

IPEX™ -840 / 860 Series Industrial Excimer Lasers

Originally developed by Lumonics and now offered by LightMachinery, the **IPEX-840/860 Series** excimer lasers deliver the performance and reliability required for a wide range of advanced, high duty-cycle industrial manufacturing applications in the electronics, semiconductor and medical device industries.

With ICON™ (Integrated-Ceramic-On-Nickel) technology, LightMachinery **IPEX-840/860 Series** lasers offer exceptionally low cost of ownership and superior optical performance. High-Brightness (“Unstable Resonator”) optics are available for applications that demand long-path low beam divergence (e.g Lidar), extended

coherence length (e.g. FBG manufacturing) and improved focusing.

Easy to use, simple to service, and economical to operate, **IPEX-840/860 Series** lasers combine the benefits of high precision excimer processing with the lowest total cost of ownership and highest uptime on the market today.

Features

- ICON laser tube
- EasyClean automated optics seals
- Advanced optic mounts
- Keyed optics (1)
- StabiLase energy control
- Soft preionization (2)
- Internal gas purification (3)

(1) U.S. Patent 5,237,583

(2) U.S. Patent 5,081,638

(3) U.S. Patent 5,319, 663

Benefits

- 50 million pulse gas lifetime (300 mJ, 200 Hz, KrF)
- Simplifies optical maintenance, retains gas fill and passivation
- Delivers 200 microradian pointing stability
- No realignment required after cleaning or replacing optics
- Fast, precise energy stabilization in internal, burst and external trigger modes
- Extends gas life, enhances energy stability to sigma value typically $\pm 2\%$
- Removes particulates and maintains optics cleanliness

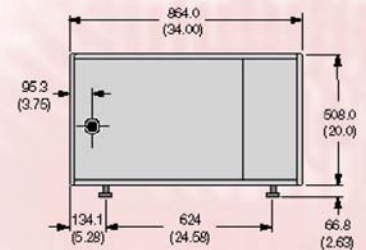
Specifications

		ArF	KrF	XeCl	XeF
Wavelength (nm)		193	248	308	351
Stabilised Pulse Energy (mJ)	Ipex-840 Series	150	400	250	225
	Ipex-860 Series	200	600	350	300
Stabilised Average Power (W)	Ipex-848	30	80	50	45
	Ipex-846	15	40	25	22
	Ipex-866	20	60	35	30
	Ipex-864	10	30	18	15
Maximum Repetition Rate (pps)	Ipex-848		200		
	Ipex-846		100		
	Ipex-866		100		
	Ipex-864		50		
Pulse Duration (ns) (FWHM, nominal)			12 - 20		
Beam Dimensions (mm) (V x H, nominal)	Ipex-840 Series		12 x 26		
	Ipex-860 Series		12 x 28		
Beam Divergence (mrad) (V x H, nominal)	Ipex-840 Series		1 x 3		
	Ipex-860 Series		1.5 x 4		

Facilities

Electrical:	3-phase, 4-wire, 208 V 30 A or 400 V 20A 50 or 60 Hz
Cooling water:	10 liters / minute, 5°-20°C, 40-60 psig
Laser gases:	Kr or Xe rare gas, F ₂ or HCl halogen gas, Ne and He buffer gases; or Pre-mixed gas
Weight installed:	230 kg
Shipping weight:	290 kg

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



Dimensions in mm (inches)

www.lightmachinery.com

LightMachinery

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

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VISIBLE & INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR SCATTERED RADIATION
CLASS 4 LASER PRODUCT
BS EN 60825-1:2001
MAX OUTPUT: 1J 200W/5mW
LASER MEDIUM: Excimer/HeNe
PULSE DURATION: 10 - 20ns CW
WAVELENGTH: 190 - 360nm/633nm

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