永利®
Yongli

DLT系列CO_2合束激光器使用说明书

DLT Series CO_2 beam combined Laser User Manual

DLT-40Z

DLT-300P

吉林省永利激光科技有限公司
Jilin Yongli Laser Technology Co., Ltd.

目录 Contents

感谢您购买吉林省永利激光科技有限公司的产品，请在使用前仔细阅读使用说明书，并妥善保管。

本使用安装说明书并非质量保证书，对印刷错误的更正，以及产品的改进，均由吉林省永利激光科技有限公司随时做出解释，恕不预先通知，修正内容将编入再版使用说明书中。

简述

DLT-40Z CO_2 合束激光器

1. 新款 DLT-40Z CO_2 合束激光器增加了可视窗，可以直观的观察到内部激光器炸裂、破损等故障。
2. 增加了水平泡的设计，便于安装人员确定 DLT-40Z CO_2 合束激光器安装在水平的位置。
3. 为了缩小 DLT-40Z CO_2 合束激光器的宽度将负极线安装到了高压端一侧出线，解决了一些机器因放置仓过窄而无法安装的问题。

DLT-300P CO_2 合束激光器

1. 新款 DLT-300P CO_2 合束激光器将原有在 2/3 位置的支撑更改为两侧支撑，更好的保证了激光器的输出稳定性。
2. 在出光口位置增加了防尘筒的设计，可以有效的减少外部环境对 DLT-300P CO_2 合束激光器内部及镜片的污染。
3. 保留了原有的观察窗口设计。

警告：应用该产品之前，请认真阅读本说明书，务必完全了解本说明书中的安全操作和维护事项。

警告：激光危险，禁止非专业人员靠近激光器工作区域。

注意：该产品是精密光学装置，禁止擅自拆解！否则我司将不予退换或保修！

1. 安全

1.1 基本信息

仅允许接受过培训并经过我公司授权的人员使用或接近激光器。
激光器工作区域放置相应的警告标识。
请严格遵守当地的相关安全规程。

1.2 光学安全

此激光器属于高功率的二氧化碳激光器。

警告：此激光器为 4 类激光产品，且发射的激光为不可见激光，激光辐射会导致眼睛和皮肤严重损伤。请避免眼或皮肤受到直射 或散射辐射的照射。

激光器运行时，所有人员务必佩戴经过认证的激光防护眼镜。并要求激光防护眼镜与激光器的输出波长相匹配。此激光器输出波长为 10.6μm。

即使佩戴激光防护眼镜，也不可直视激光器发射的或经过任何物体反射的激光光束（激光可致盲）。

确保激光光束没有被反射到工作区域以外的地方。激光器出光孔不可直接对着反射性物体，不可对着门窗，否则可能会造成人身伤害或物件损坏。

确保激光光束没有被反射或漫反射回激光器出光孔，否则可损坏激光器部件。

激光与某些材料相互作用会引起可见光辐射，可能会产生火灾或烟雾等危害，请采取适当的防护措施。

1.3 电力安全

DLT 系列 CO_2 合束激光器所配备的电源属于高压电源（DC 0mA ~ 38mA，10kV ~ 30kV 的直流高压电源），需在专业人员指导下安装和使用。

警告：非正常运行时，该激光器和配备电源具有致命的交流和直流电压，即使断电后也可能存在危险。如出现异常情况，请及时与我司联系。

激光器正常运行时不存在电气危险，但需满足以下条件：
①连接线连接无误，连接线完好无损；
②激光器和配备电源安置在适当的位置上；
③设备接地良好。
激光器运行时，请工作人员穿戴绝缘服进行作业，并要求脱下导电性的服饰。

警告：高压电存在于激光器、配备电源内部和连接线中。

1.4 其它

该激光器不具备光束阻断器，激光器的工作状态由激光机控制系统控制。
1. 连续工作时长不得超过 12 小时；
2. 使用中激光器的高压接头必须悬空，不得与任何导电物体接触；
3. 使用中高压电源壳体必须严格接地；
4. 严禁切割本波段激光器的高反射材料；
5. 合束保修期内功率不低于额定功率的 75%，视为正常；

