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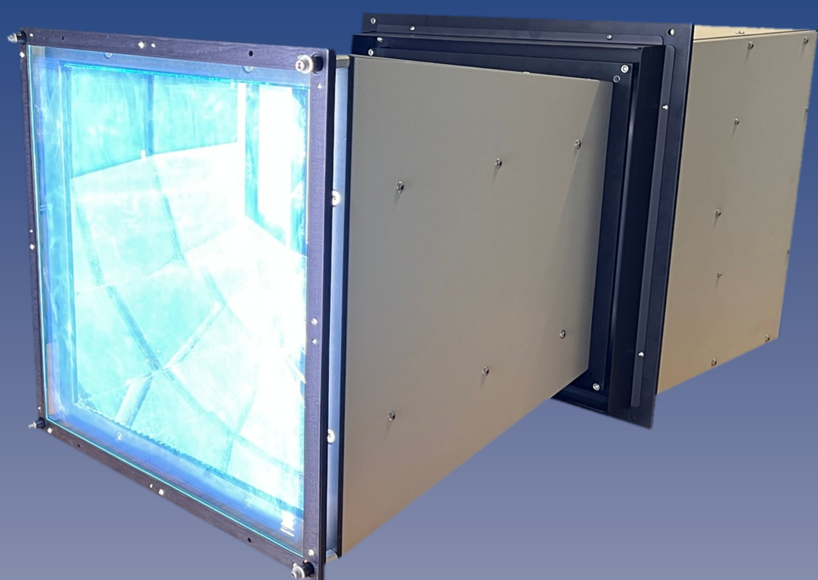
Making Light Work Better



Applications

- Measuring Module Performance
- Monocrystalline / Polycrystalline Silicon Panel Testing
- UV Resistance
- System Reliability
- Material Stability
- Colour Fastness
- Accelerated Age Testing

Features

- Large Target Size
- Continuous Illumination
- High Efficiency
- Excellent Depth of Field, Ideal for Irregularly-shaped objects
- 1 Sun Intensity
- Can be Tiled to Cover Large areas

MADE IN CANADA
FABRIQUÉ AU CANADA

Large Area Illumination Systems (LASI) and (XE-LUM)

2025-10-16 Version 3.8

Large Area Solar Illuminator

SPECIFICATIONS

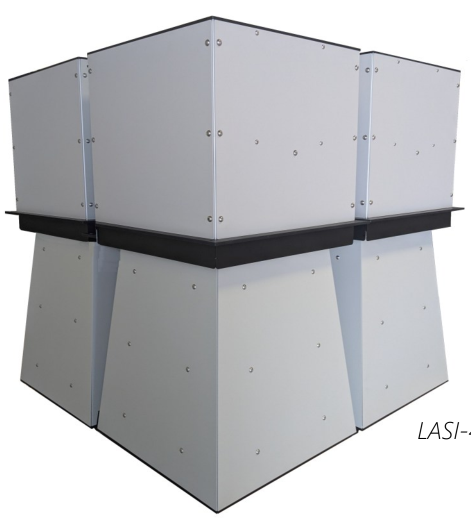
Each LASI and XE-LUM unit contains a light source, integrated power supply, beam homogenizer (LASI only), and IR filter to adjust to the solar spectrum for AM1.5G class C. Horizontal and vertical (downward-facing) stands are available as standard products for a single and a 2 × 2 unit LASI, but custom stands are available upon request.

The modular design allows for upgrades to larger target areas in the future by adding multiple LASI units with a gain of 0.5 × 0.5 m with each additional unit arrayed to make the desired target size. The LASI system produces depth of uniformity and uniformity over larger areas by combining LASI modules together.

