

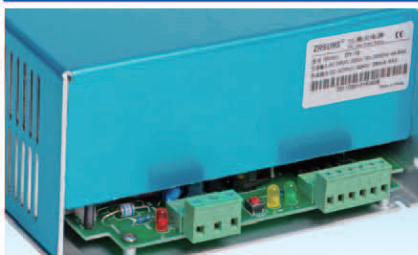


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选型样本 2021-2022

临沂朝日电子有限公司

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SINCERITY · LETTER · PRECISE REFINEMENT



临沂朝日电子有限公司是一家从事 CO₂ 激光电源研发、生产、销售于一体的专业厂家。公司 2008 年从事激光电源设备研发、生产、销售及售后服务。公司现拥有 3000m² 现代化标准厂房，年产能 10 万台。两条生产线，一条老化线；一台 4.5 米自动波峰焊接设备，数十台进口仪器仪表，所有焊接及装配工具均为进口。

公司通过 ISO9001 ISO14001 认证；产品通过 CE /FCC/SGS/ROHS 等各种认证，并获得各种专利证书。企业获得：科技型中小企业、临沂市“守合同重信用”企业等。凭借专业的团队以及技术实力，公司被科技部火炬中心认定为国家高新技术企业。

主要产品：40W-200W CO₂ 激光电源。

用料及工艺：产品所用半导体器件 95% 以上为进口或者台湾品牌，用料之优越超同行。电路板均为两次波峰焊接。产品质量为行业佼佼者。



Linyi ZhaoRi Electronics Co., Ltd is a professional CO₂ laser power supply manufacturer which engaged in the development, production and sales CO₂ power supplies from 2008. At present, it keep business relationship with many laser engraving/laser cutting/laser knife die/computerized laser embroidery machine factories and distributors. Its market share has reached 39%.

It has a modern standard factory building of 3000 square meters with an annual production capacity of 100,000 units each year. Besides, it has two production lines, one aging line, one 4.5-meter automatic wave soldering equipment, dozens of imported instruments and meters.

All welding and assembly tools are imported too.

The company has passed ISO9001 ISO14001 certification; products have passed various certifications such as CE /FCC/SGS/ROHS, and obtained various patent certificates.



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走向世界 GLOBAL COOPERATION



产品概况
Product Overview

激光电源使用说明

■ 致顾客:

感谢您选择本公司的产品, 并为您提供优质的产品和满意的售前、售后服务。为了使本产品的功能得到有效发挥, 我们建议您在连接和操作之前, 仔细阅读本手册, 并妥善保存以备查阅。

■ 开箱检查:

请小心打开包装纸箱, 并检查是否有下列附件:
控制端子 1 套、 高压线 1 条。

■ 使用注意事项:

- * 在使用本机器之前, 请仔细对照机器的工作电压与当地电源电压是否一致。
 - * 本机带有危险高压, 务必严格按照说明正确连接电源与激光管和控制信号。
 - * 请勿擅自打开机器外壳, 以免电击! 如需维修, 必须委托专业维修人员进行。
- 更换零部件时, 务必使用厂家指定元件或由厂家专业人员进行维修。
- * 防止金属异物从本机散热窗掉入机器内, 并防止雨淋和水溅。防止异物进入或阻塞散热风扇的正常运行和出风。
 - * 请勿频繁开关本电源, 请在关机和开机之间等待 10 秒钟左右。
 - * 激光管工作时必须使用冷却水!
 - * 高压输出端不得开路! 高压输出正负端 (高压 HV+ 和高压 HV-) 务必与激光器正负端正确连接。
 - * 电源内部已加入泄放电阻, 电源停电后一般可在 10 秒内将残余电荷放完。但为安全起见, 仍应注意, 当心电击! (高压输出两端必须保证悬地 40KV 高压的要求。)
 - * 激光电源必须使用带接地端的三孔插座。机壳必须严格接地! 以免触电!

ZRSUNS LASER POWER SUPPLY SERVICE MANUAL

■ To the customer:

Thank you for choosing our products, Please read the manual before you use the power supply . And save it carefully for further use.

■ OOBA

Carefully open package and check for the 3 accessories included :
Control Terminal 1 suit, high-tension line 1pcs.

■ Warning:

Before using this machine, be sure that the machine controlled voltage must be consistent with the local power supply voltage.

Please connect the power and control signals and the laser tube properly and follow the instructions in order to avoid electric shock!

Do not open the machine box to avoid electric shock! If you need repair, must entrust a specialized maintenance personnel to do. When replacement parts, be sure to use the manufacturer specified components or professional staff for repair by the manufacturer.

To prevent metal objects fall from the window of the local heat within the machine and to prevent rain and water splash. Prevent other objects from entering or blocking the normal operation of the cooling fan.

Please do not switch the power off and on constantly and please wait about 10 seconds in between.

Cooling water must be used when the laser tube is working!

High voltage output side must not be open! Positive and negative terminals of the high-voltage output (HV+ and HV-) must be correctly connected with the positive and negative terminals of the laser tube.

Internal power supply has joined the discharge resistance.

Normally the power outage within 10 seconds after the general residual charge within the discharge end. However, for safety reasons, maintenance be careful to avoid electric shock! (High output at both ends must ensure that the suspension to 40KV high voltage requirements.)

Three-hole socket must be used and case must be connected to the ground to avoid electric shock!

朝日 激光电源主要特点
The Main Features Of The ZRSUNS Laser Power Supply

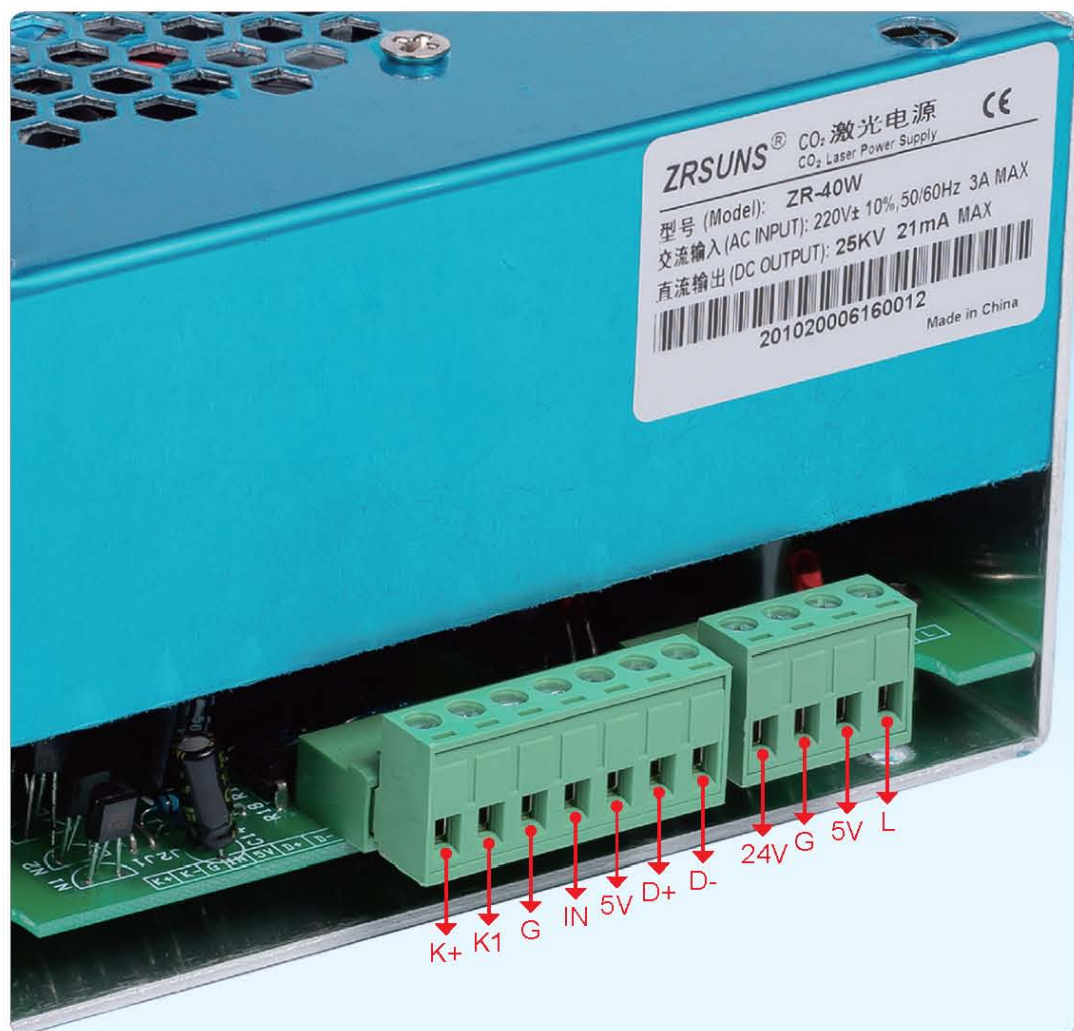
- **性能稳定:**
每一台电源都经过严格的多工序检测, 满载状态下高温 (52 ~ 55 摄氏度) 24 小时不间断老化, 以保证每台电源的稳定性。
- **兼容性好:**
可以适应多家厂家的激光管, 同时还具有适应性强, 响应速度快, 雕刻、切割效果好的优点。
- **控制简便:**
选择高或低电平控制, 利用 TTL 电平即可控制激光的启动、停止。同时加有保护开关, 检测外部是否通水、通风等。激光功率控制简单, 可以用 0 ~ 5V 的模拟信号控制激光功率的大小, 还可以用 PWM (脉宽调制) 信号加以控制。
- **保护功能:**
电源本身具有开路保护功能, 在保护接地良好的情况下, 电源可以短时间工作于开路状态, 这样可以避免因激光管爆裂造成激光电源的损坏, 从而提高了电源的使用寿命。
- **特殊功能: (选加)**
使用者不需拆开电源外壳、就可以简单判断激光电源是否正常工作, 从而区分是激光管的故障, 还是电源的故障。
- **Stable performance:**
Each power supply have been much more rigorous testing procedures, under full load high temperature (52~55 degrees celsius) 24 hours of aging, to ensure the stability of each power supply.
- **Good compatibility:**
Can adapt to a number of manufacturers of 40W, 30W, 20W CO² laser tube also has a strong adaptability and fast response, engraving, cutting advantages of good effect.
- **Control is simple:**
Select high or low level control, the use of TTL-level control of the laser can start and stop. At the same time increase the protection switch, testing is through the external water and ventilation.
Laser power control is simple, you can use 0 ~ 5V analog signal control the size of the laser power, you can also use the PWM (pulse width modulation) signal to be controlled.
- **Protection function:**
Power supply itself has open circuit protection, a good grounding in the case of protection, the power supply to short-term work in the open state, so to avoid the laser tube burst due to the damage caused by laser power supply, thereby enhancing the laser power supply of life.
- **Special Features: (optional addition)**
Power users do not need to open the shell, you can simply determine the laser power is working to distinguish between the failure of laser tube or power supply failure.