1.5 声明

如有任何疑问，请联系我司，以免造成无可挽回的损失。
该产品是精密光学装置，禁止擅自拆解！否则我司将不予退换或保修！

2. 安全标识

激光警示标识

当心激光标识如图 1 所示，
此标识指示激光器出光孔位置。

图 1. 当心激光标识

3. 准备和安装

3.1 简介

DLT 系列 CO_2 合束激光器是我司生产的拥有专利技术的合束激光器系列之一，具有专用的合束装置方案模具一体化设计、安装使用、运输及维护便捷、使用寿命长、输出功率高、功率范围可调整、光斑模式稳定等特点，是激光加工机制造企业配套的非金属厚板材及薄金属板材加工的首选配件。广泛应用于刀模加工、印刷包装、广告装饰、家具、工艺礼品、木制品加工、薄钢板加工、皮革制品加工等行业。

3.2 电力需求

供电要求：20A/220V ~ 240V/50Hz 交流电压。（如有其它供电要求需预先与我司联系）

3.3 冷却液要求

激光器需配备一台工业冷水机，冷水机要求使用蒸馏水（去离子水为最佳）。
冷却液温度要求：20℃ ~ 30℃。
冷水机性能要求：扬程≥ 25m，流量≥ 16L/min，制冷量≥ 3kW，≥ 2580kcal/h, ≥ 10236Btu/h。

3.4 环境要求

激光器应在防尘环境下运行或储存，运行和储存环境要求如表 1 所示。

激光器配备电源需在通风良好的环境下运行。

工作空间需满足当地关于激光设备运行的安全标准。

环境要求	运行	储存
温度	15℃ ~ 32℃	-10℃ ~ 35℃
湿度	30%RH ~ 60%RH	20%RH ~ 80%RH

表 1. 运行和储存环境要求

警告：如需要在 0℃或低于 0℃以下储存，务必排空激光器内部冷却液。

3.5 包装

收到我司货物后，请检查包装箱是否在运输过程中受到冲击或造成损坏，如有异常请及时告知我司销售人员。

如外包装完好，请取出激光器和相关配件，并详细检查是否有磕碰、损坏之处，确认完好后再安装测试，如发现异常请及时与我司销售人员联系。

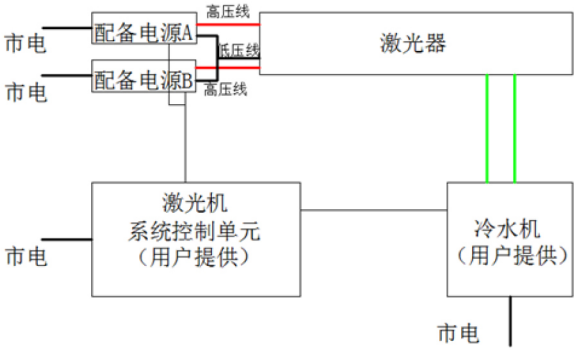
为今后长期储存或者运输的需要，请保管好此包装箱。

激光器退运说明

如需退回激光器，请使用原包装箱运输，并要求提前与我司联系， 经我司许可后方可退回。

警告：运输前，务必要排空激光器内部冷却液（可使用气泵将冷却液完全排出）。

3.6 安装程序



激光器、配备电源（A、B）、冷水机和激光机系统控制单元连接示意图如图 2 所示。

图 2. 激光器连接示意图

（1）安装激光器前，请确认是否满足所需水、电和环境方面的要求。

（2）将激光器安装在激光机相应的位置，并固定牢固。

注意：确保激光机和激光器安装面水平。

（3）激光器的进、出水嘴与冷水机出、入水口相连接，激光器上有明显标识。请按照指示正确连接。

（4）用专用电缆（CZ 连接电缆，如图 3 所示）将激光电源与激光器连接。CZ 连接电缆为一线分二线形式，三端分别为一大（10 针）、两小（5 针）共 3 个航空插头。10 针航空插头与激光器紧密连接，5 针航空插头分别与配备电源紧密连接。