Model	LASI-1	LASI-4 (2×2)	LASI-16 (4×4)	LASI-36 (6×6)	XE-LUM
Illumination Area (m)	0.5 × 0.5	1.0 × 1.0	2.0 × 2.0	3.0 × 3.0	0.5 × 0.5
Typical Non-uniformity	< ±15 % over 0.3 × 0.3 m	< ±15 % over 0.5 × 0.5 m	< ±15 % over 1.5 × 1.5 m	< ±15 % over 2.5 × 2.5 m	< ±50 % over 0.5 × 0.5 m
Working Distance (m)	0.4	1			0.4
Collimation Half Angle (°)	10				20
Temporal Instability Classification	Class A				
Spectral Match Classification	Class C				
Lamp Irradiance (Suns)	0.7-1.0				
Lamp Type	1600 W Xenon Arc Lamp				
Spectral Range (nm)	350-1700				
Depth of Uniformity (m)	N/A	±0.5 m around target plane ±20% intensity	±0.5 m around target plane ±20% intensity	±0.5 m around target plane ±20% intensity	N/A
Duty Cycle	Continuous				
Cooling Mechanism	Forced Air				
Power	200 to 240 VAC, 12.1 to 9.0 A, per illuminator				

This system includes 1 IEC 60320 C19 compatible power cables. Region-specific version must be selected at the time of placing an order.

XE-LUM with Stand



LASI-4 (2 × 2 Array)

Custom Solutions

Talk to one of our Application Scientists if you need a larger area of illumination, higher power, increased collimation, or an extended spectral range for your instrument.

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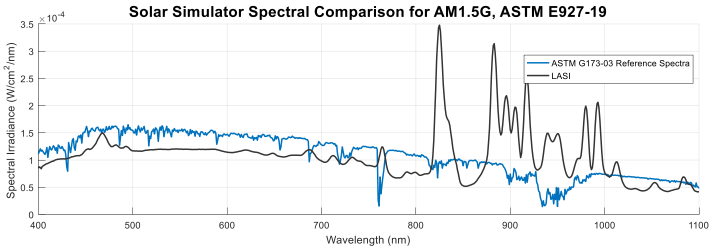
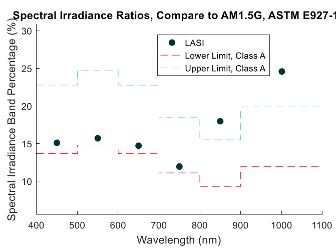
Large Area Solar Illuminator

SPECTRAL MATCH

The standard LASI and XE-LUM units include a thermal optical filter that significantly reduces the infrared wavelength strength emitted by the xenon arc lamp. The inclusion of the thermal filter allows LASI and XE-LUM units to achieve an overall ASTM class C spectral match.

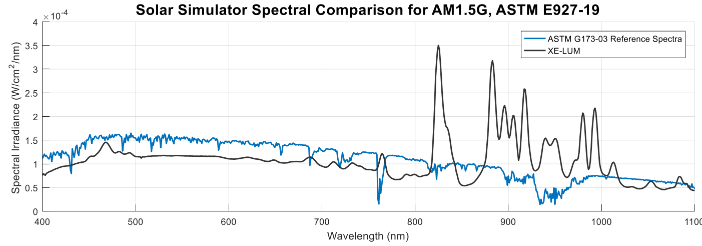
LASI AM1.5G Analysis

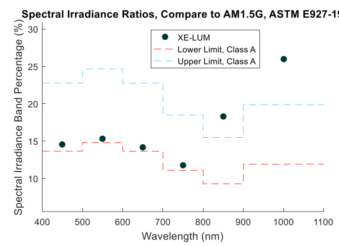




Wavelength	Percentage	Class
400-500 nm	15.1076	A
500-600 nm	15.658	A
600-700 nm	14.7021	A
700-800 nm	11.9637	A
800-900 nm	17.9754	C
900-1100 nm	24.5927	C

