;  
humidity 10-60%.

The working current: test current is 29mA. Maximum working current is 29mA.

The running current

must be kept below 27mA. The life span can reach 8,000 hours if the current is kept below 25mA.

The ammeter must be connected to the negative electrode of laser tube. When it is working under over-high current for long term, the negative pole will appear **light yellow** and the life span will be shortened rapidly.

To protect dust from going into the insulation sheath, please wrap it with plastic film.

### 3. Working Performance

Cutting function.

Engraving function: Very good. When the working current is 4mA and the tube is in the state of preionization, the laser can be used for high-frequency impulse engraving.

### 4. Key Notes

Do not clean the exterior surface of the output window mirror with tools such as tampon; otherwise the output power will be seriously affected. The followings are the designated methods to

clean up pollution in the exterior surface of window mirror:

- 1) When the mirror is polluted, do not turn on the laser.
- 2) Blow the mirror surface sideways with an air blower.
- 3) Spray the pure alcohol on the mirror surface with sprayer.
- 4) Turn on the laser after the alcohol gets fully volatilized.
- 5) If the methods above don't work effectively, it is necessary to ask for the professional to use tampon with alcohol to clean the mirror surface from middle to edge. The best solution is to prevent the window from being polluted.

Attention: it is forbidden to clean the mirror with acetone. The screws in the front and back ends of the laser tube are not allowed to be moved, otherwise the output power will be declined, even the tube will be scrapped. Put the acryl 300mm far away from output mirror, when testing its laser spot.

### 5. Safety

The laser beam is invisible light. Please wear protective glasses when debugging the laser. The positive pole is in high voltage. Pay attention to the security marks.

### 6. Storage and Transportation Requirement

Pour out cooling fluid in the event of storage and transportation, and cover the

output terminal with a dust-proof plastic bag. The storage environment is 2-40°C, and the requested humidity is 10-60%. Pack the laser as in the original way. Important notes: it is requested to use adhesive tape to cement the sponge together with laser tube to prevent the tube from vertically sliding during transportation. The sponge in the side of output mirror must be 70 mm beyond it, and the sponge in the side of reflecting mirror must be 50 mm wider.

## 7.Tubes operated in wrong way are not guaranteed by Manufacturer.

### Idealphotonics

#### Cardboard Carton Package Size

DESCRIPBTION	N.W.	G.W.	PACKAGE/UNIT	C.W.	CBM
Laser Tube Z2 (90W)	3.5KG	5KG	1360*250*260 mm	18KG	0.088
Laser Tube Z4 (100W)	4KG	7KG	1550*340*350mm	36.9KG	0.184
Laser Tube Z6 (130W)	5KG	8KG	1800*340*350 mm	43 KG	0.214
Laser Tube Z8 (150W)	6KG	11KG	2010*380*400 mm	62.4 KG	0.304

#### Laser Tube basic parameter

Model	Rated power	Max power	length mm	Φ mm	Catalyze	Life span ( h)	Warranty
Z2	90W	100W	1200	80	Yes	10,000	10Months
Z4	100W	130W	1400	80	Yes	10,000	10 Months
Z6	130W	160W	1650	80	Yes	10,000	10 Months
Z8	150W	180w	1850	90	Yes	10,000	10 Months