isolight®

Site Preparation Guide

isoplexis

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Revision History

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Rev. 1.7

IsoLight Site Preparation Guide

Contents

Introduction

Congratulations on the purchase of your IsoLight instrument. This document will guide you through the process of receiving, installing and getting training on your new IsoLight. If you have any questions or concerns during this process, please contact IsoPlexis technical support at:

support@isoplexis.com

475-221-8402

Installation and Training Workflow

The installation and training process will follow these steps:

1. Scheduling: Your Field Service Engineer (FSE) and Field Application Scientist (FAS) will both contact you to choose installation and training dates. The installation will take three days and the training will take three days. These do not need to happen the same week.
2. Shipping and Receiving: Your FSE will provide you with instrument shipment tracking info. When the instrument arrives, you will ensure the crate is not damaged (see page 5). Your FAS will provide you with shipment tracking info for the training reagents kit. When you receive the training reagents, please place them in appropriate storage (see page 5).
3. Site Preparation: You will review the items on the "Site Preparation Checklist" on page 4 and make sure that the site is ready. One week before the installation date, your FSE will have a phone meeting with you and will collect a completed and signed Site Preparation Checklist.
4. Installation: On the week of the actual installation, you will move the instrument to the install site and your FSE will install the instrument.
5. Training: On the week of the instrument training, your FAS will come on site and will train your team on how to use the instrument.

Site Preparation Checklist

Your FSE will contact you a week before installation to ensure that all items on this checklist have been reviewed and are ready.

We also ask that you include pictures of your setup with the following:

- Bench space where the IsoLight will be installed
- Regulator set pressure (30-70psi)
- Supply line tubing (OD 1/8", ¼", 5/32", or 4mm)

In the event that the site preparation checklist is not complete by the time of install, the installation may need to be rescheduled.

Completed	Initials	Site Preparation Requirement
☐		Shipping and Receiving (see page 5)
☐		Safety (see page 5)
☐		Bench space and clearance (see page 6)
☐		Environmental (see page 8)
☐		CO_2 (see page 9)
☐		Electrical (see page 11)
☐		Data transfer method setup (see page 12)

Customer Representative Name _____

Customer Representative Signature _____

Date_____

Shipping and Receiving

Crate Size and Weight

Your IsoLight instrument will come in a crate on a pallet of the following size and weight

Height	Length (depth)	Width	Weight
103 cm (40.5″)	107 cm (42″)	117 cm (46″)	191.5 kg (422 lbs)

Inspecting the Shipment

When your IsoLight arrives please inspect the crate for exterior damage and other evidence of rough handling. If you suspect rough handling, please immediately notify IsoPlexis and document the damage and evidence.

NOTE: Please do NOT open the crate and be prepared to provide adequate space for storage until the installation date. Your instrument is shipped in a special crating system. Your IsoPlexis Field Service Engineer is the only one authorized to open the crate and unpack the instrument.

Receiving Reagents

Your training kits will arrive separately from the instrument. When you receive them, please check the contents against the packing list and store the regents as specified.

Safety

Customer Responsibilities

The following safety equipment and protection from hazards must be available at the installation site: Protection from any sources of hazardous chemicals, radiation (for example, lasers, radioisotopes, radioactive wastes, and contaminated equipment), and potentially infectious biological material that may be present in the area where the service representative will work.

- Eyewash
- Safety shower
- Eye and hand protection
- Adequate ventilation, including vent line/fume hood, if applicable
- Biohazard waste container, if applicable
- First-aid equipment
- Spill cleanup equipment
- Applicable Safety Data Sheets (SDSs)

Supported BioSafety Levels

IsoPlexis does not install, service, or repair instruments in areas designated BioSafety Level 3 (BSL-3) or BioSafety Level 4 (BSL-4).

Disposing of Waste

WARNING! CHEMICAL HAZARD. Refer to Safety Data Sheets (SDSs) and local regulations for handling and disposing of plastic consumables. Follow local municipal waste ordinances for proper disposal provisions to reduce the environmental impact of plastic consumables.