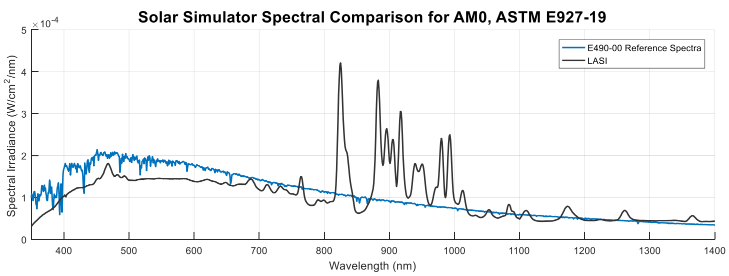
XE-LUM AM1.5G Analysis

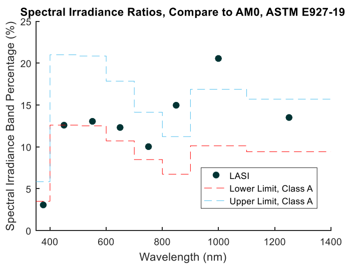




Wavelength	Percentage	Class
400-500 nm	14.5098	A
500-600 nm	15.293	A
600-700 nm	14.1781	A
700-800 nm	11.7425	A
800-900 nm	18.3439	C
900-1100 nm	25.9327	C

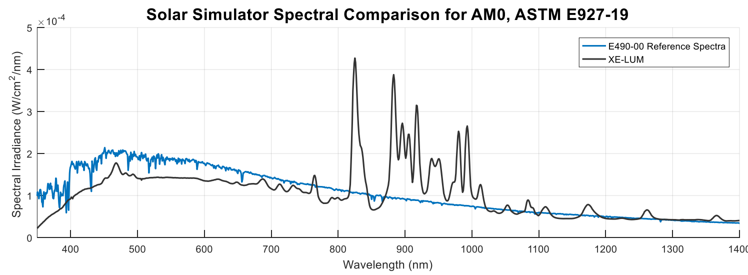
LASI AM0 Analysis

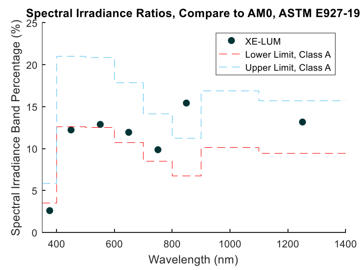




Wavelength	Percentage	Class
350-400 nm	3.044	B
400-500 nm	12.6141	A
500-600 nm	13.0741	A
600-700 nm	12.2755	A
700-800 nm	9.9891	A
800-900 nm	15.008	C
900-1100 nm	20.5329	C
1100-1400 nm	13.4617	A