40W 激光电源主要技术参数

输入	输入电压	AC220V ± 10% (如需 AC110V 订货时另外注明)
	交流频率	47 ~ 440HZ
	最大输入功率	350W
输出	最大输入电流	1.6A
	最大输出电压	25KV
	最大输出电流	24mA(视不同厂家激光管)
	效率	≥ 90% (满载时)
	响应速度	≤ 1ms
	控制接口	TTL 电平开关控制, 有效电平可高、低选择 (详见控制接线图)
	绝缘耐压	输入对地 AC1500V、50HZ 漏电流 < 10mA, 60 秒不击穿
	开路保护	可短时开路 (要求电源外壳接地良好, 同时避免正极和机壳之间拉弧)
环境要求	工作温度	-10°C ~ 50°C
	储贮温度	-20°C ~ 75°C
	相对湿度	最高 85%RH (非凝结状态)
	海拔高度	100,000 英尺正常工作; 200,000 英尺存储, 不工作
	冷却方式	强制风冷 (风机冷却)
	外形尺寸 (长 * 宽 * 高)	163mm*143mm*80mm

40W Laser power supply

Input	Input voltage	AC220V ± 10% (AC110V specified while order)
	AC frequency	47 ~ 440HZ
	Maximum input power	350W
	Maximum input current	1.6A
Output	Maximum output voltage	25kV
	Maximum output current	24mA (depending on the laser tubes of different manufacturers)
	Efficiency	≥ 90% (Full load)
	Response speed	≤ 1ms
	Control Interface	TTL multilevel switching control, effective level can be high and low selection (see control wiring diagram)
Insulation	Input-output	AC 1500V 1 minutes ≤ 10 mA
	Input-shell	AC 1500V 1 minutes ≤ 10 mA
	Output-shell	Connection
	Open Circuit Protection	Can be short circuit (requires a good grounding shell, while avoiding the positive electrode and the shell between the arc)
Environmental Requested	Working temperature	-10°C ~ 50°C
	Storage of temperature	-20°C ~ 75°C
	Relative Humidity	Maximum 85% RH (non-condensing)
	Altitude	100,000 feet of work 200,000 feet of storage, does not work
	Cooling methods	Forced air cooling (fan cooling)
	Dimensions (L*W*H)	163mm*143mm*80mm



ZR-40W



ZR-40WA



ZR-40WB



ZR-40WD



ZR-40WE



ZR-40WG



ZR-40WH

50W 激光电源主要技术参数

输入	输入电压	AC220V ± 10% (如需 AC110V 订货时另外注明)
	交流频率	47 ~ 440HZ
	最大输入功率	370W
	最大输入电流	1.7A
输出	最大输出电压	25KV
	最大输出电流	25mA(视不同厂家激光管)
效率		≥ 90% (满载时)
响应速度		≤ 1ms
控制接口		TTL 电平开关控制, 有效电平可高、低选择 (详见控制接线图)
绝缘耐压		输入对地 AC1500V、50HZ 漏电流 < 10mA, 60 秒不击穿
开路保护		可短时开路 (要求电源外壳接地良好, 同时避免正极和机壳之间拉弧)
环境要求	工作温度	-10°C ~ 50°C
	储存温度	-20°C ~ 75°C
	相对湿度	最高 85%RH (非凝结状态)
	海拔高度	100,000 英尺正常工作; 200,000 英尺存储, 不工作
冷却方式		强制风冷 (风机冷却)
外形尺寸 (长*宽*高)		162mm*145mm*97mm

50W Laser power supply

Input	Input voltage	AC220V ± 10% (AC110V specified while order)
	AC frequency	47 ~ 440HZ
	Maximum input power	370W
	Maximum input current	1.7A
Output	Maximum output voltage	25kV
	Maximum output current	25mA (depending on the laser tubes of different manufacturers)
Efficiency		≥ 90% (Full load)
Response speed		≤ 1ms
Control Interface		TTL multilevel switching control, effective level can be high and low selection (see control wiring diagram)
Insulation	Input-output	AC 1500V 1 minutes ≤ 10 mA
	Input-shell	AC 1500V 1 minutes ≤ 10 mA
	Output-shell	Connection
Open Circuit Protection		Can be short circuit (requires a good grounding shell, while avoiding the positive electrode and the shell between the arc)
Environmental Requested	Working temperature	-10°C ~ 50°C
	Storage of temperature	-20°C ~ 75°C
	Relative Humidity	Maximum 85% RH (non-condensing)
	Altitude	100,000 feet of work 200,000 feet of storage, does not work
Cooling methods		Forced air cooling (fan cooling)
Dimensions (L*W*H)		162mm*145mm*97mm

