

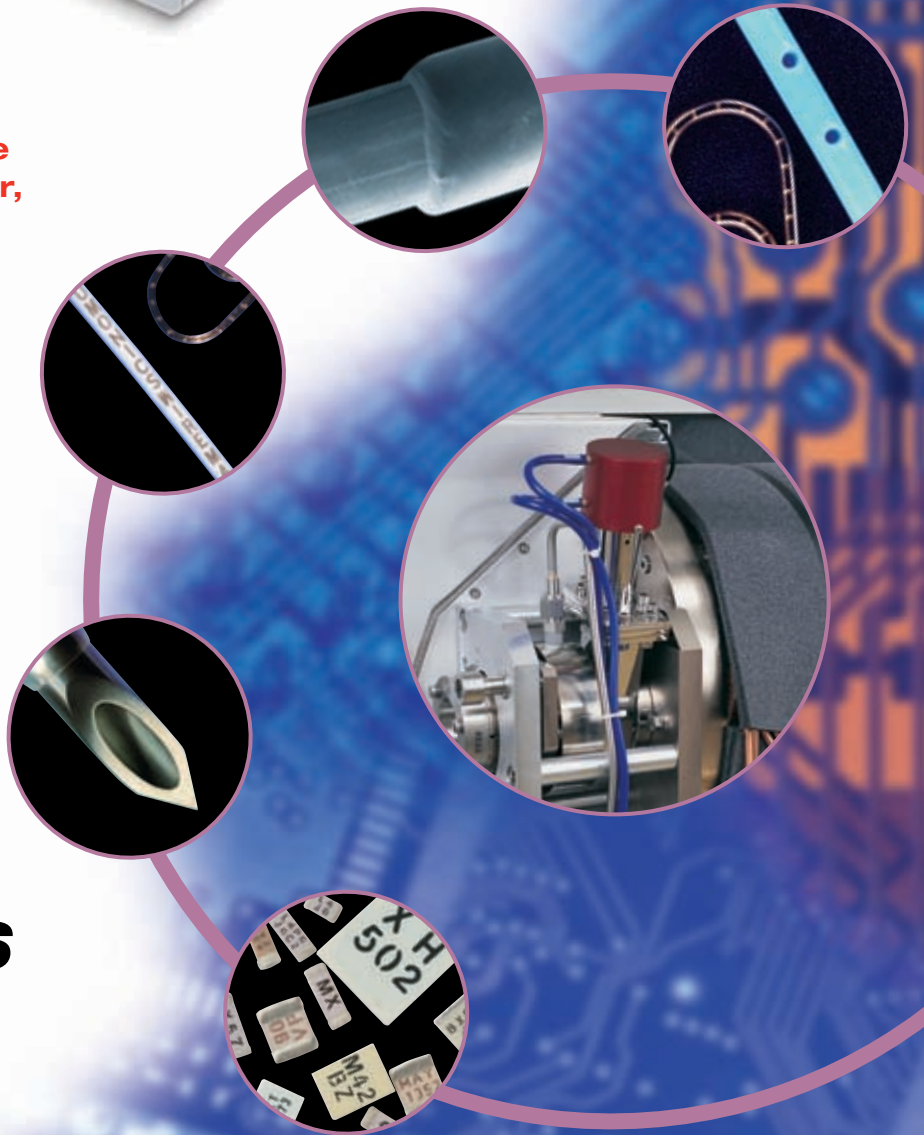
IPEX™

Industrial Excimer Lasers for Materials Processing



Industrial excimer lasers for precision ultraviolet machining in the manufacture of electronics, semiconductor, and medical components.

- ICON™ (Integrated Ceramic On Nickel) technology for extended gas lifetimes
- Gate valves retain gas fill and preserve passivation during optics maintenance
- High stability optics mounts for the ultimate in pointing stability
- Optional resonator optics available for improved spatial coherence



gsi Lumonics

IPEX™ 800 Series Lasers

Designed for high duty cycle operation in a manufacturing environment, IPEX series lasers deliver high power excimer laser machining with state of the art performance.

Incorporating GSI Lumonics' proprietary ICON™ (Integrated Ceramic On Nickel) technology, IPEX lasers offer long gas lifetimes, superior optical stability, and precise control of laser operating parameters.

Easy to use, simple to service, and economical to operate, IPEX 800 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
- Gate valves
- INDEX® 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
- 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 keeps optics clean

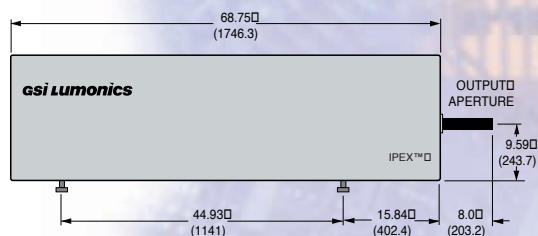
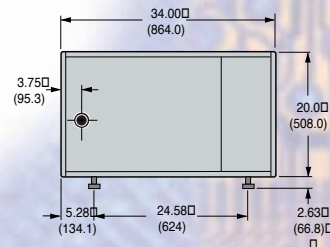
Specifications

	KrF	XeCl
Wavelength (nm)	248	308
Pulse Energy (mJ)	400	250
Average power (W)	IPEX-848	80
	IPEX-846	40
Repetition rate (pps)	IPEX-848	200
	IPEX-846	100
Pulse Duration (ns) (FWHM, nominal)	12 - 20	
Beam Dimensions (mm) (FWHM, nominal)	12 x 25	
Beam Divergence (mrad) (FWHM, nominal)	1 x 3	

Facilities

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

Specifications are subject to change. Consult GSI Lumonics for complete details.



Dimensions in inches (mm)

GSI Lumonics

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For sales information, visit our web site or
contact your local distributor.

The safety classification of IPEX products is class 4/IV

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