XE-LUM AM0 Analysis





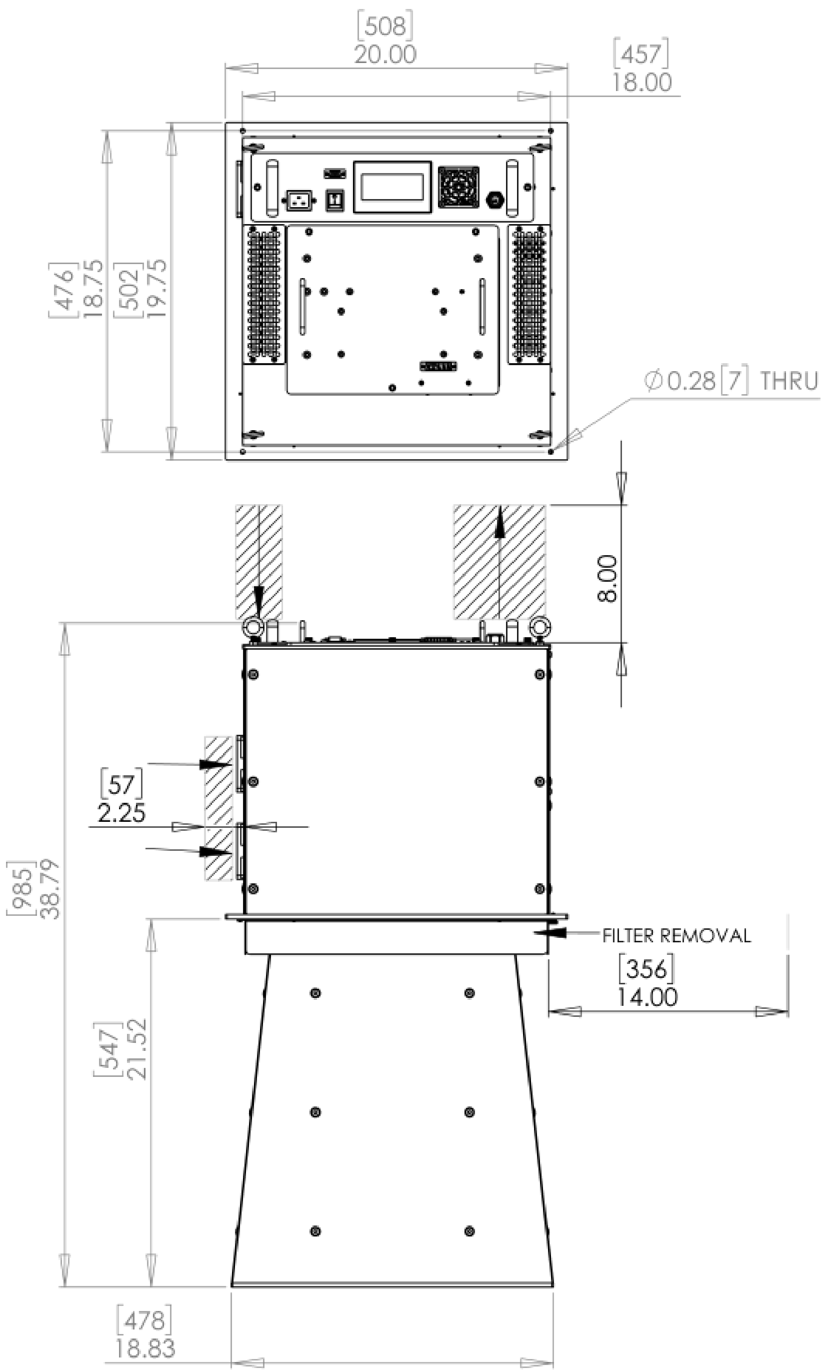
Wavelength	Percentage	Class
350-400 nm	2.6228	C
400-500 nm	12.2164	B
500-600 nm	12.8758	A
600-700 nm	11.9371	A
700-800 nm	9.8865	A
800-900 nm	15.4444	C
900-1100 nm	21.832	C
1100-1400 nm	13.1849	A

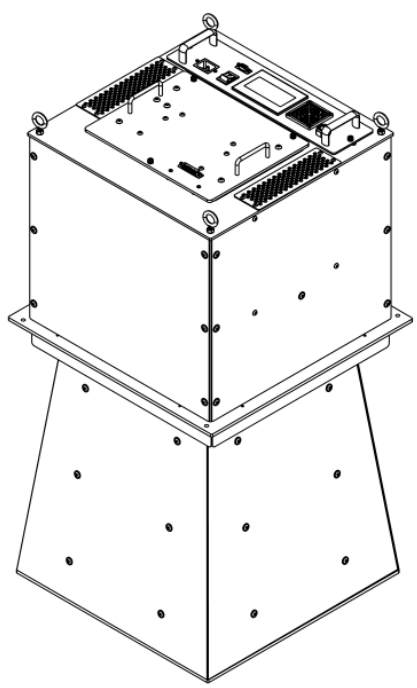
Large Area Solar Illuminator

DIMENSIONS

Single LASI

Dimensions are in inches [mm].