WARNING! CHEMICAL HAZARD. Before handling chemicals, refer to the Safety Data Sheet (SDS) provided by the manufacturer, and observe all relevant precautions.

WARNING! CHEMICAL HAZARD. All chemicals in the instrument, including liquid in the lines, are potentially hazardous. Always determine what chemicals have been used in the instrument before changing reagents or instrument components. Wear appropriate eyewear, protective clothing, and gloves when working on the instrument.

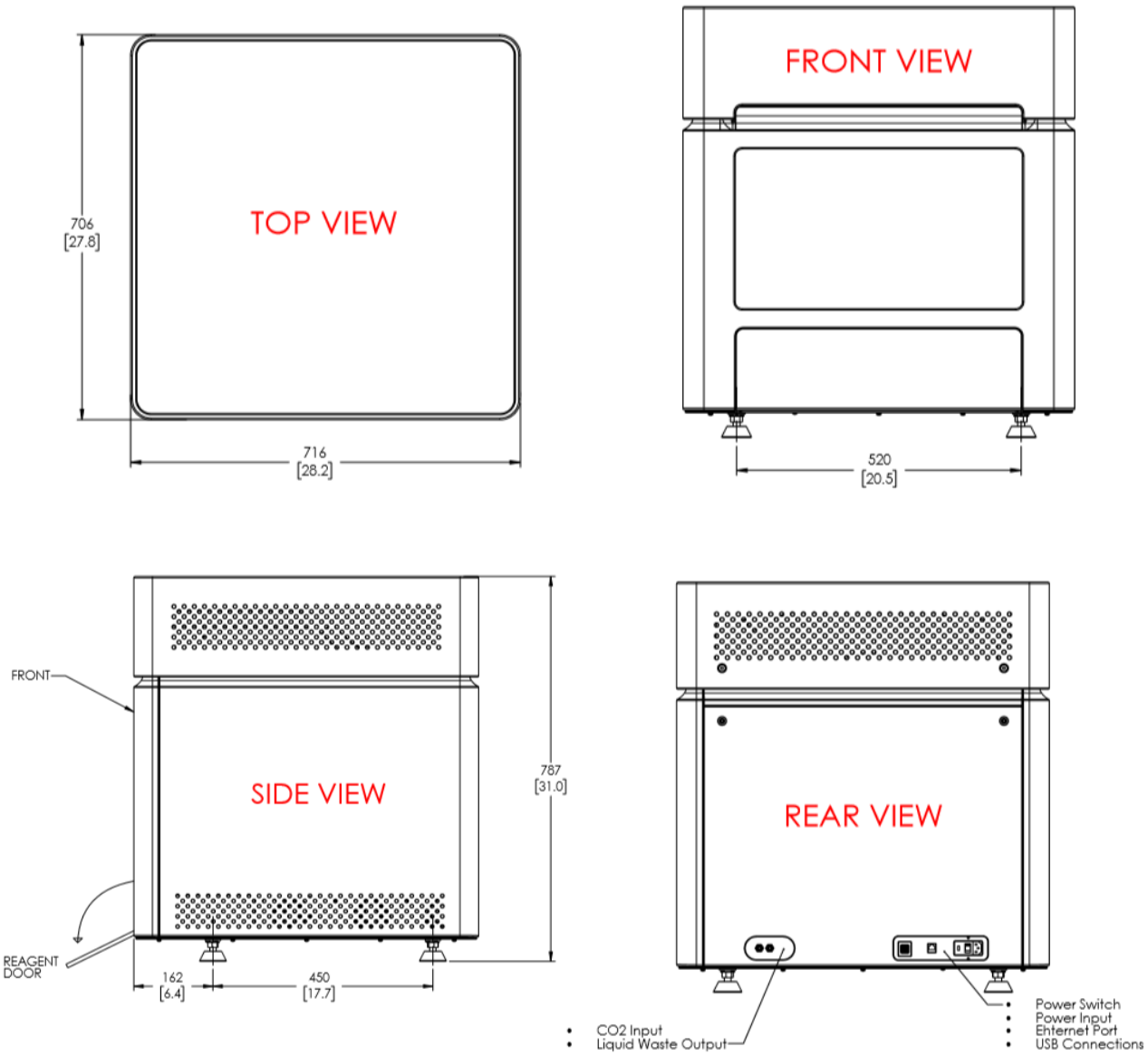
WARNING! CHEMICAL HAZARD. Waste produced by instruments can be hazardous and can cause injury or illness.