图 3.CZ 连接电缆

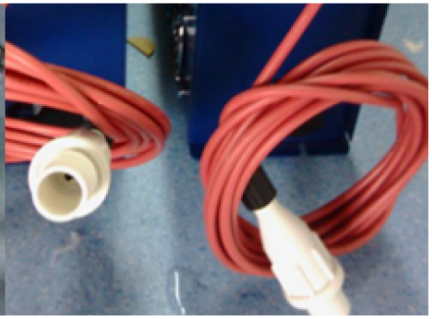


图 4. 配备电源

（5）将激光器的配备电源（如图 4 所示）高压输出端分别与激光器的高压接头紧密连接。

高、低压线标配最大长度为 6m，高、低压线过长可能会导致如下问题：

①电压损耗增大，导致激光器输出不稳定，影响激光器综合性能。

②增大高压放电的概率。

③干扰附近电子设备，导致设备不能正常工作。

（6）连接激光器配备电源供电电源和激光机系统控制端子，激光器配备电源供电和控制端子连接位置如图 5 所示。

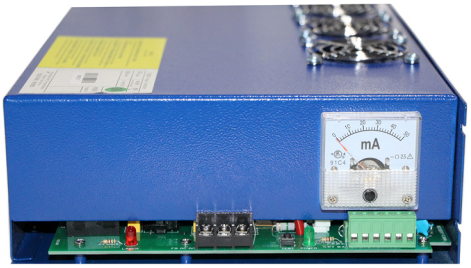


图 5. 配备电源供电和控制端子连接位置图

注意：冷水机和激光配备电源应良好接地，并确保通风良好。

（7）激光器配备电源供电连接如图 6 所示。

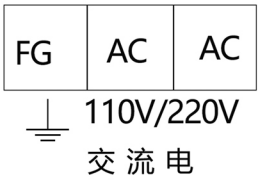
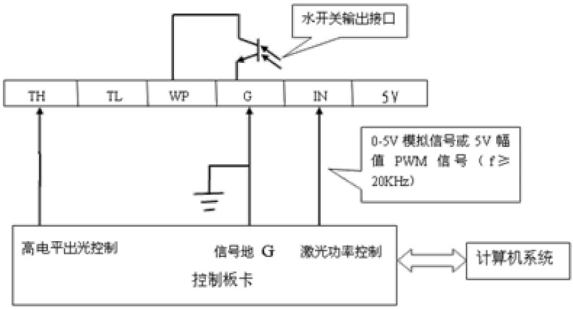


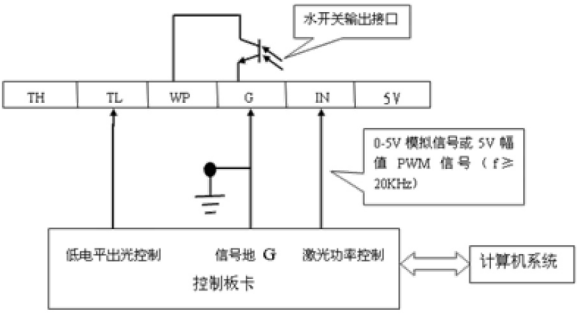
图 6. 配备电源供电连接图

（8）激光器配备电源控制端子连接



（a）高电平控制连接图如图 7 所示

图 7. 配备电源控制端子连接图



（b）低电平控制连接图如图 8 所示

图 8. 配备电源控制端子连接图

（9）激光器检测程序

①单管检测

测试前请揭掉激光器出光孔的防护标签。

将一台配备电源的控制端子拔出，测试另一台电源和相应的激光管。

设置不同的输出功率，以点射形式测试激光管的发光情况（出光孔处放置挡光板观察），同时观察配备电源上电流表的数值变化。

关闭激光机总电源，更换端子准备测试另一台电源和相应的激光管。

②双管检测

两台激光器电源控制端子均连接无误，设置不同的输出功率，以点射形式测试激光管发光情况（出光孔处放置挡光板观察），同时观察配备电源上电流表的数值变化。

4. 操作程序

4.1 启动程序

请按如下顺序启动激光器：

（1）开启冷水机，

（2）开启激光器配备电源，

（3）设置相应工作参数进行作业。

4.2 关机程序

请按如下顺序关闭激光器：

（1）关闭激光器配备电源，

（2）关闭冷水机。

4.3 工作电流限制

（1）最小电流

最小电流设置不得低于 15mA，否则激光器工作将会不稳定。

（2）最大电流

① DLT-40Z CO_2 合束激光器额定最大电流为 38mA，绝对最大电流为 40mA。

② DLT-300P CO_2 合束激光器额定最大电流为 38mA，绝对最大电流为 40mA。

在任何情况下，在额定最大电流之上工作时将缩短激光器寿命; 激光器都不允许超过绝对最大电流。

激光器工作电流显示在激光器配备电源上，工作电流可由激光机系统控制单元设置相应的功率百分比调节激光器的工作电流。

4.4 工作方式限制

该类激光器属于大功率激光器，不适用于雕刻、以及其它形式的小电流工作。

5. 维护

定期维护可减少设备的故障率，可确保设备长期稳定的工作，维护计划如表 2 所示。

时间	维护项目
1 星期	检查冷水机水箱中冷却液的液位。
1 个月	更换冷却液， 检查冷水机冷凝器的状况。
3 个月	更换去离子滤器和冷却液滤网， 清扫激光器配备电源、激光器和冷水机上的灰尘和杂物。