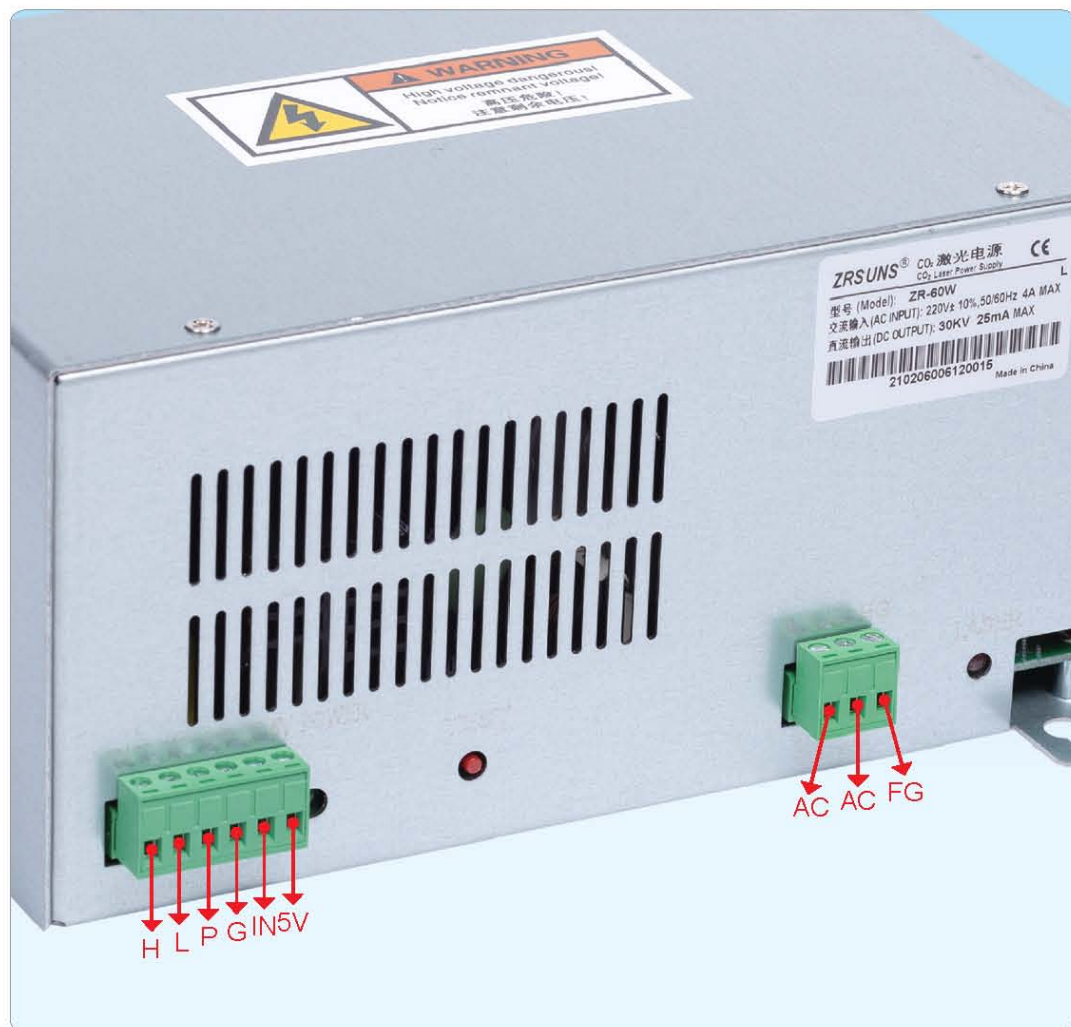


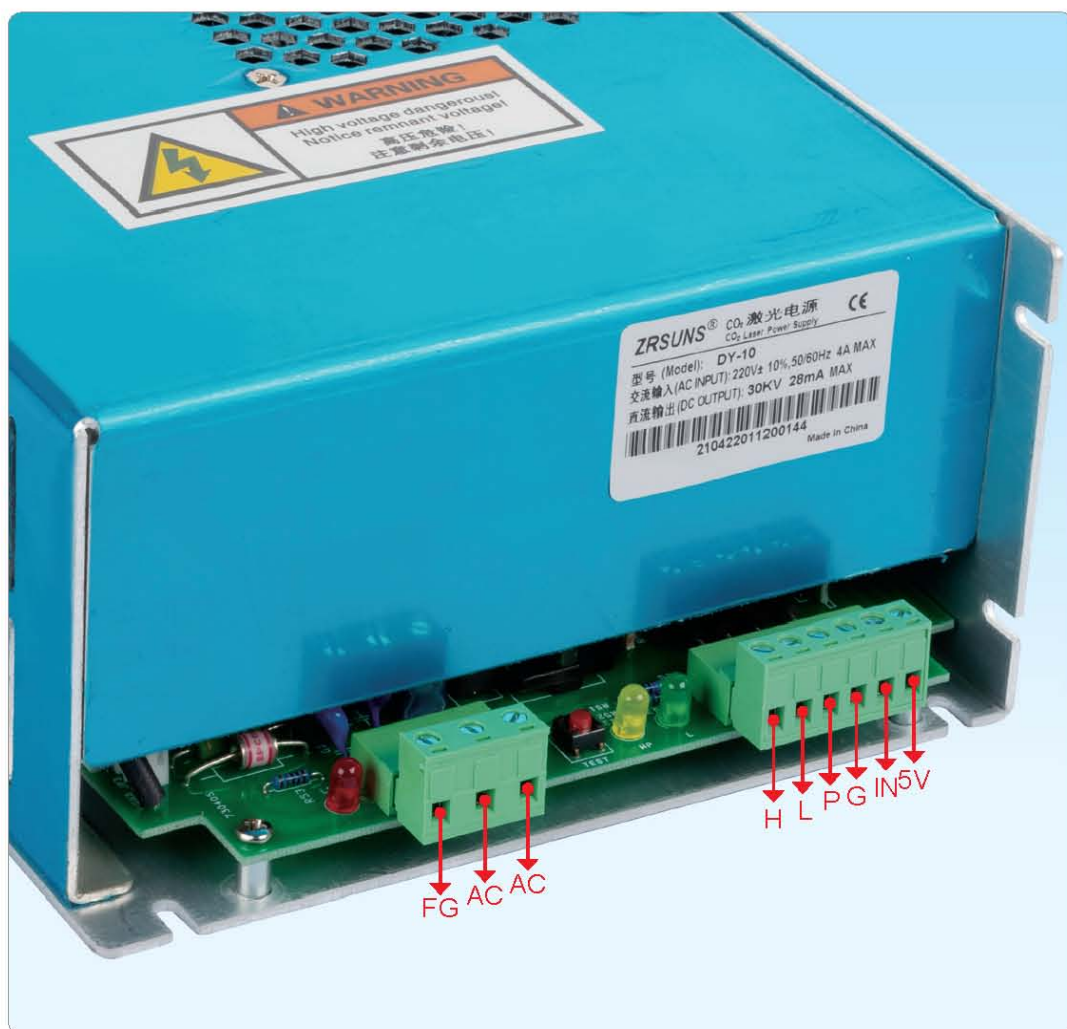
60W 激光电源主要技术参数

输入	输入电压	AC220V ± 10% (如需 AC110V 订货时另外注明)
	交流频率	47 ~ 440HZ
	最大输入功率	490W
输出	最大输入电流	2.2A
	最大输出电压	25KV
	最大输出电流	28mA(视不同厂家激光管)
	效率	≥ 90% (满载时)
	响应速度	≤ 1ms
	控制接口	TTL 电平开关控制, 有效电平可高、低选择 (详见控制接线图)
	绝缘耐压	输入对地 AC1500V、50HZ 漏电流 < 10mA, 60 秒不击穿
	开路保护	可短时开路 (要求电源外壳接地良好, 同时避免正极和机壳之间拉弧)
环境要求	工作温度	-10°C ~ 50°C
	储存温度	-20°C ~ 75°C
	相对湿度	最高 85%RH (非凝结状态)
	海拔高度	100,000 英尺正常工作; 200,000 英尺存储, 不工作
	冷却方式	强制风冷 (风机冷却)
	外形尺寸 (长*宽*高)	210mm*145mm*102mm

60W Laser power supply

Input	Input voltage	AC220V ± 10% (AC110V specified while order)
	AC frequency	47 ~ 440HZ
	Maximum input power	490W
Output	Maximum input current	2.2A
	Maximum output voltage	25KV
	Maximum output current	28mA (depending on the laser tubes of different manufacturers)
	Efficiency	≥ 90% (Full load)
	Response speed	≤ 1ms
	Control Interface	TTL multilevel switching control, effective level can be high and low selection (see control wiring diagram)
Insulation	Input-output	AC 1500V 1 minutes ≤ 10 mA
	Input-shell	AC 1500V 1 minutes ≤ 10 mA
	Output-shell	Connection
	Open Circuit Protection	Can be short circuit (requires a good grounding shell, while avoiding the positive electrode and the shell between the arc)
Environmental Requested	Working temperature	-10°C ~ 50°C
	Storage of temperature	-20°C ~ 75°C
	Relative Humidity	Maximum 85% RH (non-condensing)
	Altitude	100,000 feet of work 200,000 feet of storage, does not work
	Cooling methods	Forced air cooling (fan cooling)
	Dimensions (L*W*H)	210mm*145mm*102mm





