
Pre-Installation Information For Sirah Pulsed Dye Laser Systems

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Introduction

Thank you for your purchase of a Sirah / Spectra-Physics Dye Laser system. This pre-installation brochure gives you all information you need to prepare the installation of your laser system.

Some preliminary planning is essential to avoid unnecessary delays during installation and to ensure easy operation and access to your systems. You are requested to carefully consider your operating environment prior to installation. Proper utility parameters must be maintained for each system.

You are responsible for meeting the pre-installation requirements prior to installation, with due consideration given to all applicable building and safety codes.

Detailed checklists of pre-installation considerations are provided in this brochure for the Dye Laser Series (*Cobra*, *Cobra-Stretch* and *PrecisionScan*, see Section **Error! Reference source not found.**), Frequency Tripling and Mixing Units (*THG-205* and *DFMNIR*), the Autotracking Frequency Conversion Unit *Auto-FCU* (Section **Error! Reference source not found.**) and the *WS-Sirah Built-In wavemeter* (Section **Error! Reference source not found.**). Please note that all checklists are valid for dye laser systems pumped by Nd:YAG lasers with repetition rates of up to 50 Hz. Please contact Sirah or Spectra-Physics in case you use another pump laser or higher repetition rates.

We at Sirah and Spectra-Physics, Inc. intend to provide you with responsive support so that you can derive great satisfaction and value in using our systems for your application. In case of any questions call 800 456-2552.

When the System Arrives

1.1 Inspection

When the system arrives, any sign of damage to the shipping crates should be brought to the attention of the delivering freight company. A claim must be filed with that commercial carrier, usually within 30 days. Notify the originating Sirah or Spectra-Physics office of any shipping damage.

Each system is supplied with a user's manual, which is in general included in a Service Box, containing further tools for your everyday work with the laser system. Unpack this manual first, and leave the laser system itself in the crate. Especially, leave the dye circulator systems in the crate and avoid touching the circulator's tubing system. The dye cells have to be treated extremely carefully, and you should first read the respective sections in the laser manual before handling them.

Read the manual. It contains valuable and important information about how to operate your laser system. *Before unpacking the dye circulators carefully read Sections Maintenance and Safety Precautions, of your dye laser manual.*

Your packing list shows all items that you have ordered. Open all the packages and check each item for possible damage during shipping. Check the items against your packing list. Some items may have been installed at the factory.

Please report any missing or damaged items to Sirah or Spectra-Physics, or to the respective sales engineer. Addresses may be found in Section **Error! Reference source not found., Error! Reference source not found.**

1.2 Review Instruction Manuals

When you have read the manual, familiarise yourself with the system. You are encouraged to spend as much time as possible reviewing the system components before your Sirah or Spectra-Physics service engineer arrives for the installation and training.

1.3 Laser Safety Considerations

In addition to reviewing the sections in the manuals regarding laser safety, be sure to have the proper safety glasses available for ALL lab personnel present during the installation and testing of your system. For more information, please call Sirah or Spectra-Physics. Addresses and phone numbers are summarised in Section **Error! Reference source not found.**

When the System Arrives

1.4 Diagnostics

During the course of installation, power measurements will be demonstrated. To demonstrate other published specifications, consult your Sirah or Spectra-Physics Service Engineer to determine additional equipment that may be required to conduct the necessary tests. Customers are encouraged to provide their own power meter.

1.5 Computer Requirements

Most Sirah instruments have to be controlled by an external computer (PC). Computer requirements for each Sirah instrument are specified in the following chapters. Set up an appropriate computer system close to the place where your laser system will be installed. Make sure that the computer system, including all required ports, is correctly working.

2.1 Location and Environment

The location and environment of your system should have the following features:

- Safe location that meets all applicable building codes.
- Easy access and adequate clearance around the instrument.
- Consider room requirements for future maintenance and upgrades by your Sirah or Spectra-Physics Service Engineer.
- Proper vibration isolation may be required for your system. The structural integrity of the floor may be important for some applications.
- Ambient room temperature control is important to the performance of the system. Room temperature changes could interfere with the system's performance. For stable operation on a day-to-day basis, the recommended room temperature range should be 15°C to 25°C and should not fluctuate more than 3°C during an eight-hour period. The optimum room temperature is 20°C. The system should not be placed near air conditioning vents. This may result in changing temperature gradients near the system, as well as stir up dust particles that may settle on critical optical surfaces. Humidity should be controlled to prevent any condensation on optical surfaces.
- Pay attention that some solvents have relative high freezing point e.g. DMSO at 18.7°C and p-Dioxane at 12°C!
- The laser must be set-up on an optical table, for example a lightweight steel breadboard.

Pre-Installation Checklist

Before the arrival of your Spectra-Physics Service Engineer please review the following pre- installation requirements. When all the requirements have been met, initial the boxes and fax a signed copy to the Spectra-Physics Service department at **(408) 980-6921**.

Physical Location:

- A location with adequate clearance around system to conduct service and accessible by Spectra-Physics personnel.
- A temperature controlled room.
- Utility services have been installed.
- Local building and safety codes are in compliance and have been verified.

When Your System Arrives:

- Check crates for damage.
(If damaged, file a claim with the carrier and notify Spectra-Physics.)
- Uncrate and place the system on your work surface.
(Two or more people may be required to lift some equipment.)
- Compare the packing list with your quotation. Call your Spectra-Physics office about any discrepancies.
- Check that all manuals were received.
- Save all packing and shipping material until the installation has been completed.
- Obtain the correct safety glasses and a power meter.

Customer Signature

Date

Phone Number

Fax Number

E-Mail

Sales Order Number