Site and Safety Information

Before installation, please read this manual and follow its recommendations for the system.

NOTICE Follow instructions with this label to avoid damaging the system hardware or losing data.

Note Contains helpful supplementary information.

Tip Provides helpful information that can make a task easier.

The following table lists some of the safety symbols and their indications that may appear in the user documentation.

Symbol	Description	Symbol	Description
	This is a mandatory action symbol. It is used to indicate that an action shall be taken to avoid a hazard.		
	This is a prohibition symbol. The graphic in this symbol is used to alert the user to actions that shall not be taken or shall be stopped.		
	This is the general warning sign. Failure to heed the safety precautions could result in personal injury.		
	Alternating current		Earth terminal or ground
	Direct current		Fuse
	Power off		Power on
	Frame or chassis terminal		Power off

Site Preparation

CAUTION

- **Avoid personal injury.** If this equipment is used in a manner not specified in the accompanying documentation, the protection provided by the equipment may be impaired.
- **Avoid personal injury.** Perform only those procedures described in the documentation. If there are other problems, contact us. Any other service must be performed by trained personnel.
- **Avoid shock hazard.** Do not remove the cover of the instrument. All service to the instrument must be performed by trained personnel.

When the instrument arrives, check the exterior of the shipping box for signs of damage. If damage is apparent, contact us or your local distributor for instructions.

- Move the shipping box to the installation location at least 24 hours before installation.

IMPORTANT

- Inside the shipping box, the instrument is sealed in a plastic bag to keep unit dry.
- Allow 24 hours for the instrument to reach room temperature before opening the bag.
- If the bag is opened before the instrument reaches room temperature, moisture could condense on the optical components and cause permanent damage.

- While moving the instrument to the installation location, keep upright.

Note It is important to have all system utilities installed before the spectrophotometer arrives. Utility installations must comply with all local building and safety codes.

Lifting or Moving the Instrument

To avoid risk of injury, use proper lifting techniques when lifting or moving the instrument or other system components.

Workspace Considerations

- **Weight:** 6.78 kg (without printer), 7.2 kg (with printer and paper roll)
- **Dimensions:** 355 mm (L), 385 mm (W), 195 mm (H)
- **Clearance needed:** 32.5 cm
- If you have purchased software to run the instrument from a computer:
  —Plan for location of the computer, monitor and keyboard
  —A standard USB A-B data cable is required to connect the instrument to the computer

IMPORTANT Do not position the instrument so that it is difficult to operate the power switch or access the power supply and power cord.

Temperature and Humidity

- Designed for indoor use at altitudes up to 2,000m (6,500 ft)
- Operates reliably at temperatures between 5 °C and 35 °C non-condensing

- Avoid damage to the optical components
  —Do not place system near sources air conditioning ducts or large windows
  —Do not place system near sources of heat, such as hot plates or heating mantles
  —Do not place system near air conditioning or heating ducts

Storage

- When stored in the original shipping container, the instrument can be exposed to temperatures from -20 °C to 60 °C without damage to the instrument
- Maximum humidity for storage is 85 %RH, non-condensing, between 20 °C to 60 °C

Vibration

- The instrument will perform better in a mechanically stable environment
- Keep instrument away from machinery that may vibrate the floor
- Minimize or eliminate acoustic noise and vibration wherever possible
- Consider placing instrument on a marble top table or counter

  Floor vibration or acoustical noise from heavy manufacturing equipment, computer equipment, or other sources will not damage the system, but it can affect performance and spectral quality.

