

Nd:YAG Laser Safety

This section gives:

- ☐ Safety instructions to promote safe and proper use of the laser
- ☐ Warning labels attached to the product
- ☐ Samples of warnings found in this manual



WARNING

The use of controls, adjustments, or procedures other than those specified within this manual may result in exposure to hazardous radiation.

See the laser manufacturer's installation manual for drawings showing the locations of all warning labels for your laser.

The Pulse Energy specification is laser specific, see the laser manufacturer's installation manual for the specifications for your laser. The pulse energy can be as high as 2 Joules per pulse. The following table shows the specifications used for classifying the laser.

Class IV Laser Product

Energy/Pulse	2 Joule maximum
Pulse Duration	2-40 nanoseconds
Nd:YAG Wavelengths	1064 nm and 532 nm

The TSI LASERPULSE Imaging System requires a CDRH certified laser. Do *not* use the TSI LASERPULSE Imaging System with a laser that is not certified.

Nd:YAG laser safety goggles are included in the Model 610019 Nd:YAG Laser Accessory Kit. If you did *not* purchase this Accessory Kit, you should purchase Nd:YAG laser safety goggles.

This PIV system uses a Nd:YAG laser. This is a Class IV type of laser. The laser beam is very powerful and can permanently damage eyes not protected by safety glasses. It has enough energy to burn skin or combustible materials.

Safety Instructions

Always follow the safety rules recommended by the laser manufacturer. To minimize the danger, you must follow these cautions:

- ☐ Wear laser safety glasses.
- ☐ *Never* look into the laser beam. If you must look at the beam, view it from an angle and in the direction in which the beam is traveling.
- ☐ Do *not* look at laser beam from a reflective surface. Block beams from reflecting off a surface whenever possible. A reflected beam can be as dangerous as the beam emitted directly from the laser.
- ☐ Avoid exposing your skin to a laser beam.
- ☐ Operate the laser in an enclosed room.
- ☐ Operate the laser only with people who have been instructed in laser safety.
- ☐ Post warning signs outside the room.
- ☐ Do *not* use the laser near combustible materials.

Laser Safety

Warning Labels on Lasers

TSI's PIV systems use different models of the Nd:YAG lasers. Use only lasers certified with the Office of Compliance Center for Devices and Radiological Health. See the laser manual for labeling and safety information about your laser.

Safety Labels in Manual

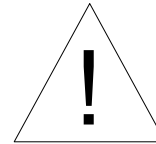
This section acquaints you with the advisory and identification labels on the instrument and used in this manual to reinforce the safety features built into the design of the instrument.

Caution



C a u t i o n
Caution means <i>be careful</i> . It means if you do not follow the procedures prescribed in this manual, you may do something that might result in equipment damage, or you might have to take something apart and start over again. It also indicates that important information about the operation and maintenance of this instrument is included.





Warning



W A R N I N G
Warning means that unsafe use of the instrument could result in serious injury to you or cause irrevocable damage to the instrument. Follow the procedures prescribed in this manual to use the instrument safely.

Caution or Warning Symbols

The following symbols may accompany cautions and warnings to indicate the nature and consequences of hazards:

	Warns you that uninsulated voltage within the instrument may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any contact with any part inside the instrument.
	Warns you that the instrument contains a laser and that important information about its safe operation and maintenance is included. Therefore, you should read the manual carefully to avoid any exposure to hazardous laser radiation.
	Warns you that the instrument is susceptible to electro-static dissipation (ESD) and ESD protection procedures should be followed to avoid damage.
	Indicates the connector is connected to earth ground and cabinet ground.