DY-10

80W 激光电源主要技术参数

输入	输入电压	AC220V ± 10% (如需 AC110V 订货时另外注明)
	交流频率	47 ~ 440HZ
	最大输入功率	750W
	最大输入电流	3.4A
输出	最大输出电压	32KV
	最大输出电流	33mA
效率		≥ 90% (满载时)
响应速度		≤ 1ms
控制接口		TTL 电平开关控制, 有效电平可高、低选择 (详见控制接线图)
绝缘耐压		输入对地 AC1500V、50HZ 漏电流 < 10mA, 60 秒不击穿
开路保护		可短时开路 (要求电源外壳接地良好, 同时避免正极和机壳之间拉弧)
环境要求	工作温度	-10°C ~ 50°C
	储存温度	-20°C ~ 75°C
	相对湿度	最高 85%RH (非凝结状态)
	海拔高度	100,000 英尺正常工作; 200,000 英尺存储, 不工作
冷却方式		强制风冷 (风机冷却)
外形尺寸 (长*宽*高)		283mm*176mm*106mm

80W Laser power supply

Input	Input voltage	AC220V ± 10% (AC110V specified while order)
	AC frequency	47 ~ 440HZ
	Maximum input power	750W
	Maximum input current	3.4A
Output	Maximum output voltage	32KV
	Maximum output current	33mA (depending on the laser tubes of different manufacturers)
Efficiency		≥ 90% (Full load)
Response speed		≤ 1ms
Control Interface		TTL multilevel switching control, effective level can be high and low selection (see control wiring diagram)
Insulation	Input-output	AC 1500V 1 minutes ≤ 10 mA
	Input-shell	AC 1500V 1 minutes ≤ 10 mA
	Output-shell	Connection
Open Circuit Protection		Can be short circuit (requires a good grounding shell, while avoiding the positive electrode and the shell between the arc)
Environmental Requested	Working temperature	-10°C ~ 50°C
	Storage of temperature	-20°C ~ 75°C
	Relative Humidity	Maximum 85% RH (non-condensing)
	Altitude	100,000 feet of work 200,000 feet of storage, does not work
Cooling methods		Forced air cooling (fan cooling)
Dimensions (L*W*H)		283mm*176mm*106mm



ZR-80W



ZR-80WE



ZR-80WH



ZR-80WK

100W 激光电源主要技术参数

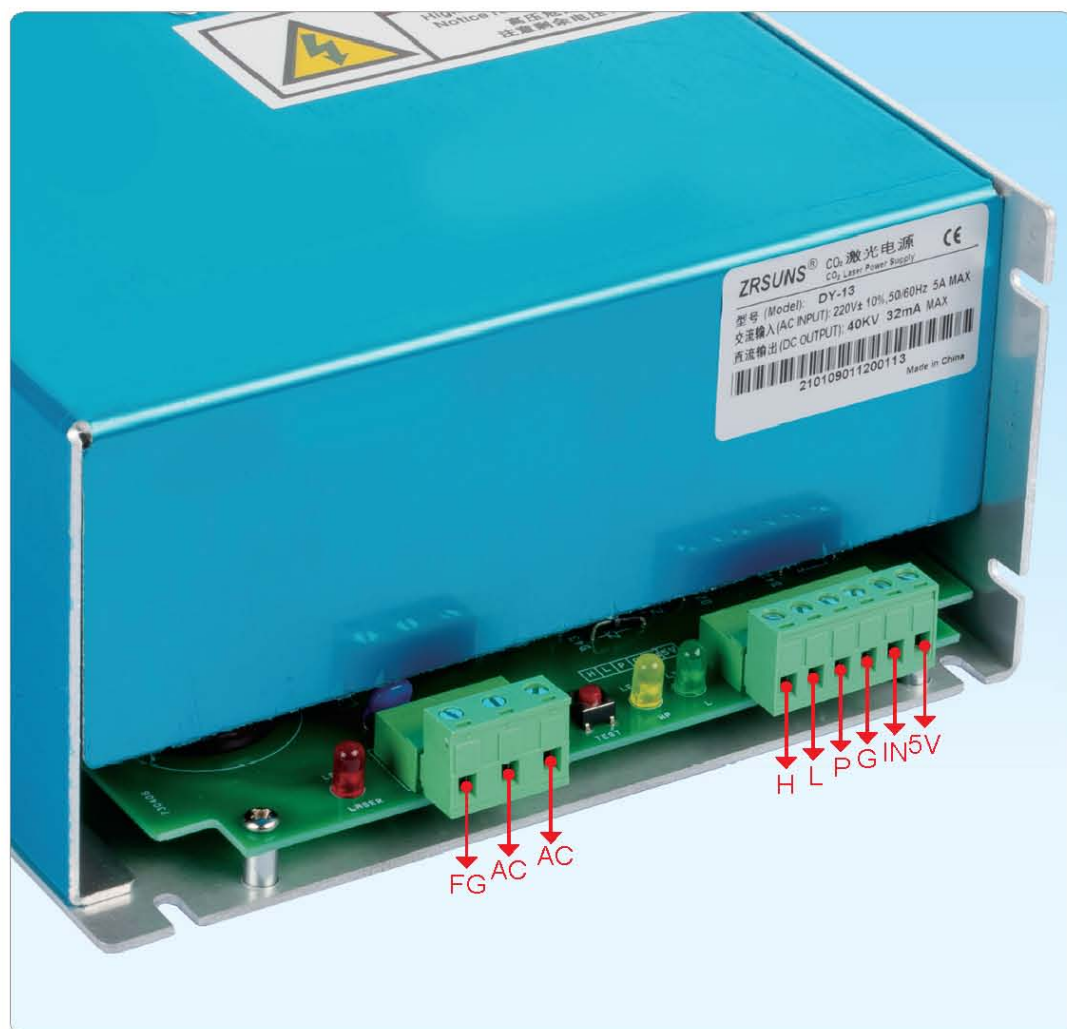
输入	输入电压	AC220V ± 10% (如需 AC110V 订货时另外注明)
	交流频率	47 ~ 440HZ
	最大输入功率	770W
	最大输入电流	3.5 A
输出	最大输出电压	35KV
	最大输出电流	33mA(视不同厂家激光管)
效率		≥ 90% (满载时)
响应速度		≤ 1ms
控制接口		TTL 电平开关控制, 有效电平可高、低选择 (详见控制接线图)
绝缘耐压		输入对地 AC1500V、50HZ 漏电流 < 10mA, 60 秒不击穿
开路保护		可短时开路 (要求电源外壳接地良好, 同时避免正极和机壳之间拉弧)
环境要求	工作温度	-10°C ~ 50°C
	储存温度	-20°C ~ 75°C
	相对湿度	最高 85%RH (非凝结状态)
	海拔高度	100,000 英尺正常工作; 200,000 英尺存储, 不工作
冷却方式		强制风冷 (风机冷却)
外形尺寸 (长*宽*高)		301mm*205mm*112mm

100W Laser power supply supply

Input	Input voltage	AC220V ± 10% (AC110V specified while order)
	AC frequency	47 ~ 440HZ
	Maximum input power	770W
	Maximum input current	3.5 A
Output	Maximum output voltage	35kV
	Maximum output current	33mA (depending on the laser tubes of different manufacturers)
Efficiency		≥ 90% (Full load)
Response speed		≤ 1ms
Control Interface		TTL multilevel switching control, effective level can be high and low selection (see control wiring diagram)
Insulation	Input-output	AC 1500V 1 minutes ≤ 10 mA
	Input-shell	AC 1500V 1 minutes ≤ 10 mA
	Output-shell	Connection
Open Circuit Protection		Can be short circuit (requires a good grounding shell, while avoiding the positive electrode and the shell between the arc)
Environmental Requested	Working temperature	-10°C ~ 50°C
	Storage of temperature	-20°C ~ 75°C
	Relative Humidity	Maximum 85% RH (non-condensing)
	Altitude	100,000 feet of work 200,000 feet of storage, does not work
Cooling methods		Forced air cooling (fan cooling)
Dimensions (L*W*H)		301mm*205mm*112mm