表 2. 维护计划

6. 故障检修

常见的故障、及解决方案（如仍不能解决，请联系我司）：

6.1 问题：激光器始终以最大功率输出，或者电流不可调节。

可能原因和解决方案

（1）激光器配备电源控制端子连接有误，请仔细查看端子连接情况。

（2）激光器配备电源故障，请尝试更换配备电源。

（3）激光机控制板卡故障，请联系激光机厂家进行测试。

6.2 问题：激光器不出光。

可能原因和解决方案

（1）激光器配备电源控制端子连接有误，或者控制连接线断路；请详细检查端子和连接线是否出现错接，或者不导通。

（2）冷水机水保护故障，冷水机冷却液不足；请更换水保护装置，或添加冷却液。

（3）激光器配备电源故障，或者供电问题；请尝试更换配备电源，或市电电源线。

（4）激光机控制板卡故障；请联系激光机厂家进行测试。

（5）激光器故障；请联系我司进行相关测试。

6.3 问题：放电打火。

可能原因和解决方案

（1）激光器与激光器配备电源之间的连接线损坏、或断路；请尝试更换连接线。

（2）激光器故障；请联系我司进行相关测试。

（3）激光机接地不良或者无接地，确保地线可靠接地。

6.4 问题：冷水机温度持续上升。

可能原因和解决方案

（1）冷水机制冷量过小；请更换较大功率冷水机。

（2）冷水机周围通风不良；请将冷水机移至通风良好位置。

（3）冷凝器污染；请清洗冷凝器，或更换冷凝器。

（4）冷却液不足；请添加足够的冷却液。

（5）冷却液污染；请更换冷却液。

7. 技术规格

7.1. DLT-40Z DLT-300P CO2 合束激光器

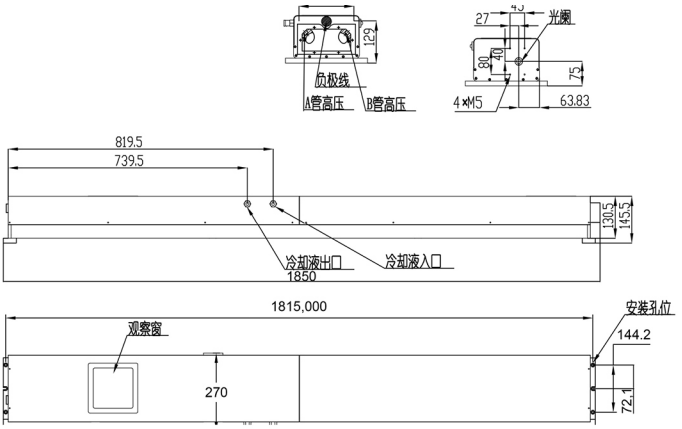
型号	DLT-40Z	DLT-300P
额定功率 (W)	300-320	290-320
光束质量（M^2）	≤ 1.1	≤ 1.1
发散角（mrad）	≤ 3	≤ 3
稳定度（%）	≤ ±5	≤ ±5
长（mm）	1850	1850
宽（mm）	270	270
高（mm）	146	146
重量（kg）	26	16

7.2. 配备电源

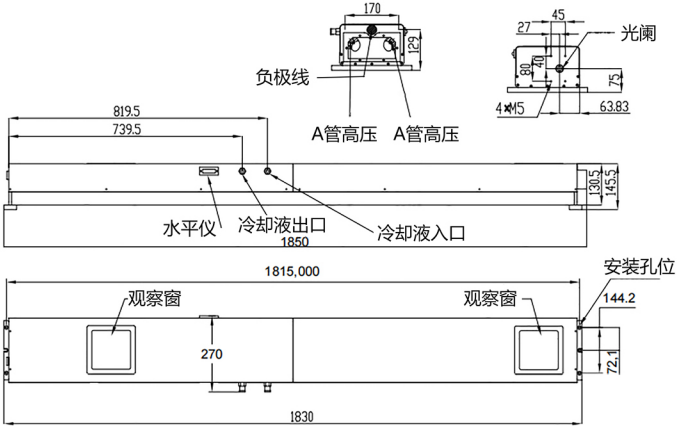
型号	DLT-40Z	DLT-300P
最佳输出电流（mA）	36	36
绝对最大电流（mA）	40	40
长（mm）	320	320
宽（mm）	210	210
高（mm）	80	80
重量（kg）	5（单台）	5（单台）

8. 安装尺寸图

DLT-300P



DLT-40Z



Thank you for choosing Yongli DLT series laser products.
Please read the installation instructions carefully before using and keep the manual properly.