Bench Space and Clearance

The designated bench space for the IsoLight must meet the following requirements:

Item	Requirement
Weight Capacity	118 kg (260 lbs.)
Width (horizontal space)	Instrument = 72 cm (28.5”) Service and Ventilation = 30 cm (12”) per side TOTAL = 132 cm (52”)
Depth (front to back)	Instrument = 71 cm (28”) Ventilation = 10 cm (4”) TOTAL = 81 cm (32”). A 10 cm (4”) front overhang is acceptable.
Height (vertical space)	Instrument = 77 cm (30.5”) Service and ventilation = 30 cm (12”) TOTAL = 108 cm (42.5”)

IsoLight Dimensions



Dimensions are in millimeters [inches].

In addition, the instrument must be located on a bench free of vibration creating equipment such as centrifuges and compressors and away from sources of sunlight, heat, draft, and electronic noise. See Environmental below.

Environmental

The area where the IsoLight operated must meet the following environmental requirements

Item	Requirement
Altitude	Between sea level and 2000 m (6500')
Humidity	Recommended range 40-60% non-condensing.
Operating Temperature	18°C to 25°C (65°F to 77°F) Note: The room temperature must not fluctuate more than 2°C over a 2-hour period.
Vibration	The bench should be free of contact with equipment that causes vibration such as centrifuges, compressors, freezers and pumps.
Electronic Noise	Instrument must be at least 100 cm (38") from major sources of electronic noise such as refrigerators or microwaves
Heating and Cooling	Instrument must not be in direct sunlight or adjacent to or below heating and cooling ducts.
Pollution	The IsoLight is intended to be used in Office or Laboratory controlled environments. The instrument must be away from any vents that could expel particulate matter.

CO_2

The IsoLight instrument requires a clean, consistent, regulated supply of CO_2 in order to operate. CO_2 is used both to maintain ambient CO_2 in the incubation chamber and as a pressurized gas to move liquid reagents and cleaning solutions. Failure to provide proper and adequate CO_2 will lead to failed runs and loss of data.

Item	Requirement
Quality	99.5% pure or above
Consumption	A single run will consume around 17 lbs of CO_2 (≈87 ft^3 or ≈2500 L at room temp)
Tank	The tank must be 50 lbs or larger. The tank should not contain a syphon tube. Do not use liquid CO_2
Shut-Off	There should be a manual shut-off valve easily within reach of the instrument.
Pressure	The instrument requires 30 to 70 PSI. A low-pressure regulator should be installed at the instrument. Contact IsoPlexis for a recommendation if required.
Supply Line	A flexible plastic (Nylon, Polypropylene, Polyurethane) supply line should bring the CO_2 to where the IsoLight will be placed. Supported outer diameters include 1/8”, 1/4", 5/32” and 4 mm OD.

