www.sciencetech-inc.com sales@sciencetech-inc.com (519) 644 0135 (Canada)

SCIENCETECH
Making Light Work Better Since 1985

Applications

- High Temperature Solar Thermal Research (e.g. Heat transfer and energy storage in molten salts research, etc.)
- Concentrated solar power and liquid-based solar receivers research
- Solar fuel research (e.g. solar hydrogen)
- Solar syngas, high power solar pyrolysis, high temperature gasification
- Photosynthetic Irradiance
- Photo biological research
- Material testing
- Space application
- Semiconductor industry
- Defense application

Features

- Turn-key operation
- Customization available
- Touchscreen and software control
- Safety interlocks

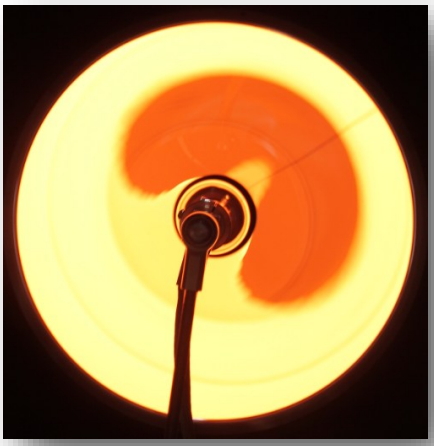
Ultra Powered Light Sources
Xenon Arc Lamp 6.5 kW

MADE IN CANADA
FABRIQUÉ AU CANADA

Version 4.3 2025-11-11

Ultra Powered Xenon Arc Lamp Housings

OVERVIEW



The UPLH-series lamp housing is a modular lamp house design which allows you to customize depending on the required application. Standard offerings include elliptical reflectors, but the lamp house can be easily customized to meet other needs. The Sciencetech UPLH-series lamp housing is designed for 6500 W Xenon short arc lamps.

The UPLH-series lamp housing includes a forced air-cooled fan mounted on the top and bottom panel of the lamp house (when in horizontal operation). The system comes with a glass output window.

Configuration-Housing

Configuration process in 2 Steps

Step One (1) Select The Model

1. A SELECT THE OPTICAL COLLECTION

1. B SELECT POWER SUPPLY VOLTAGE

Lamp House Series	Optical Collection	Power Supply Voltage	Model
UPLH-	-EF [1]	200/240	UPLH-EF-220-PAC
		380/480	UPLH-EF-480-PAC
	-E [2]	200/240	UPLH-E-220-PAC
		380/480	UPLH-E-480-PAC

Selection Information

1). **-EF** - Elliptical reflector, F/2.4

2). **-E -** Elliptical reflector collection, F/2.7

Talk to one of Sciencetech's technical representatives to help decide what is the best option for your application!

Step Two (2) Select orientation

The UPLH-series high-powered xenon arc lamps can be operated in the horizontal or vertical orientation. Feet are required for horizontal orientation, and a stand or mounting is required for vertical operation. The UPLH is configured for horizontal operation standard. Vertical operation will require the addition of a downward-facing stand.

Beam Orientation	Support required
Horizontal	Adjustable Feet (standard)
Downward-facing	Downward-facing Stand (optional)