This user manual should not regarded as a quality guarantee. Jilin Yongli Laser Technology Co., Ltd reserves the finial interpretation of correction of printing errors and product improvements at any time without prior notice. The revised contents will be incorporated into the reprinted manual.

DLT-40Z CO_2 beam combined laser

1)We add inspection windows to the updated DLT-40Z beam combined laser , through the windows you can observe if there are any failures, such as cracks or damages inside the laser.
2)The design of gradienter on both sides facilitate the installers to determine the horizontal direction of the laser.
3)In order to reduce the width of the laser, the negative wire is integrated to the high-voltage terminal , which avoid the installation issues that on some machines DLT Laser cannot be installed due to the narrow space.

DLT-300P CO_2 beam combined laser

1)The new DLT-30Z laser changes the original support position form the middle 2/3 to the two ends , which better guarantees the output stability of the laser.
2)A dust-proof cap added to the place of beam outlet , which can effectively reduce the pollution to the inside of the laser and the lens.
3)The original inspection window design is retained.

Warning: Before using this product, please read this manual carefully and be sure to fully understand the safe operation and maintenance items in this manual.

Warning: Laser is dangerous. Non-professionals are prohibited from approaching the laser working area.

Attention: This product is a precision optical device, and any unauthorized disassembly will result in refusal of the return, exchange or warranty!

1. Safety Instruction

1.1 Basic information

Only trained and authorized personnel are allowed to use or approach the laser. Place warning signs in the laser working area.
Please strictly abide by the relevant local safety regulations.

1.2 Optical safety

This laser is a kind of high power co2 laser.

Class 4 visible and invisible laser radiation when open.Staring at the laser beam can cause damage to the eyes and touching the laser beam can cause serious injuries. Please avoid eye or skin exposure to direct or scattered radiation.

When the laser is running, all personnel must wear certified laser protective goggles. And it is required that the laser protective goggles match the output wavelength of the laser. The output wavelength of this laser is 10.6μm.
Even if you wear laser protective goggles, you should not look directly at the laser beam or the laser beam reflected by any object (laser can cause blindness).
Ensure that the laser beam is not reflected outside the work area. The laser outlet should not directly point to reflective objects, nor to doors or windows, otherwise it may cause personal injury or damage to objects.
Ensure that the laser beam is not reflected or diffusely reflected back to the laser outlet, otherwise the laser components may be damaged.
The interaction between laser and certain materials can cause visible light radiation, which may cause fire or smoke and other hazards. Please take appropriate protective measures.

1.3 Electrical safety

The power supply equipped with DLT laser system is a high-voltage power supply (DC 0mA ~ 38mA, 10kV ~ 30kV high voltage power supply), so the installation of the power supply should under the guidance of professionals.

> Warning: In abnormal operation , there will be lethal AC and DC voltages produced by the laser and its power supply. It may still be dangerous even after power off. So if there is an abnormal situation, please contact our aftersales engineer or sales Rep. in time.

No electrical hazard occurs during normal operation, but the following conditions must be met:
① The connection of the wires is correct and intact;
② The laser and the equipped power supply are placed in an appropriate position;
③ The equipment is well grounded.
When the laser is running, the operating personnel should wear insulating clothing, and take off conductive accessories.

> Warning: High-voltage electricity exists in the laser, power supply, and the connecting wires.

1.4 Others

1.The laser does not have a beam blocker, and the working state of the laser is controlled by the laser machine control system.
2. The duration of continuous operation must not exceed 12 hours.
3. The high voltage connector of the laser in use must be suspended and must not be in contact with any conductive object.
4. The high-voltage power supply housing must be strictly connected to ground.
5. The cutting of high reflective materials for this band laser is strictly prohibited.
6. During the warranty period, the power is considered normal if it is not less than 75% of the rated power.

1.5Deceleration

If you have any questions, please contact our company to avoid irreparable damage. This product is a precision optical device, and any unauthorized disassembly will r refusal of the return,exchange or warranty!

2. Safety Labels

Laser Aperture Label

Laser Aperture Label as shown in Figure 1. This label indicates the position where laser beam exits.