DY-13

120W 激光电源主要技术参数

输入	输入电压	AC130V~250V
	交流频率	47 ~ 440HZ
	最大输入功率	820W
	最大输入电流	3.7A
输出	最大输出电压	35KV
	最大输出电流	35mA(视不同厂家激光管)
效率		≥ 90% (满载时)
响应速度		≤ 1ms
控制接口		TTL 电平开关控制, 有效电平可高、低选择 (详见控制接线图)
绝缘耐压		输入对地 AC1500V、50HZ 漏电流 < 10mA, 60 秒不击穿
开路保护		可短时开路 (要求电源外壳接地良好, 同时避免正极和机壳之间拉弧)
环境要求	工作温度	-10℃ ~ 50℃
	储存温度	-20℃ ~ 75℃
	相对湿度	最高 85%RH (非凝结状态)
	海拔高度	100,000 英尺正常工作; 200,000 英尺存储, 不工作
冷却方式		强制风冷 (风机冷却)
外形尺寸 (长 * 宽 * 高)		335mm*205mm*100mm

120W Laser power supply

Input	Input voltage	AC130V~250V
	AC frequency	47 ~ 440HZ
	Maximum input power	820W
	Maximum input current	3.7A
Output	Maximum output voltage	35kV
	Maximum output current	35mA (depending on the laser tubes of different manufacturers)
Efficiency		≥ 90% (Full load)
Response speed		≤ 1ms
Control Interface		TTL multilevel switching control, effective level can be high and low selection (see control wiring diagram)
Insulation	Input-output	AC 1500V 1 minutes ≤ 10 mA
	Input-shell	AC 1500V 1 minutes ≤ 10 mA
	Output-shell	Connection
Open Circuit Protection		Can be short circuit (requires a good grounding shell, while avoiding the positive electrode and the shell between the arc)
Environmental Requested	Working temperature	-10℃ ~ 50℃
	Storage of temperature	-20℃ ~ 75℃
	Relative Humidity	Maximum 85% RH (non-condensing)
	Altitude	100,000 feet of work 200,000 feet of storage, does not work
Cooling methods		Forced air cooling (fan cooling)
Dimensions (L*W*H)		335mm*205mm*100mm



ZR-120W



ZR-120WA



ZR-120WH

130W 激光电源主要技术参数

输入	输入电压	AC220V ± 10% (如需 AC110V 订货时另外注明)
	交流频率	47 ~ 440HZ
	最大输入功率	970W
	最大输入电流	4.3A
输出	最大输出电压	40KV
	最大输出电流	36mA(视不同厂家激光管)
效率		≥ 90% (满载时)
响应速度		≤ 1ms
控制接口		TTL 电平开关控制, 有效电平可高、低选择 (详见控制接线图)
绝缘耐压		输入对地 AC1500V、50HZ 漏电流 < 10mA, 60 秒不击穿
开路保护		可短时开路 (要求电源外壳接地良好, 同时避免正极和机壳之间拉弧)
环境要求	工作温度	-10°C ~ 50°C
	储存温度	-20°C ~ 75°C
	相对湿度	最高 85%RH (非凝结状态)
	海拔高度	100,000 英尺正常工作; 200,000 英尺存储, 不工作
冷却方式		强制风冷 (风机冷却)
外形尺寸 (长*宽*高)		335mm*205mm*100mm

130W Laser power supply

Input	Input voltage	AC220V ± 10% (AC110V specified while order)
	AC frequency	47 ~ 440HZ
	Maximum input power	970W
	Maximum input current	4.3A
Output	Maximum output voltage	40kV
	Maximum output current	36mA (depending on the laser tubes of different manufacturers)
Efficiency		≥ 90% (Full load)
Response speed		≤ 1ms
Control Interface		TTL multilevel switching control, effective level can be high and low selection (see control wiring diagram)
Insulation	Input-output	AC 1500V 1 minutes ≤ 10 mA
	Input-shell	AC 1500V 1 minutes ≤ 10 mA
	Output-shell	Connection
Open Circuit Protection		Can be short circuit (requires a good grounding shell, while avoiding the positive electrode and the shell between the arc)
Environmental Requested	Working temperature	-10°C ~ 50°C
	Storage of temperature	-20°C ~ 75°C
	Relative Humidity	Maximum 85% RH (non-condensing)
	Altitude	100,000 feet of work 200,000 feet of storage, does not work
Cooling methods		Forced air cooling (fan cooling)
Dimensions (L*W*H)		335mm*205mm*100mm



ZR-130W

150W 激光电源主要技术参数

输入	输入电压	AC220V ± 10% (如需 AC110V 订货时另外注明)
	交流频率	47 ~ 440HZ
	最大输入功率	1000W
	最大输入电流	4.5A
输出	最大输出电压	40KV
	最大输出电流	40mA(视不同厂家激光管)
效率		≥ 90% (满载时)
响应速度		≤ 1ms
控制接口		TTL 电平开关控制, 有效电平可高、低选择 (详见控制接线图)
绝缘耐压		输入对地 AC1500V、50HZ 漏电流 < 10mA, 60 秒不击穿
开路保护		可短时开路 (要求电源外壳接地良好, 同时避免正极和机壳之间拉弧)
环境要求	工作温度	-10°C ~ 50°C
	储贮温度	-20°C ~ 75°C
	相对湿度	最高 85%RH (非凝结状态)
	海拔高度	100,000 英尺正常工作; 200,000 英尺存储, 不工作
冷却方式		强制风冷 (风机冷却)
外形尺寸 (长 * 宽 * 高)		350mm*221mm*105mm

150W Laser power supply

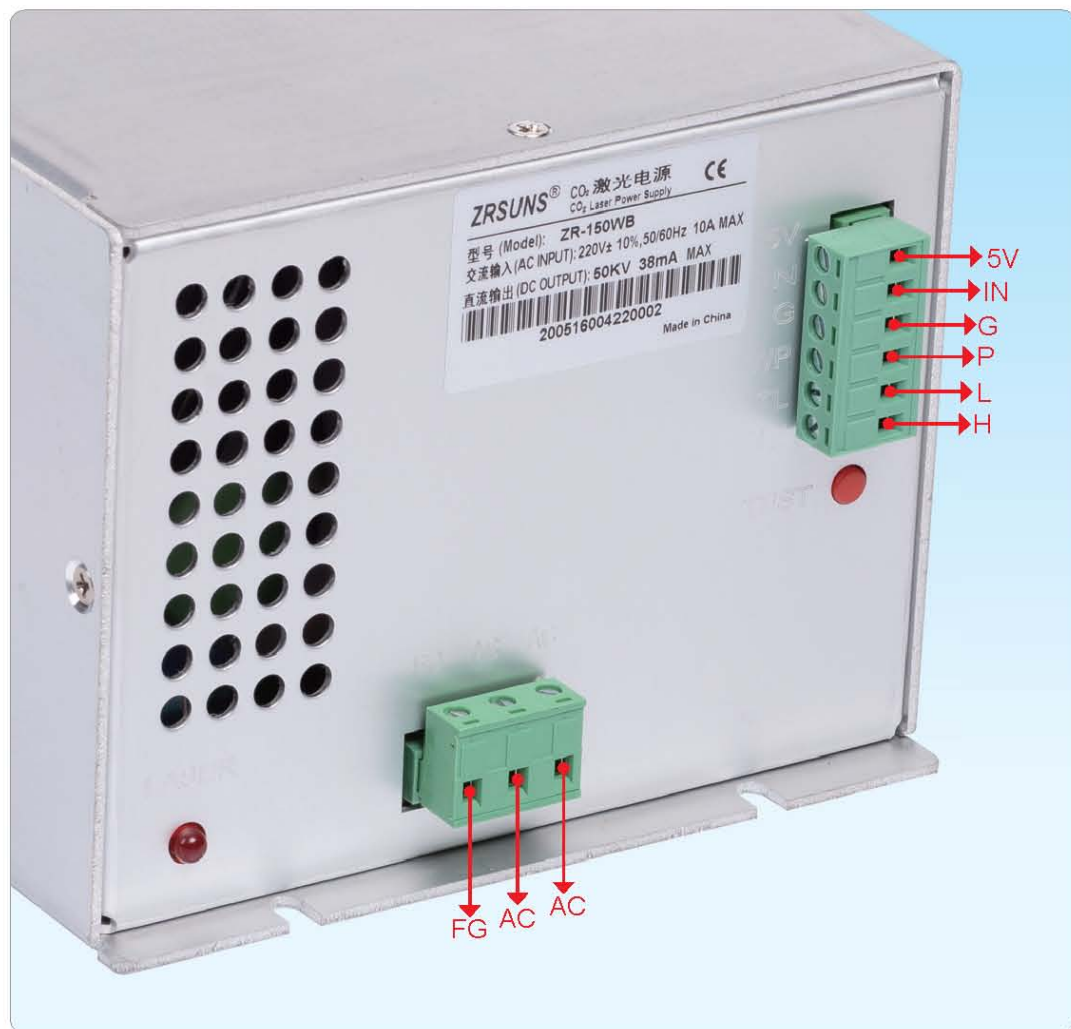
Input	Input voltage	AC220V ± 10% (AC110V specified while order)
	AC frequency	47 ~ 440HZ
	Maximum input power	1000W
	Maximum input current	4.5A
Output	Maximum output voltage	40kV
	Maximum output current	40mA (depending on the laser tubes of different manufacturers)
Efficiency		≥ 90% (Full load)
Response speed		≤ 1ms
Control Interface		TTL multilevel switching control, effective level can be high and low selection (see control wiring diagram)
Insulation	Input-output	AC 1500V 1 minutes ≤ 10 mA
	Input-shell	AC 1500V 1 minutes ≤ 10 mA
	Output-shell	Connection
Open Circuit Protection		Can be short circuit (requires a good grounding shell, while avoiding the positive electrode and the shell between the arc)
Environmental Requested	Working temperature	-10°C ~ 50°C
	Storage of temperature	-20°C ~ 75°C
	Relative Humidity	Maximum 85% RH (non-condensing)
	Altitude	100,000 feet of work 200,000 feet of storage, does not work
Cooling methods		Forced air cooling (fan cooling)
Dimensions (L*W*H)		350mm*221mm*105mm