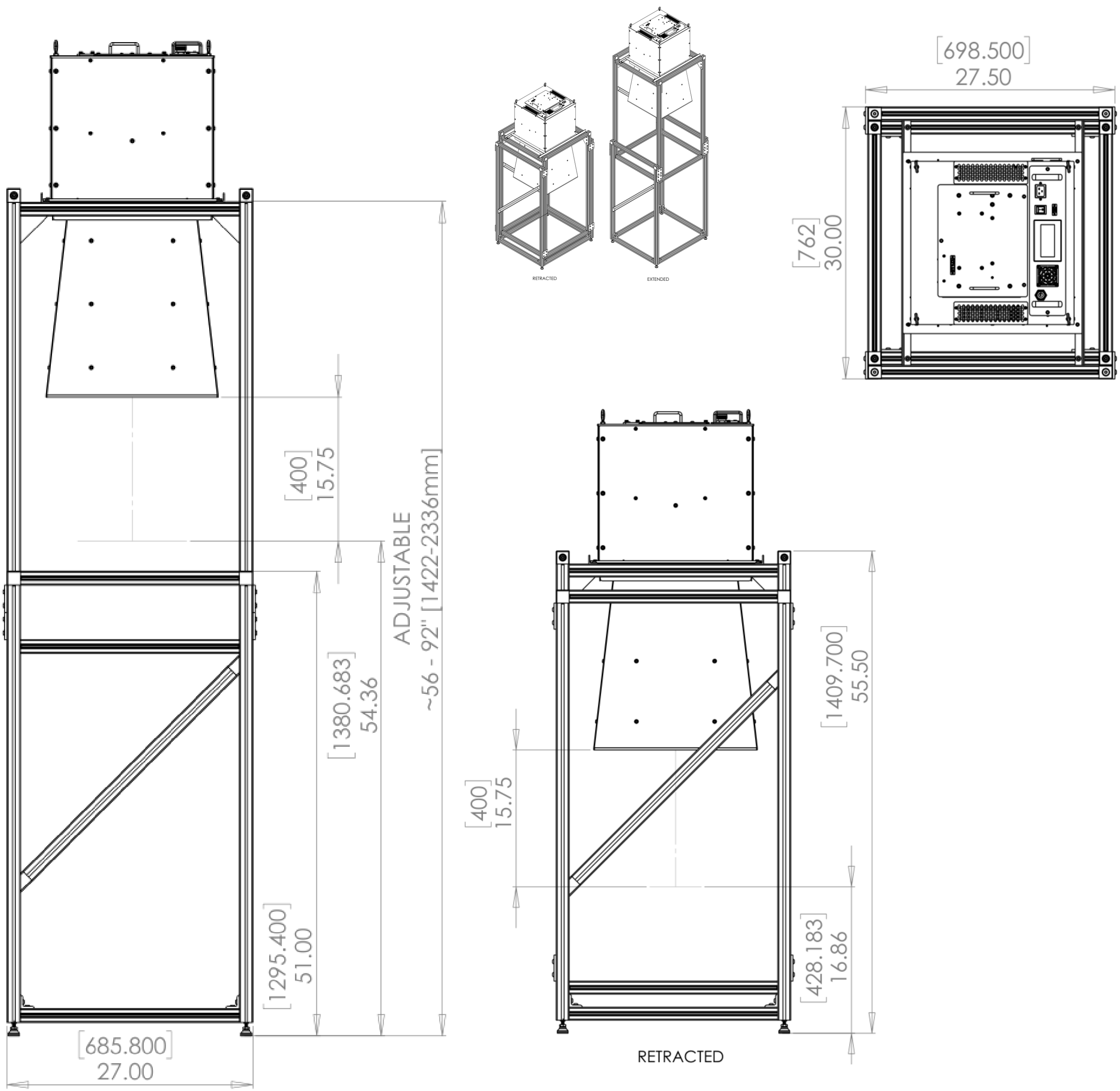




Large Area Solar Illuminator
DIMENSIONS

Single LASI Downward-Facing Stand

Optional stand dimensions are in inches [mm].



