

## IPEX-700

### A better excimer laser

- **Medium-power excimer lasers** for Industrial, R&D and Scientific applications (including Pulsed Laser Deposition), based on LightMachinery's best-selling high-power IpeX-800 Series industrial excimer lasers
- Now with **exciPure™** technology for ultimate gas lifetimes and lowest cost of operation
- Simple, direct control from a new-generation tablet-based user interface
- User-convenient features, optional air-cooling to 25 Hz, single-phase electrical power, small footprint, single-sided service access, **EasyClean™** automated optics seals to retain gas fill and reduce downtime during optics maintenance
- Excellent beam uniformity, pulse-to-pulse energy stability and short pulse duration
- High-stability optics mounts for ultimate beam pointing accuracy & optional high-brightness optics for applications requiring low beam divergence

## IPEX™-740 / 760 Series Excimer Lasers for Industrial & Scientific Applications

**IPEX-700 Series lasers** are designed for medium-power industrial processing and scientific applications. They deliver versatile performance combined with state-of-the-art industrial reliability.

**exciPure™** technology, introduced in 2016, combines improved materials, a new dual-stage filter that removes both particulate and gaseous contaminants, and an improved stabilization algorithm. It represents the greatest improvement in excimer gas lifetime and reduction in operating costs in a generation.

**EasyClean™** automated valves filled to the optics ports allow the laser chamber to be sealed and the gas fill to be retained while resonator optics are removed for cleaning and maintenance.

### Simple to use

- Advanced tablet-based operator interface
- Optional air cooled operation to 25 Hz
- Premix or individual gas cylinders
- Single phase electrical power
- Integral oil-free vacuum pump
- Single-sided service access and economical to operate

IPEX-700 lasers combine the benefits of high performance with the lowest total cost of ownership and best uptime in the market today.

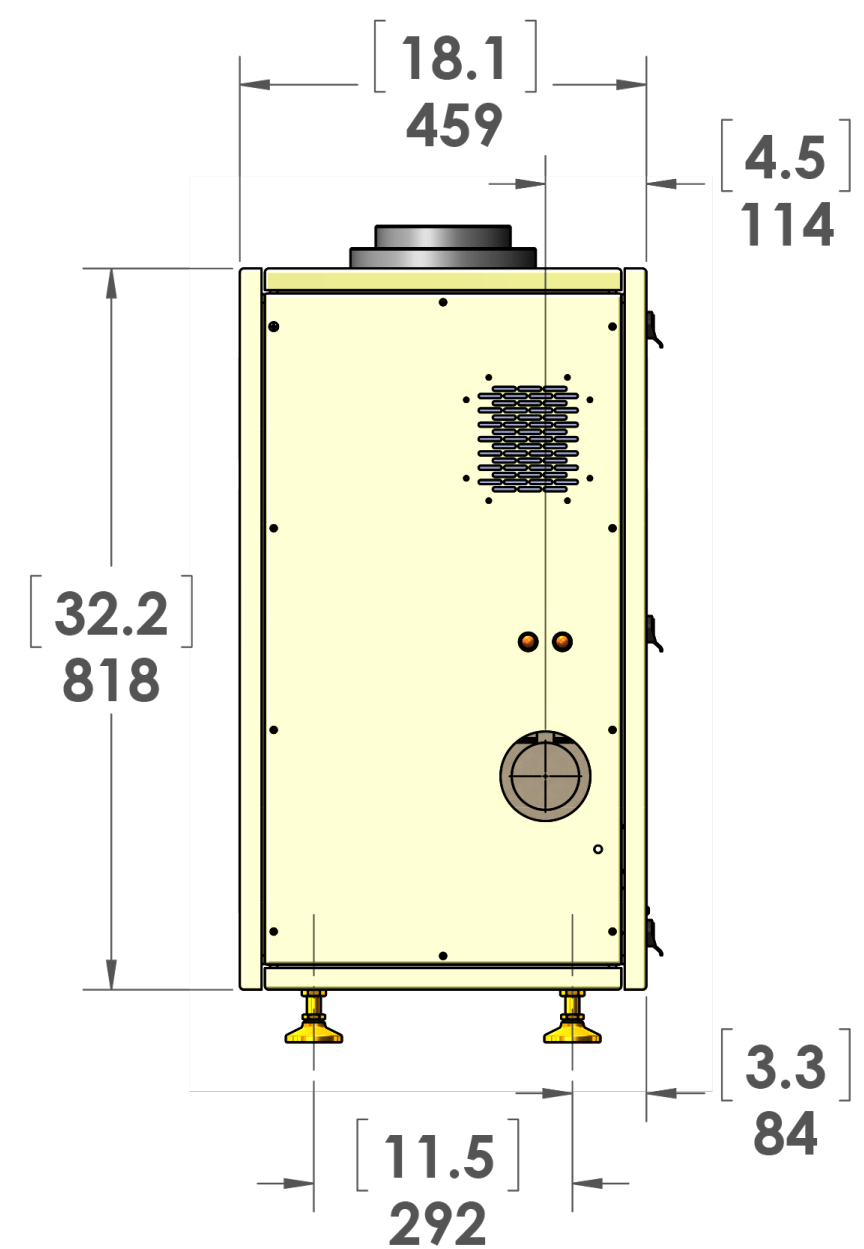
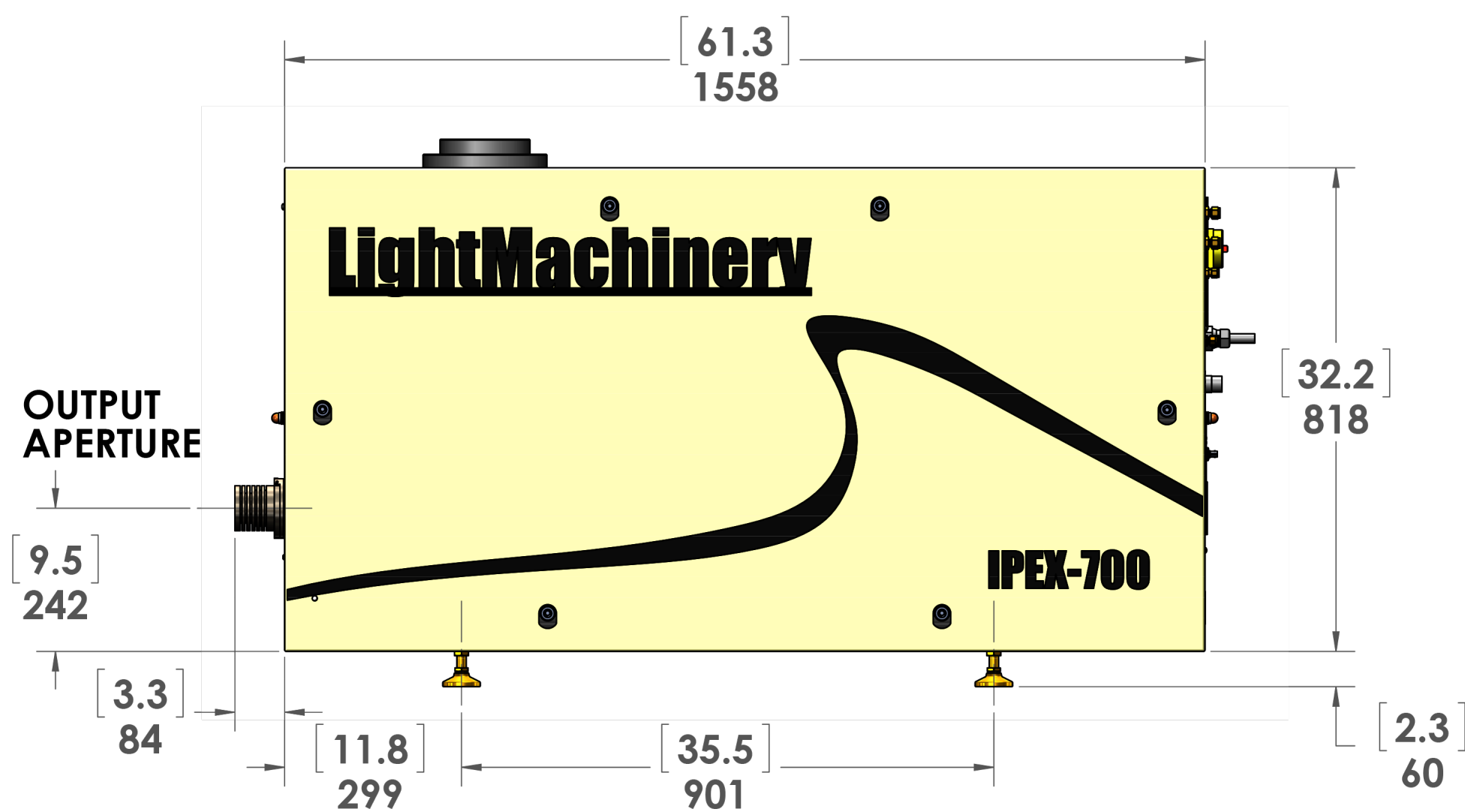
### Optical Beam Delivery Systems