ZR-150W



ZR-150WA





ZR-150WH



ZR-150WK

150WZ 激光电源主要技术参数

输入	输入电压	AC220V ± 10% (如需 AC110V 订货时另外注明)
	交流频率	47 ~ 440HZ
	最大输入功率	1100W
	最大输入电流	5A
输出	最大输出电压	40KV
	最大输出电流	45mA(视不同厂家激光管)
效率		≥ 90% (满载时)
响应速度		≤ 1ms
控制接口		TTL 电平开关控制, 有效电平可高、低选择 (详见控制接线图)
绝缘耐压		输入对地 AC1500V、50HZ 漏电流 < 10mA, 60 秒不击穿
开路保护		可短时开路 (要求电源外壳接地良好, 同时避免正极和机壳之间拉弧)
环境要求	工作温度	-10°C ~ 50°C
	储存温度	-20°C ~ 75°C
	相对湿度	最高 85%RH (非凝结状态)
	海拔高度	100,000 英尺正常工作; 200,000 英尺存储, 不工作
冷却方式		强制风冷 (风机冷却)
外形尺寸 (长*宽*高)		350mm*221mm*105mm

150WZ Laser power supply

Input	Input voltage	AC220V ± 10% (AC110V specified while order)
	AC frequency	47 ~ 440HZ
	Maximum input power	1100W
	Maximum input current	5A
Output	Maximum output voltage	40kV
	Maximum output current	45mA (depending on the laser tubes of different manufacturers)
Efficiency		≥ 90% (Full load)
Response speed		≤ 1ms
Control Interface		TTL multilevel switching control, effective level can be high and low selection (see control wiring diagram)
Insulation	Input-output	AC 1500V 1 minutes ≤ 10 mA
	Input-shell	AC 1500V 1 minutes ≤ 10 mA
	Output-shell	Connection
Open Circuit Protection		Can be short circuit (requires a good grounding shell, while avoiding the positive electrode and the shell between the arc)
Environmental Requested	Working temperature	-10°C ~ 50°C
	Storage of temperature	-20°C ~ 75°C
	Relative Humidity	Maximum 85% RH (non-condensing)
	Altitude	100,000 feet of work 200,000 feet of storage, does not work
Cooling methods		Forced air cooling (fan cooling)
Dimensions (L*W*H)		350mm*221mm*105mm





BR-150W



DY-20

200W 激光电源主要技术参数

输入	输入电压	AC220V ± 10% (如需 AC110V 订货时另外注明)
	交流频率	47 ~ 440HZ
	最大输入功率	1300W
	最大输入电流	5.9A
输出	最大输出电压	52KV
	最大输出电流	36mA(视不同厂家激光管)
效率		≥ 90% (满载时)
响应速度		≤ 1ms
控制接口		TTL 电平开关控制, 有效电平可高、低选择 (详见控制接线图)
绝缘耐压		输入对地 AC1500V、50HZ 漏电流 < 10mA, 60 秒不击穿
开路保护		可短时开路 (要求电源外壳接地良好, 同时避免正极和机壳之间拉弧)
环境要求	工作温度	-10°C ~ 50°C
	储存温度	-20°C ~ 75°C
	相对湿度	最高 85%RH (非凝结状态)
	海拔高度	100,000 英尺正常工作; 200,000 英尺存储, 不工作
冷却方式		强制风冷 (风机冷却)
外形尺寸 (长*宽*高)		390mm*240mm*116mm

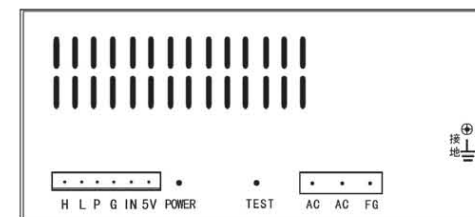
200W Laser power supply

Input	Input voltage	AC220V ± 10% (AC110V specified while order)
	AC frequency	47 ~ 440HZ
	Maximum input power	1300W
	Maximum input current	5.9A
Output	Maximum output voltage	52KV
	Maximum output current	36mA (depending on the laser tubes of different manufacturers)
Efficiency		≥ 90% (Full load)
Response speed		≤ 1ms
Control Interface		TTL multilevel switching control, effective level can be high and low selection (see control wiring diagram)
Insulation	Input-output	AC 1500V 1 minutes ≤ 10 mA
	Input-shell	AC 1500V 1 minutes ≤ 10 mA
	Output-shell	Connection
Open Circuit Protection		Can be short circuit (requires a good grounding shell, while avoiding the positive electrode and the shell between the arc)
Environmental Requested	Working temperature	-10°C ~ 50°C
	Storage of temperature	-20°C ~ 75°C
	Relative Humidity	Maximum 85% RH (non-condensing)
	Altitude	100,000 feet of work 200,000 feet of storage, does not work
Cooling methods		Forced air cooling (fan cooling)
Dimensions (L*W*H)		390mm*240mm*116mm