CO_2 Supply Options

Option	Description	Benefits and Details
A. "House" Gas	Gas at high volume is stored at the customer's site. House gas must be available at the location of the IsoLight at the pressure specified on page 9.	Tanks are not handled and placed near the IsoLight by lab personnel
B. Large tank (~200 lbs of CO_2)	These CO_2 tanks are typically delivered & placed near the IsoLight by a gas supplier. Tanks dimensions approximately 53 cm (21") in diameter, 155 cm (61") tall. IsoPlexis can supply a regulator. Product code ISOREG-01 or ISOREG-02.	Monitoring the number of completed IsoLight runs is required to maximize CO_2 usage efficiency Tanks must be replaced approximately every 15 IsoLight runs.
C. Standard tank (50 lbs of CO_2)	Tanks dimensions approximately 25 cm (10") in diameter, 140 cm (55") tall. IsoPlexis can supply a regulator. Product code ISOREG-01 or ISOREG-02.	Monitoring the number of completed IsoLight runs is required to maximize CO_2 usage efficiency Tanks must be replaced every 2 IsoLight runs. Tanks must be handled and placed near the IsoLight by lab personnel
Option B and C can be configured in a single or multiple tank configuration	When configured in a single tank setup (ISOREG-01), usage must be monitored, and tanks replaced as described above. When configured in a multiple tank setup (ISOREG-02), usage must still be monitored but not as closely. When primary tank is emptied it will automatically switch to the secondary tank providing uninterrupted supply of CO_2 to the IsoLight. When the IsoLight is not in the process of a run, the empty tank must be replaced to provide reserve capacity for future runs.	Continuous CO_2 delivery is provided by the reserve capacity of a multiple tank configuration. Monitoring of the tanks is still required but not as critical compared to a single tank configuration.

Electrical

WARNING! For safety, the power outlet used for powering the instrument requirements must be accessible at all times. In case of emergency, you must be able to immediately disconnect the main power supply to all the equipment.

Item	Requirement
Voltage	100-240 V AC (±10% of nominal voltage)
Frequency (Hz)	50/60
Rated Current (A)	6 via building code compliant 15A circuit
UPS	**Recommended**: Customer supplied 1.5-kVA uninterruptible power supply. Contact IsoPlexis for recommendation if required.
Cord	Use an approved UL Listed detachable power supply cord, as supplied, to connect the system to the wall or UPS

Data Transfer and Management

The IsoLight system requires transfer of raw data from the IsoLight instrument to an external PC for analysis through the IsoSpeak software. IsoPlexis supports three methods of data transfer off of the IsoLight.

- USB removable media
- Ethernet to local network
- Ethernet directly to IsoSpeak analysis workstation

In all three cases the instrument may be configured to automatically upload image data to a specified location during run time. **Each Single Cell chip requires approximately 15 GB of data and each CodePlex chip requires approximately 7 GB of data.**

It is recommended the customer understand the options provided prior to device installation, so the field engineer present may assist with setup.

Once connection to a desired device is established, the user is free to specify the exact path the IsoLight will upload to.

Restrictions and Considerations

- IsoPlexis does not support customer administration of the IsoLight.
- IsoPlexis does not support installation of third-party software on the IsoLight.
- IsoPlexis does not support updating of third-party software components on the IsoLight.
- IsoPlexis recommends only connecting the IsoLight to local networks.

Data Transfer Methods

USB removable media

Data may be transferred to removable media via USB. This method requires no network connection or special configuration. IsoPlexis only supports this option with the flash drive provided; Alternate third-party drives may impair instrument function and are used at the user's own risk.

Ethernet to local network

Data may be transferred to a network share location. This method requires no special instrument configuration. However, IsoPlexis can provide IT technical assistance if required. Upload speed may be limited by the quality of the network attached network connection. **IsoPlexis recommends only connecting the IsoLight to local networks.** The following needs to be provided by the user.

- Network connection
- SMB file share
- Network credentials
- IP Address or Hostname of share

Ethernet directly to IsoSpeak analysis workstation

Similar to the network share method, the Isospeak laptop may be directly used as a server upload location. **However, this method requires configuration of instrument settings by an IsoPlexis technician.** This can be completed at installation by your FSE. IsoPlexis offers an optional network cable and USB ethernet adapter.

Related Documents and Support

Document	Pub. No.	Description
IsoLight User Manual	795-00017-01	Describes the IsoLight hardware and firmware and provides information on preparing, maintaining, and troubleshooting the system.
IsoSpeak User Manual	795-00018-01	Describes the use of the IsoSpeak software for data preprocessing and analysis.

Visit IsoPlexis.com/support for the latest in services and support, including:

Customer and technical support:

- Product FAQs
- Product documentation, including:
    - User guides, manuals, and protocols

Note: For SDSs for reagents and chemicals from other manufacturers, contact the manufacturer.

Limited product warranty:

For warranty information please contact IsoPlexis at support@isoplexis.com