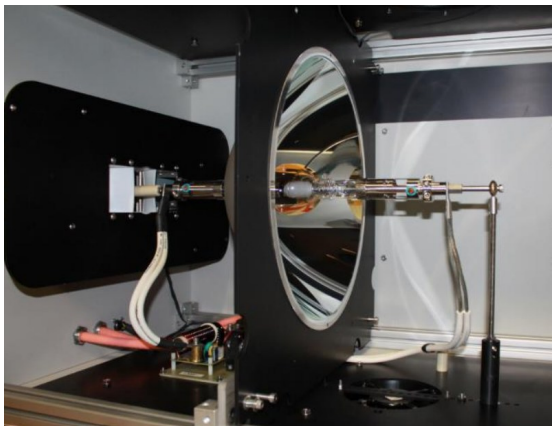
SELECT YOUR BEAM ORIENTATION

SCIENCETECH

Ultra Powered Xenon Arc Lamp Housings

SPECIFICATIONS

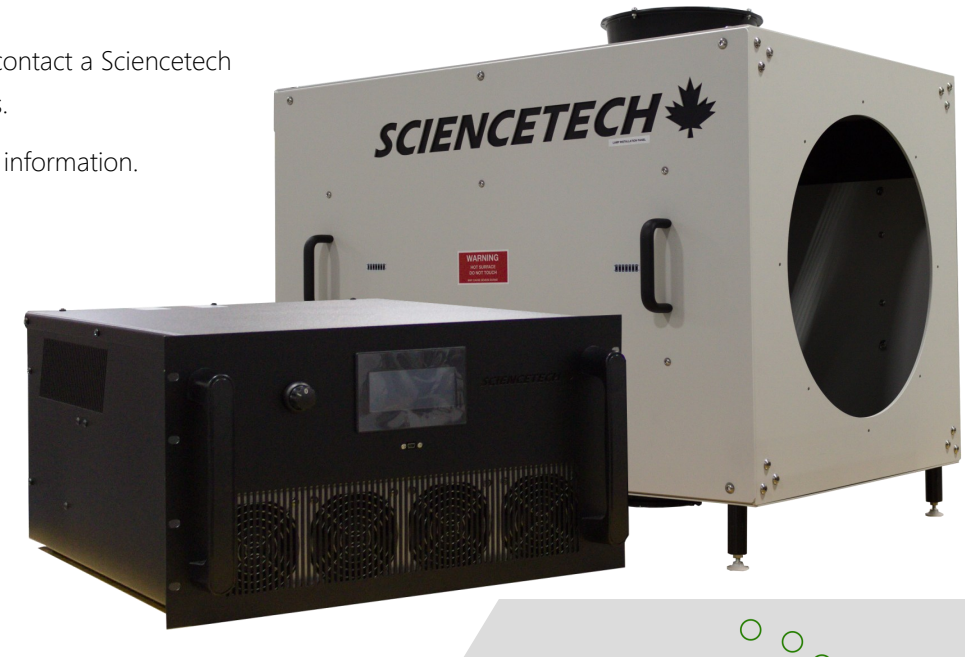
Model	UPLH	
Lamp Type	Xenon Short Arc (6.5 kW)	
Optics	Elliptical Reflector, Protected Aluminum, Al + SiO_2 [3]	
F/#	By reflector selection	
	F/2.4 (EF)	F/2.7 (E)
Dimensions (L×W×H)	983 × 713 × 740 mm [4]	
Weight	Lamp House 65 kg	Power Supply 27 Kg
Compatible Power Supply Model	PS-XE6500-A-T-220 (150-9320)	PS-XE6500-A-T-480 (150-9310)
Power Supply Electrical Requirements	200-240 VAC 3 Phase, 31.3-26.1 A	380-480 VAC 3 Phase, 16.8-13.3 A



Our most popular offering is the UPLH-EF model which includes an F/2.4 reflector for very high-power over a small area at the focus plane of the system.

3). Other coating options available, contact a Sciencetech Technical Specialist for more options.

4). See DIMENSIONS page for more information.