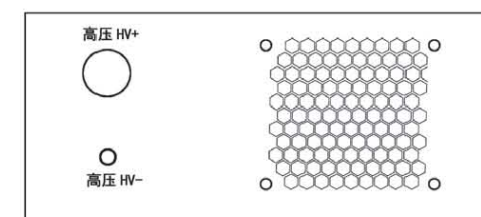




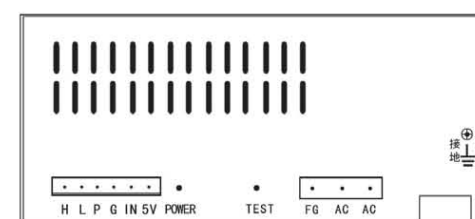
ZR-200W



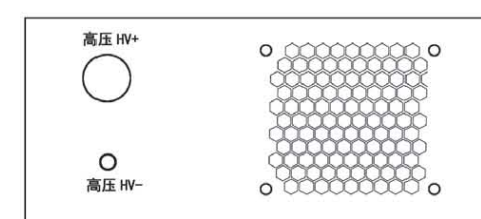
50W激光电源A



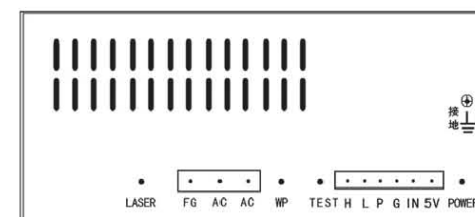
50W 激光电源 B



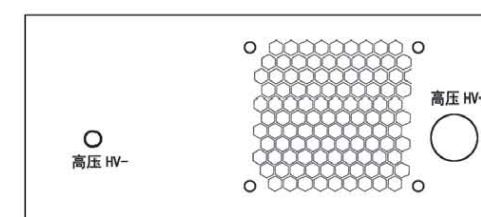
60W激光电源A



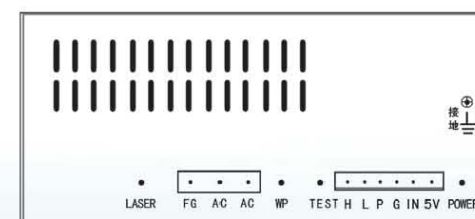
60W 激光电源 B



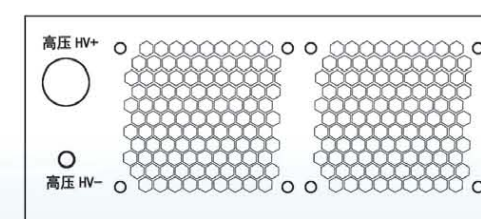
80W 激光电源 A



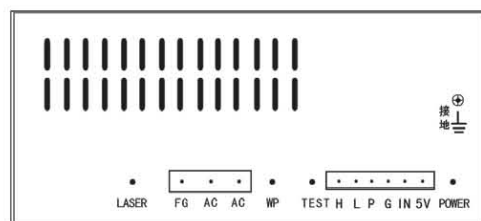
80W 激光电源 B



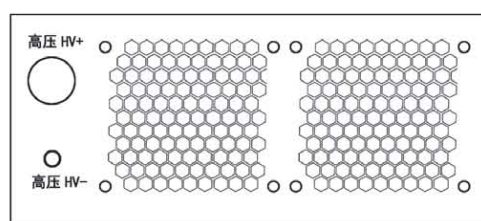
100W激光电源A



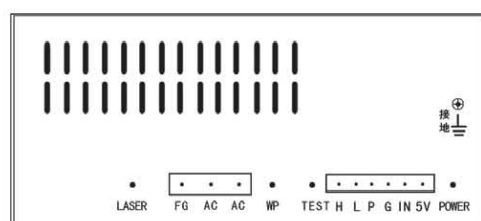
100W 激光电源 B



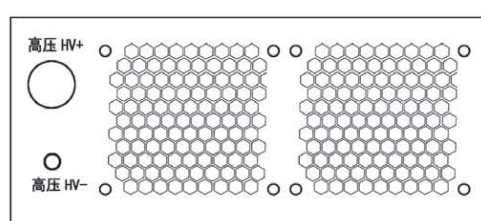
130W 激光电源 A



130W 激光电源 B



150W 激光电源 A



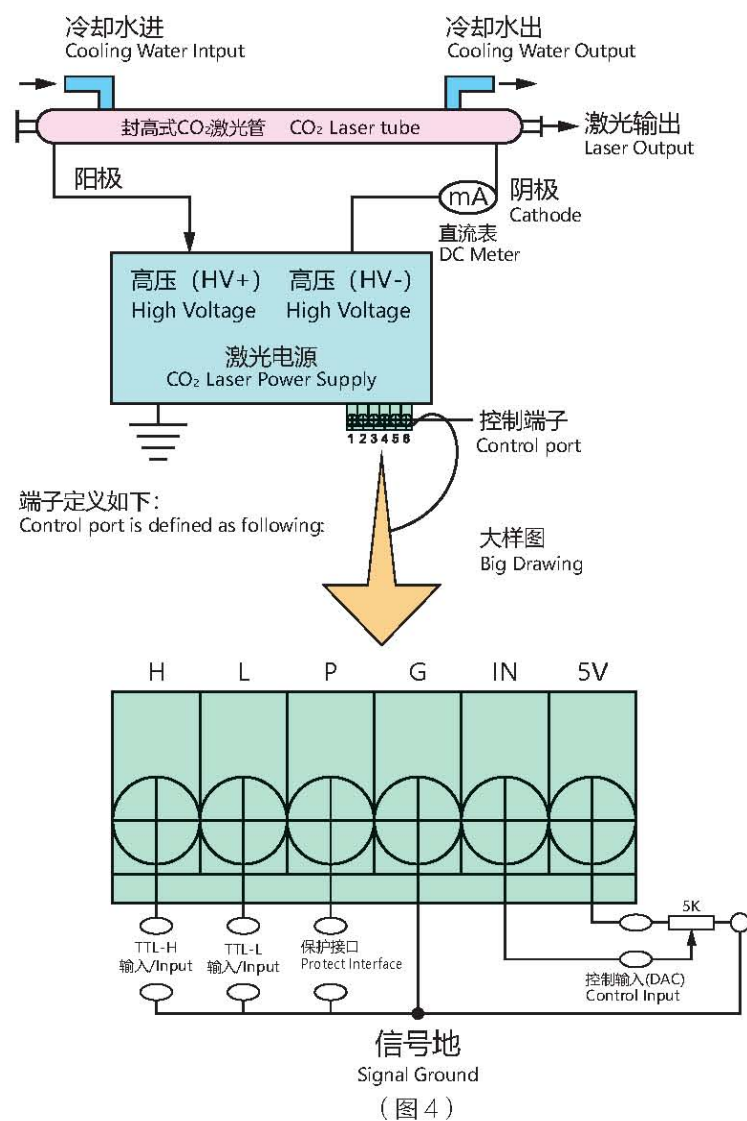
150W 激光电源 B

- ◆ FG: 三孔插座的接地端
- ◆ AC: 交流 220V (交流 110V) 输入
- ◆ 接地符号: 机壳接地
- ◆ H: HIGH 高电平
- ◆ L: LOW 低电平
- ◆ P: PROTECT 水保护端
- ◆ G: GND 接地端
- ◆ IN: 激光功率控制信号输入
- ◆ 5V: VCC+5V 直流电
- ◆ LASER: 高压部分是否工作的指示灯
- ◆ WP: 水保护指示灯
- ◆ TEST: 强制出光检测按键
- ◆ POWER: 电源指示灯
- ◆ 高压 HV+: 电源高压输出
- ◆ 高压 HV-: 与高压 HV+、激光管连接电流回路输入端
- ◆ LASER: 激光高压指示灯
- ◆ WP: PROTECT 水保护指示灯

- ◆ FG: three-hole grounding outlet
- ◆ AC: AC 220V (or AC110V) input
- ◆ 接地符号: Chassis ground
- ◆ H: High level
- ◆ L: LOW level
- ◆ P: Water Protect terminals
- ◆ G: GND ground
- ◆ IN: IN control signal input
- ◆ 5V: VCC.DC 5V
- ◆ LASER: high voltage working indicator light
- ◆ WP: Water protect indicator light
- ◆ TEST: Forced light detection key
- ◆ POWER: Power indicator light
- ◆ High Voltage HV+: high voltage output terminal
- ◆ High Voltage HV-: oppsite to HV+, with laser tube connected current loop input