Figure 1.Laser aperture label

3. Preparation and Installation

3.1 Introduction

DLT beam combined laser is one of our patented products, equipped with dedicated combiners and has the features as integral mold design, convenient to use, to transport, to install and even for maintenance. The lifespan is long, power is high, power scope is adjustable and beam quality is stable. DLT series can be widely applied in die-cutting, printing and packaging, advertising and decoration, furniture, handcrafts, woodwork processing, thin sheet metal processing, and leather processing, etc.

3.2 Electrical requirements

Users need to supply 20A/220~240V/50Hz AC voltage(other requirements are optional) to the PSUs of the DLT system.

3.3 Coolant requirements

The DLT laser requires an industrial water chiller with distilled water, or preferably, deionized water at the appropriate water temperature between 20 ℃ -30 ℃ ; replace the coolant regularly to ensure the coolant is without foreign substances or dirt.

The chiller should meet the following requirements:

Pump lift ≥ 25m, water flow ≥ 16L/min,

coolant capacity ≥ 3kW, ≥ 2580kcal/h, ≥ 10236Btu/h.

3.4 Environment requirements

The lasers should work in a dust free condition, at room temperature between 15~30℃ and a humidity level of 30-60%.

The lasers PSU should be operated in a well ventilated condition.

Environment requirements	Operation	Storage
Temperature	15℃ ~ 32℃	-10℃ ~ 35℃
Humidity	30%RH ~ 60%RH	20%RH ~ 80%RH

The working room must conform to the local safety standards for theoperation of the lasers.

Table1 operation and storage requirements

Warning: Coolant inside the lasers must be drain out completely when the laser stored at the temperature 0℃ or below.

3.5 Packing

Please examine the packaging to ensure it' s not crushed or damaged, please contact our sales persons if the lasers arrive with serious damage.

If the package is intact, please take the laser out and check if it' s bumped or damaged and have the test only after ensuring the laser is good and intact. Please contact our sales persons if there is any anomaly.

The packaging should be retained for any future storage or shipment of the laser.

Return of the laser

If the lasers should be returned, please use the original packaging and contact us in advance for authorized return.

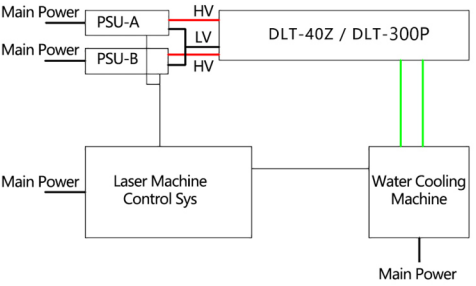
Warning: All coolant should be drained out completely before.

3.6 Installation Procedure

The laser, PSU, water chiller and the laser machine interconnections are as Picture. 2

(1) Verify water, electrical and environment requirements are satisfied before installation of the laser.

(2) Place the laser on the correct position of the laser machine and fix it firmly.



NOTE: Ensure the laser machine and DLT laser are installed horizontally.

(3) Connect the water inlet of the laser to the outlet of the chiller and outlet of the laser to the inlet of chiller, there are obvious marks. Please connect as instructed.

(4) Connect the power supplies with the laser with original cables(see Picture 3, CZ connection cable). Two sub-bundles come out of the CZ connection cable, those three bundles are 1 big(for 10 pins) and two smaller(5pins) aviation plugs. The 10pins plug must connect with the laser firmly and 5pins plugs should connect with power supplies.

Picture 3.CZ connection cable

Picture 4 Power Supplies

(5) Connect the HV end of YL-HSP200 power supplies(see Picture 4) with HV end of the laser.

The max length of HV & LV cables are 6m respectively, exceeded length may occure below problems:

① Increased voltage loss leads to an unstable laser output, which affects the overall performance of the laser.

② Increase the probaility of the high voltage discharge.

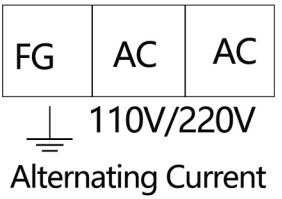
③ Interfere nearby electronic devices that would lead to the failure of the equipment.

(6) Connect the AC of laser PSUs and control terminal, see Picture 4 for laser power supply connection.

Picture 5.AC and control terminal position.