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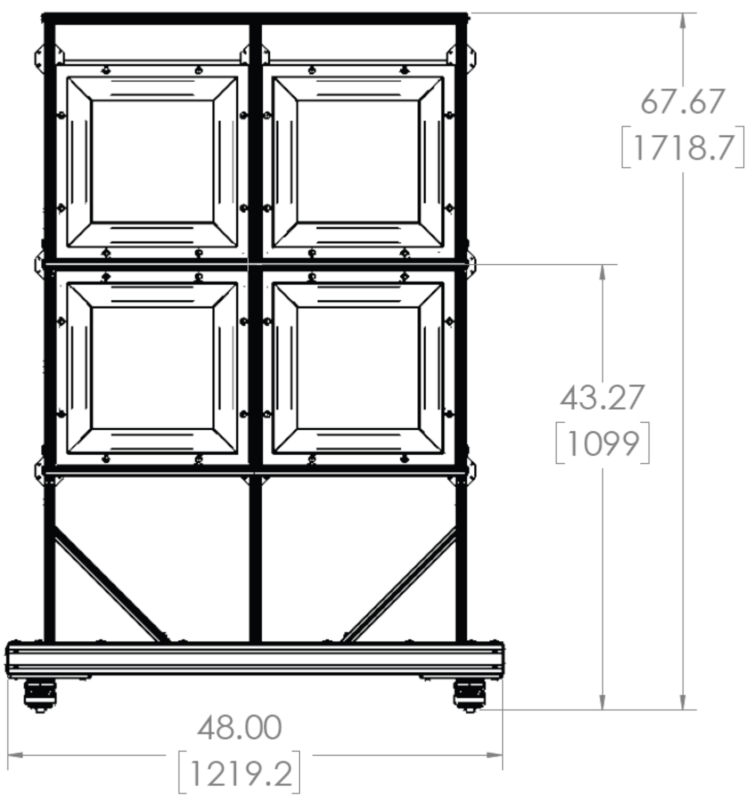
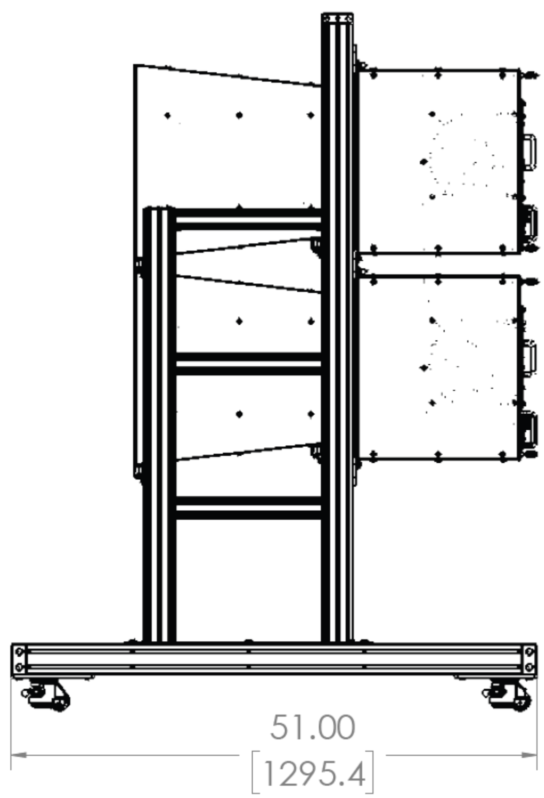
Large Area Solar Illuminator

DIMENSIONS

Four Unit (2 × 2 Array) LASI Side-Facing Stand

Optional stand dimensions are in inches [mm].