- ◆ 激光管的连接: 激光电源的高压 (HV+) 必须与二氧化碳 (CO₂) 激光管的阳极 (全反射端) 相连, 激光电源的高压 (HV-), 通过一个直流电流表 (或直接) 与二氧化碳激光管的阴极 (激光输出端) 相连如图 4。
- ◆ 控制信号的连接 (如图 4) 将控制信号分别可靠接入激光电源的控制端。
- ◆ 控制信号的输入: 如图 4 所示, 将外部计算机输出的 DAC 信号及 TTL 信号按要求输入激光电源, 即可控制激光管按要求输出激光。
- ◆ 电压选择: AC220V ± 10% (如需 AC110V, 订货时另外注明)
- ◆ 特殊功能: 激光电源有一组保护开关 (PROTECT), 可串联水保护, 打开外壳时的保护等。
- ◆ 高压指示灯: 无需拆开电源外壳, 通过观察指示灯的亮、灭即可简单判断高压部分是否工作, 从而辨别电源损坏, 还是激光管损坏, 减少了维修误判, 提高工作效率。
- ◆ laser tube connection: laser power supply High-voltage(HV +) are connected to laser tube anode . High voltage (HV-) are connected the laser tube cathode directly or through a DC amperemeter . (as show in Figure 4).
- ◆ control signal connection (as show in Figure 4): Connect the compitable control signals to the suitable laser power supply terminal.
- ◆ Control signal input: as shown in photo 4: Input the external computer output DAC signal and TTL signal to the laser power supply as request , then can control the laser power output .
- ◆ Voltage Selection: AC220V ± 10% and AC110V (specified while order)

◆ 电源和激光器的接线图 Laser power supply and laser tube connection diagram

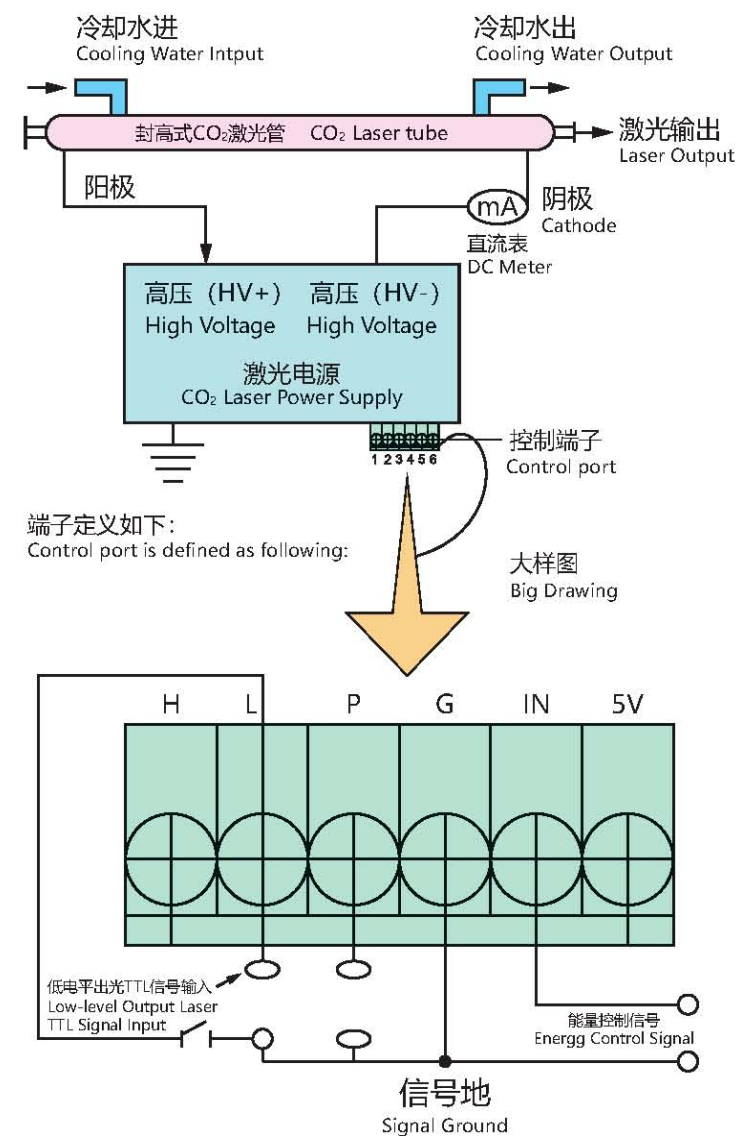


控制端子含义及功能:

The meaning and function of control port

TTL-HIGH 输入 TTL-HIGH input	TTL-LOW 输入 TTL-LOW input	控制输入端 (DAC) Control input (DAC)	激光输出 Laser output
悬空 /	低 / Low (< 0.3V)	0-5V	Pmin-Pmax
	高 / High (> 3V)	0-5V	0
低 / Low (< 0.3V)	悬空 / Vacant	0-5V	0
高 / High (> 3V)		0-5V	Pmin-Pmax
保护接口端开		0-5V	0

◆ 电源和激光器的接线图



(图5) 低电平出光 TTL 信号联接图 / Photo 5: The low level TTL signal connection graph

注: 能量控制信号有两种方式

A: (射频激光) 脉冲发生器: 激光强度由 20KHZ ~ 50 KHZ, 5V 变占空比。

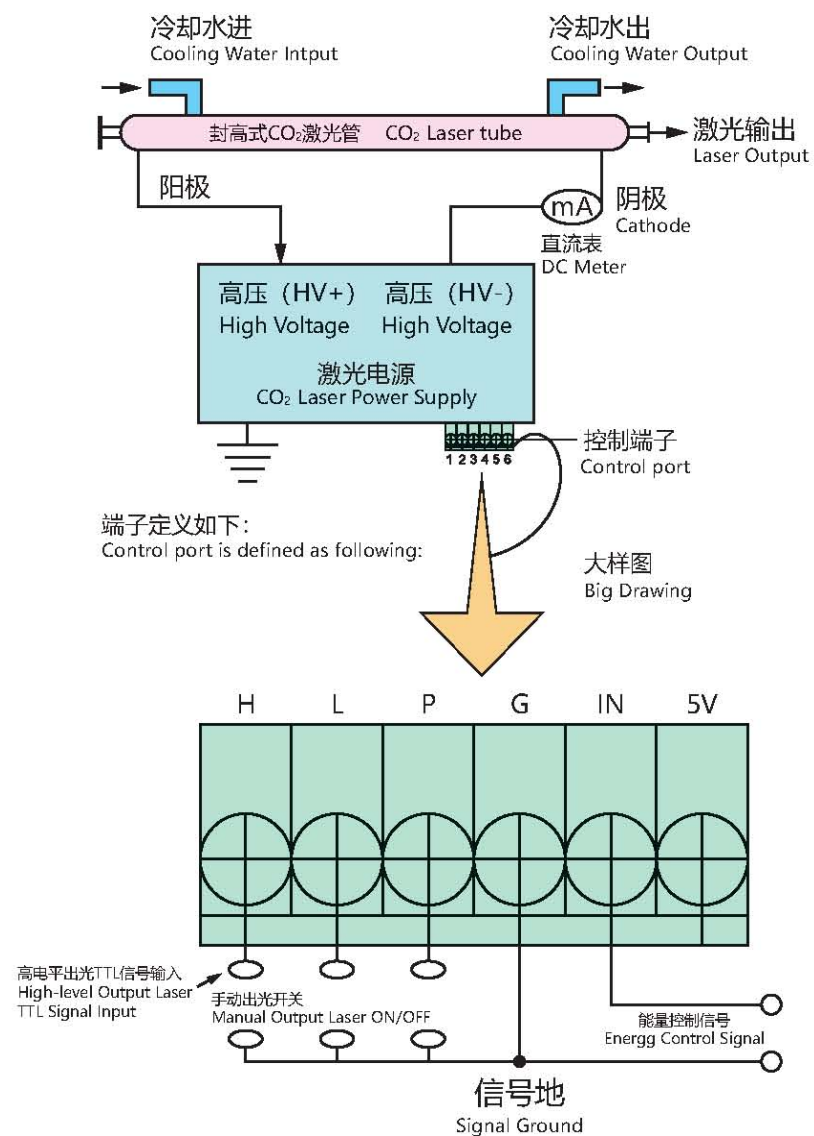
B: 0-5V 模拟信号

Note: There are two ways of control signal

A: (RF laser) pulse generator: the laser intensity by the 20~50 KHZ, 5V variable duty cycle.

B: 0-5V analog signals

◆ 电源和激光器的接线图



(图6) 高电平出光TTL信号联接图

Photo 6: The high level TTL signal connection graph



- 正常显示状态
- Normal display



- 无激光信号显示状态
- No laser signal display



- 无水保护显示状态
- No water protection display



- 无水保护及激光信号显示状态
- No water protection and laser signal display



- 自带电位器 (调节电流大小, 控制功率输出)
- It has potentiometer to adjust current and control putput laser power

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