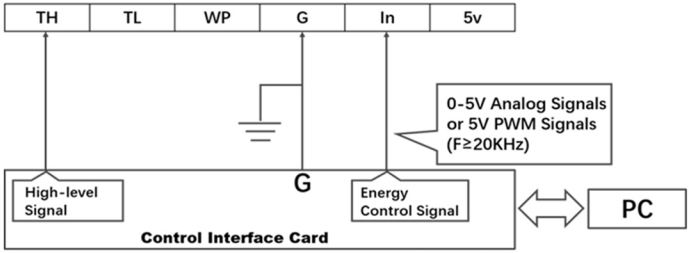
Attention: Ensure the ventilation and grounding of the water chiller and the PSUs is in good condition.

(7) See Picture 6 for AC connection instruction.

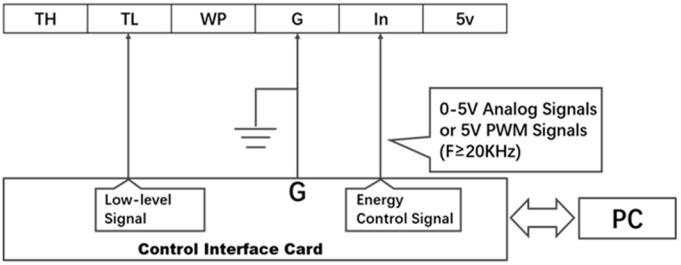


Picture 6.AC connection of the PSU.

(8) See Picture 7 for control terminal.



(a) Control connection for High Level output



(b) Control connection for Low Level output

Picture 7. Control connection of the PSU.

(9) Examination process of the laser

① Examination for single tubes.

Attention the Laser Aperture Label and remove it before examinations or tests. Remove the control terminal of one PSU and test the other laser with its PSU.Test with pulsing the laser(Place a beam blocker in front of the laser aperture) and observe the mA reading of the Amperemeter. Shutdown the item and test the other laser as above instructed.

② Examination for two tubes.

Ensure the control terminals of two PSUs are connected correctly, test with pulsing the laser(place a beam blocker in front of the laser aperture) and observe the mA reading of the Amperemeter.

4. Operating Procedure

4.1 Start-up procedure

Please switch on the laser in below sequence:

（1）Turn on the water chiller.
（2）Turn on the power to the PSUs.
（3）Set the correlative operation parameters to work.

4.2 Shutdown procedure

Please shutdown the laser in below sequence.
（1）Shutdown the PSU.
（2）Shutdown the water chiller.

4.3 Operating Current Limits

（1） Min. current

Min. current setup should not be lower than 15mA, otherwise the laser will be unstable.
（2）Max. current.

① DLT-40Z Rated max. current is 38mA, absolute max. current is 40mA.

② DLT-30Z Rated max. current is 28mA, absolute max. current is 32mA.

Running above max. current will shortens the life of the laser; the laser must not be running above absolute max. current in any circumstances.

Working current of the laser will be displayed on the PSUs, and it could be adjusted by the control unit of the laser machine by setting the power percentage.

4.4 Operating Mode Limits

The DLT series are high power laser, so it is not suitable for engraving or other small current type processing.

5．Maintenance

Maintenance schedule

Regular maintenance can reduce equipment failure rate and ensure long-term stable operation of equipment, maintenance schedule as shown in Table 2.(Table2. Maintenance schedule)

Time	Maintenance Items
Each week	Check the coolant level of the water chiller.
Each month	Change the coolant. Check the condenser of the water chiller.
Each 3 months	Change the deionizer cartridge and coolant filter. Remove excess dust and debris of the PSU, laser and the water chiller.

6．Troubleshooting

Some basic troubleshooting steps are given below. Please contact us if the issues are not resolved or recurring.

6.1 Problem - The LASER always come with max. output, or the current could not be adjusted.

Possible causes and solutions

(1) Incorrect control terminal connections of the PSU. Try to checkout the connection.

(2)PSU failure. Change a PSU

(3)Control board failure of the laser machine. Contact the machine manufacturer for inspection

6.2 Problem - No laser beam output.

Possible causes and solutions

(1) Incorrect control terminal connections of the PSU or disconnection of control wiring ; Check carefully whether the terminals and connecting wires are connected properly or if they are disconnected.

(2) The water protection of the chiller is faulty, and the cooling fluid of the chiller is insufficient; Replace the water protection device or add cooling fluid.

(3) The power supply failure, or external power supplying problem; please try to replace the equipped power supply or check the main power supplying.

(4) The laser machine control board is malfunctioning; please contact the laser machine manufacturer for testing.

(5) Laser failure; please contact our company for related tests.