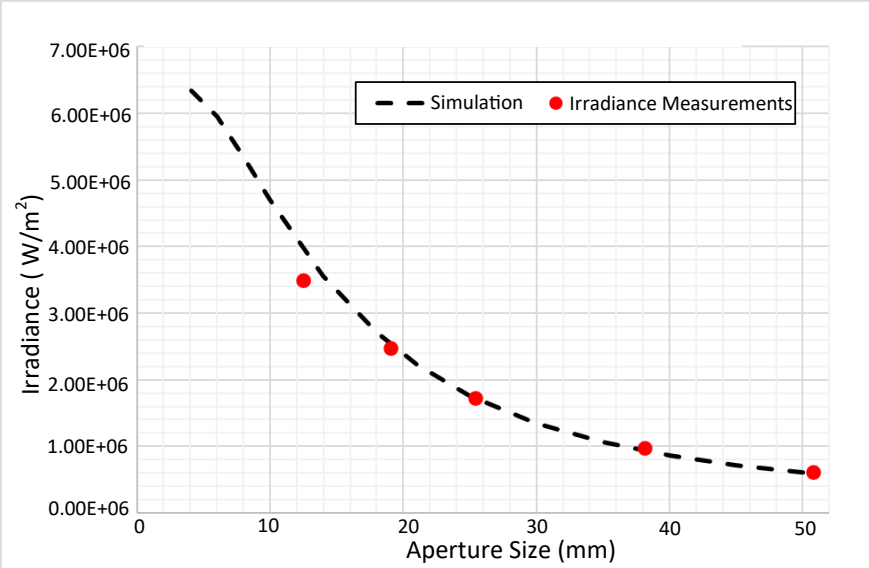


Ultra Powered Xenon Arc Lamp Housings

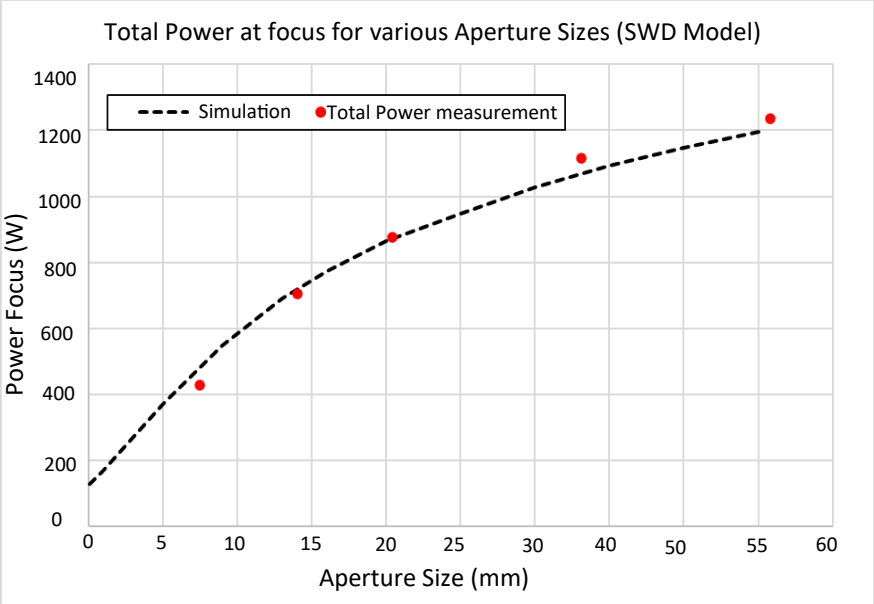
PERFORMANCE (-EF)

The UPLH-EF with a 6500 W xenon arc lamp was modeled in FRED (optical modelling software) for power over various areas at the focal plane. Measurements of the system were then taken to confirm the optical modelling results and are shown below.

The graph below shows the irradiance vs diameter in mm at the focus plane. This shows how the irradiance increases for smaller sized apertures at the focus plane.



The graph below shows the total power vs diameter in mm at the focus plane. This shows how the total power increases for larger sized apertures.



SCIENCETECH

Ultra Powered Xenon Arc Lamp Housings

ACCESSORIES

To cater to specific requirements we have no standard accessories. The following list details some of the possible custom accessories we can add-on to the UPLH:

- Output window
- Custom reflector
- Stands
- Exhaust venting
- Beam turning mirrors
- Homogenizing Optics

Model	SKU	Description
W-FQ-UPLH-E	100-8221	Quartz protection window upgrade.
W-FQ-UPLH-EF	100-8220	Quartz protection window upgrade.
DFS-UPLH	100-8215	Downward facing stand to mount UPLH series lamp house.

Various custom reflectors, coatings, and optics are available for the UPLH and can be customized to meet specific requirements.

Model	Description
-CUST REFL	Custom reflector selection, some other reflector options are available.
-CUST COAT	Custom reflector coating. UV Enhanced Aluminum, Gold, Silver or various Dichroic coatings are available.
-CUST OPTIC	Customized light guiding systems can be coupled to the UPLH series lamp house. For lamps with high power we use a fused silica light pipe polished to perfection. Imaging optics are used to provide high uniformity and can also provide high collimation.

For information on spectral filtering, please see Sciencetech's Bandpass Filters brochure or contact your Sciencetech technical sales representative.