Magnetic and Electric Fields

- Place instrument at least 5.5 m (18 ft) away from magnetic fields

Electrical Requirements and Safety

CAUTION Avoid shock hazard

- Each wall outlet used must be equipped with a ground. The ground must be a non-current-carrying wire connected to earth ground at the main distribution box
- Only a qualified person using the appropriate measuring device shall check the line voltage, current and frequency
- Only our trained and certified service representatives shall attempt to service a component that carries this symbol

- If a protective cover on a system component appears damaged, turn off the system and secure it against any unintended operation. Always examine the protective cover for transport stresses after shipping
- Even after this instrument has been disconnected from all voltage sources, capacitors may remain charged for up to 30 seconds and can cause an electrical shock
- Do not allow liquid to run over or into any surface where it may gain entry into the instrument
- Do not attempt to remove the cover of the instrument. All service must be performed by our trained and certified service representatives

- Power supplied to the system must be from dedicated, uninterrupted sources
- Power must be free of voltage dropouts, transient spikes, frequency shifts, and other line disturbances
- Use an appropriate grounded power cord for electrical service

- Contact us if the power cord received is not appropriate for the electrical system in your location, or if the power cord becomes damaged

Power Line Conditioning Accessories

- A UPS reduces the probability of a system shutdown if power is lost in the building
- Power line conditioners (which ensure your service is free from sags, surges or other line disturbances) for 120 volt and 220 volt operation can be purchased locally
- Contact us for information about power conditioners and UPS

Electrical Service Specifications

- **Input current:** 1.5A RMS (max.)
- **Input voltage:** 100-240 VAC
- **Line frequency:** 50-60 Hz
- **Line disturbances:** Sags, surges or other line disturbances must not exceed 10% of input voltage (even for a half cycle)
- **Noise:** < 2 V common mode; < 20 V normal mode
- **Power consumption:** 80 W
- Generally, 50% more power should be available than the entire system (including accessories) typically uses

Safety Information

Fire Safety and Burn Hazards

CAUTION Avoid personal injury. Allow lamp to cool before replacement,

NOTICE Do not position the instrument so that it is difficult to operate the power switch or access the power supply and power cord.

To avoid a burn injury and the risk of fire or explosion:

- Use caution when testing flammable or explosive samples (see “Hazardous Materials Including Corrosives and Flammables”)
- Never block any of the vents on the instrument or its power supply
- Use ONLY exact replacement power supplies from us
  Correct wattage, voltage and current levels are essential to the safe operation of your instrument.

Optical Safety

This instrument was designed with a protective housing to prevent user exposure to ultraviolet light.

Hazardous Materials Including Corrosives and Flammables

Spectroscopic analysis may involve the use of solvents or samples which are volatile or corrosive.

WARNING Avoid an explosion or fire hazard. This instrument or accessory is not designed for use in an explosive atmosphere.

CAUTION Avoid personal injury. Do not leave solvents or flammable samples near the instrument. Be sure that the workspace is properly ventilated.

- Use appropriate personal protective equipment when handling these samples
- Solvents and corrosives may damage the surfaces or structure of the instrument if spilled on it
- When working with volatile materials, ensure proper workspace ventilation to minimize entry of vapors into the interior of the instrument

Biohazard or Radioactive Materials and Infectious Agents

Biological samples such as tissues, body fluids, infectious agents, and blood of humans and other animals have the potential to transmit infectious diseases. Wear appropriate protective equipment. Individuals should be trained according to applicable regulatory and organization requirements before working with potentially infectious materials. Follow your organization's Biosafety Program protocols for working with and/or handling potentially infectious materials.

WARNING Reduce the risk associated with potentially infectious samples:

- Do not spill samples on any of the instrument components.
- If spill occurs, disinfect the external surfaces immediately following your laboratory protocols.

Instruments, accessories, components or other associated materials should not be disposed of and may not be returned to us or other accessory manufacturers if they are contaminated with biohazard or radioactive materials, infectious agents, or any other materials and/or conditions that could constitute a health or injury hazard to employees. Contact us if you have questions about decontamination requirements.

Contact us: www.thermofisher.com

For Research Use Only. This instrument or accessory is not a medical device and is not intended to be used for the prevention, diagnosis, treatment or cure of disease.

WARNING Avoid an explosion or fire hazard. This instrument or accessory is not designed for use in an explosive atmosphere.

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