6.3 Problem- Arching

Possible causes and solutions

(1) The connecting wire between the laser and the power supply is damaged or disconnected; please try to replace the connecting wire.

(2) Laser failure; please contact our company for related tests.

(3) The laser machine is poorly grounded or has no grounding. Ensure that the ground wire is reliably grounded.

6.4 Problem - Coolant temperate continues to rise.

Possible causes and solutions

(1) The cooling capacity of the chiller is too small; please replace the chiller with a higher power.

(2) Poor ventilation around the chiller; please move the chiller to a well-ventilated location.

(3) The condenser is contaminated; please clean the condenser or replace the condenser.

(4) Lack of coolant; please add enough coolant.

(5) The coolant is contaminated; please replace the coolant.

7 . Specifications

Model	DLT-40Z	DLT-300P
Rated Power (W)	300-320	290-300
Beam Quality (M^2)	≤ 1.1	≤ 1.1
Beam Divergence （mrad）	≤ 3	≤ 3
Power Instability （%）	≤ ±5	≤ ±5
length （mm）	1850	1850mm
Width （mm）	270	270
Thickness （mm）	146	146
Weight （kg）	26	16

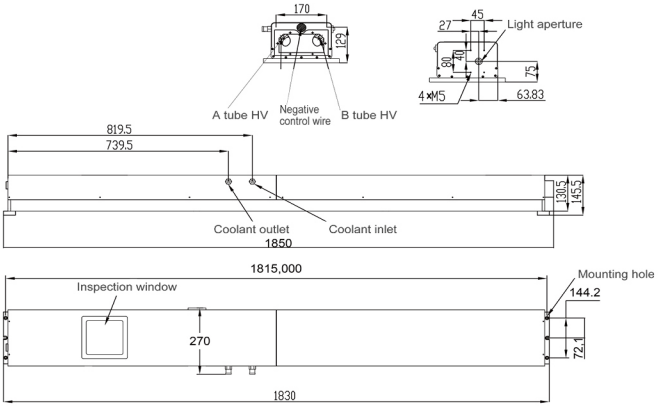
7.1 Laser

Model	DLT-40Z	DLT-300P
Recommended Output Current（mA）	36	26
Max Current（mA）	40	32
Length （mm）	320	320
Width（mm）	210	210
Thickness（mm）	80	80
Weight（kg）	5（Per）	5（Per）

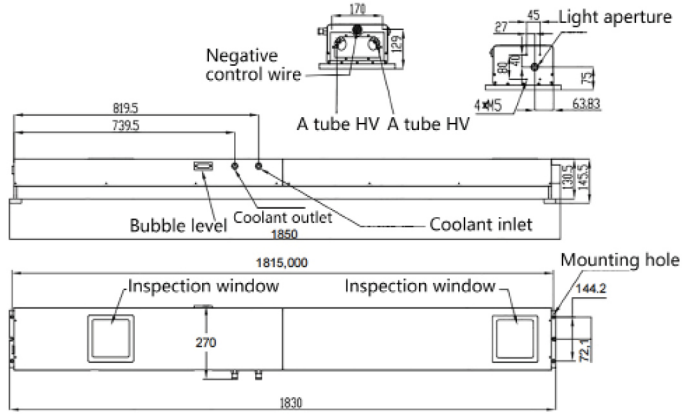
7.2 Power Supply

8. Installation Dimension Drawing

DLT-30Z



DLT-40Z



专业激光器件品牌智造者

Reputable manufacturing expert of LASER equipment

+86-431-8462-3618 www.yl-laser.com Sales@yl-laser.com

总厂地址:中国，吉林省长春市北湖科技开发区北展街555号

Address: No. 555, Beizhan St. Beihu Science and technology development area, Changchun city, Jilin Province.,China

分厂地址:中国，吉林省长春市北湖科技开发区雅安路1588号

Address: No.1588,Ya'an Road,North Lake Science and Technology Development Zone Changchun 130102,Jilin Province,China

邮编：130102
电话：+86-431-8462-3618
国际业务：+86-159-0443-2231
国内业务：+86-187-4309-7987
迪拜办事处：+97-156-2701-263
售后及客服：+86-188-4301-3576
+86-187-4309-7989
投诉及建议：+86-187-4309-7987

Postcode：130102
Tel：+86-431-8462-3618
International Sales：+86-159-0443-2231
Domestic Sales：+86-187-4309-7987
Dubai Office：+97-156-2701-263
Customer Service：+86-188-4301-3576
+86-187-4309-7989
Complaints：+86-187-4309-7987