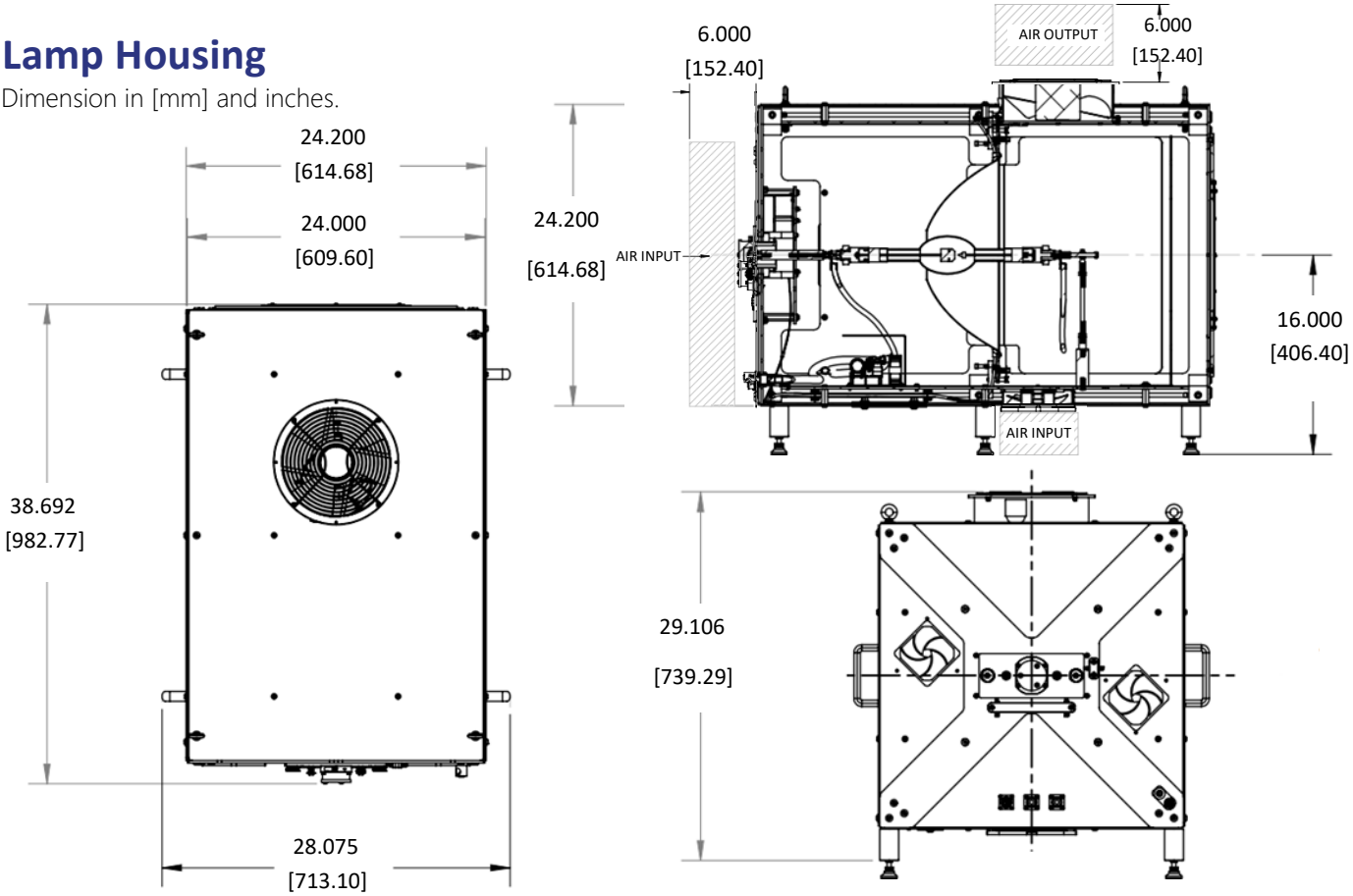
SCIENCETECH

Ultra Powered Xenon Arc Lamp Housings

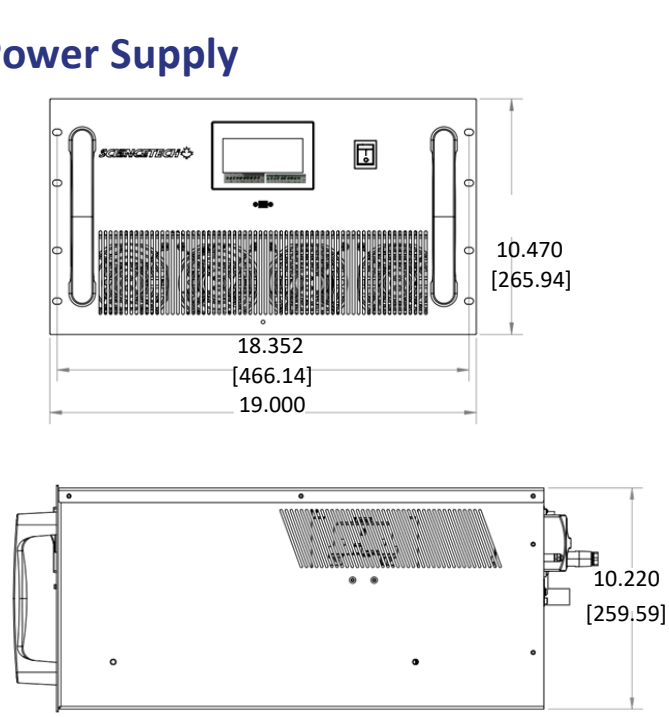
DIMENSIONS

Lamp Housing

Dimension in [mm] and inches.



Power Supply



System shown without adjustable feet required for horizontal operation.

SCIENCETECH