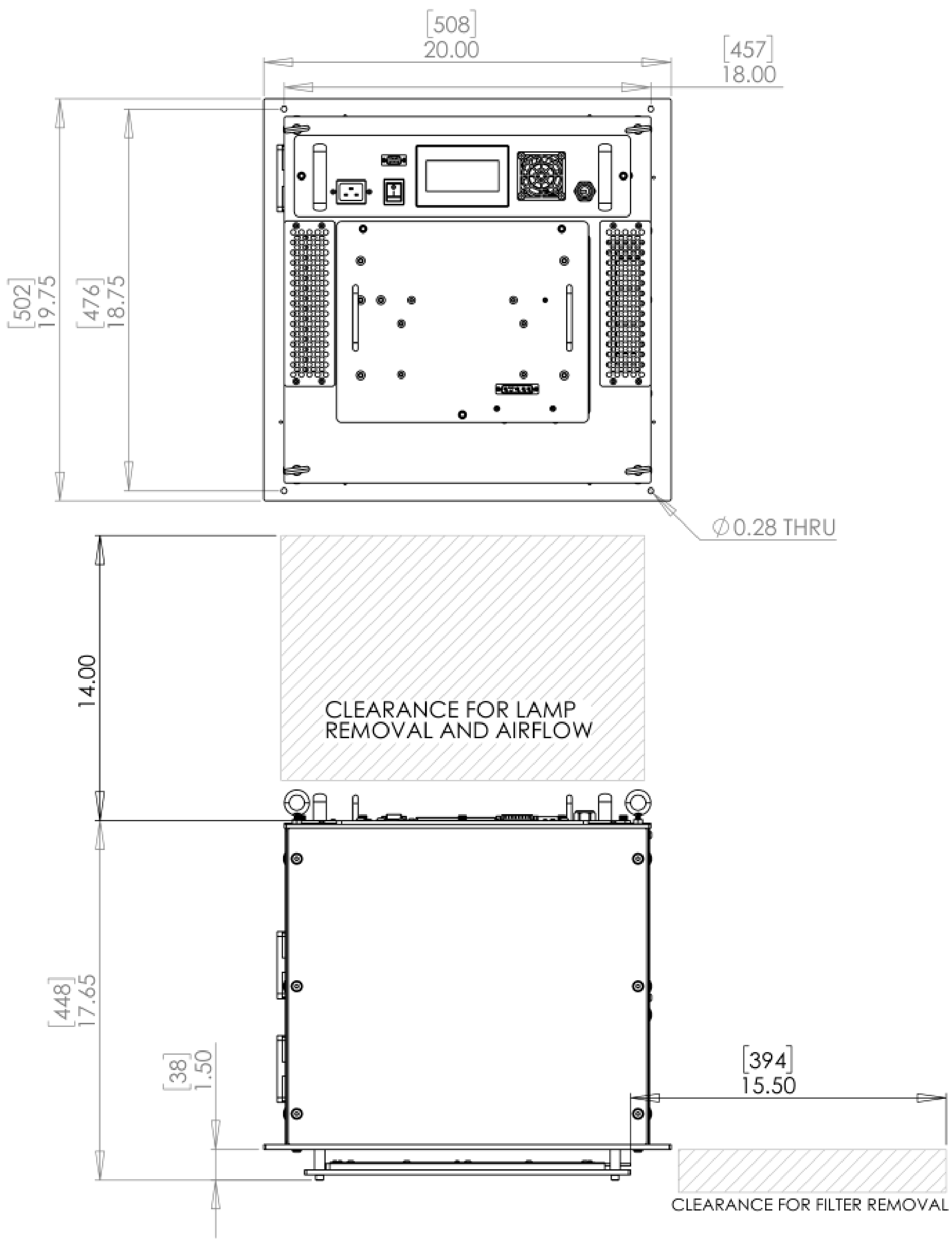


Large Area Solar Illuminator

DIMENSIONS

Single XE-LUM

Dimensions are in inches [mm].



Large Area Solar Illuminator

DIMENSIONS

Single XE-LUM Stand

Dimensions are in inches [mm].