LightMachinery is more than just a laser supplier. With our optical design expertise and together with our integration partners, we can offer complete laser / beam delivery / processing systems for many requirements, including those of PLD customers.

## Facilities

<p><b>Electrical Power</b> Single-phase, 200 – 240 V 50 / 60 Hz</p>	<p><b>Cooling</b> Optional air cooling up to 25 Hz repetition rates Water cooling at higher repetition rates</p>
<p><b>Laser Gas</b> Premix or individual gas cylinders Consult LightMachinery for details</p>	<p><b>Weight (net)</b> 295 kg / 650 lbs.</p>

## Dimensions





## Specifications

	Series	ArF	KrF	XeCl	XeF
Wavelength (nm)		193	248	308	351
Maximum Pulse Energy (mJ) at low repetition rates	IPEX- 740	230	475	300	275
	IPEX- 760	250	700	600	350
Stabilised Pulse Energy (mJ) at maximum repetition rates	IPEX- 740	150	400	250	225
	IPEX- 760	200	600	500	300
Stabilised Average Power (W)	IPEX- 746	15	40	25	22
	IPEX- 744	7.5	20	12	11
	IPEX- 742	3.7	10	6.0	5.5
	IPEX- 766	10	30	25	15
	IPEX- 764	6.0	18	10	9.0
	IPEX- 762	3.0	9.0	5.0	4.5
Maximum Repetition Rate (pps)	IPEX- 746	100	100	100	100
	IPEX- 744	50	50	50	50
	IPEX- 742	25	25	25	25
	IPEX- 766	50	50	50	50
	IPEX- 764	30	30	20	30
	IPEX- 762	15	15	10	15
Pulse Duration (ns) (FWHM)		12-20			
Energy Stability, 1 Sigma (%) (KrF)		1			
Beam Dimensions (mm) (V x H) (nominal)	IPEX- 740	12 x 26			
	IPEX- 760	12 x 28			
Beam Divergence (mrad) (V x H) (nominal) *	IPEX- 740	1 x 3			
	IPEX- 760	1 x 3			

\*With standard resonator optics. Can be reduced to ~250  $\mu$ rad with High Brightness Unstable Resonator Optics

Specifications are subject to change. Please consult LightMachinery for latest information

For further technical and sales information, please visit our website or contact:

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