

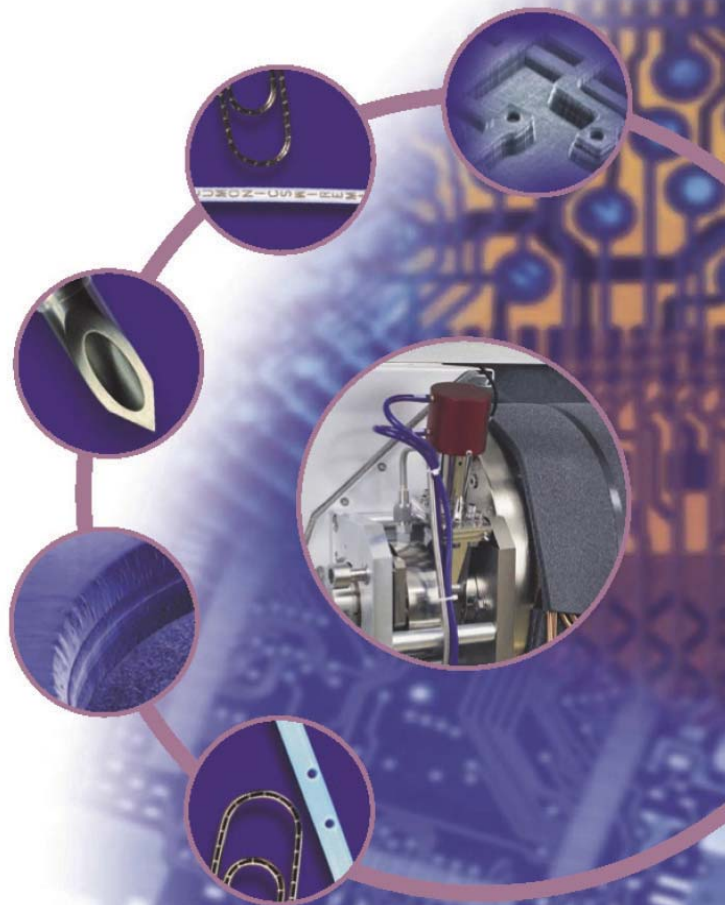
PulseMaster[®] 840 SERIES

General Purpose Excimer Lasers



A comprehensive range of advanced excimer lasers for process development, scientific research and light industrial applications

- TMC™ (Total Metal Ceramic) design for long gas lifetimes
- Versatile range of models, repetition rates and average powers
- EasyClean automated optics seals to retain gas fill and reduce downtime during optics maintenance
- Excellent beam quality and stability
- Optional High-Brightness optics for applications requiring low beam divergence or extended coherence length



PulseMaster[®] 840 Series Excimer Lasers

Originally developed by Lumonics and now offered by LightMachinery, **PulseMaster PM-840 Series** lasers are designed for a wide range of applications in process development, scientific research and light industrial manufacturing applications.

TMC[™] (Total metal ceramic) construction ensures excellent gas lifetime and low operating costs. Powerful microprocessor controls permit precise control over laser operating parameters, stabilize the laser output power even in burst mode, and simplify routine maintenance procedures.

EasyClean automated valves fitted to the optics ports allow the laser chamber to be sealed and the gas fill / passivation to be retained while resonator optics are removed for cleaning and maintenance – a feature pioneered by Lumonics.

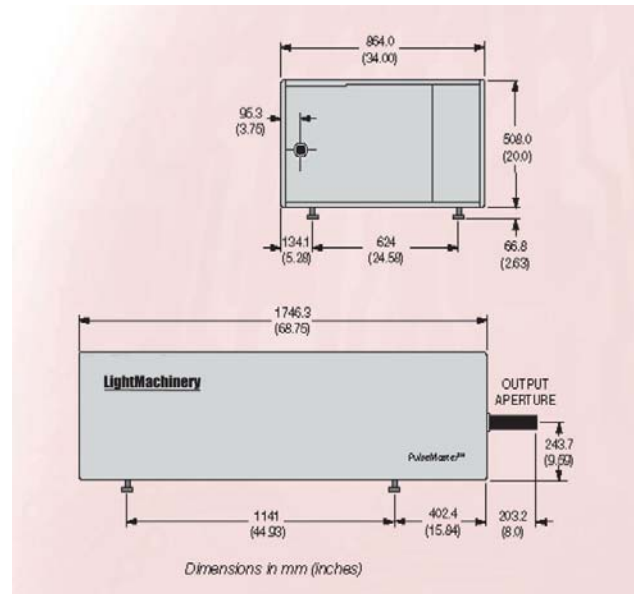
Specifications

	PM-840 Series			
	ArF	KrF	XeCl	XeF
Wavelength (nm)	193	248	308	351
Maximum Pulse Energy (mJ)	230	450	300	275
Stabilised Average Power (W)	PM-848	30	80	45
	PM-846	15	40	25
	PM-844	6	20	12
	PM-842	3	10	6
Maximum Repetition Rate (pps)	PM-848	200	200	200
	PM-846	100	100	100
	PM-844	40	50	50
	PM-842	20	25	25
Pulse Duration (ns) (FWHM, nominal)	12 - 20			
Beam Dimensions (mm) (V x H, nominal)	8 - 12 x 26			
Beam Divergence (mrad) (V x H, nominal)	1 x 3			
Timing Jitter (ns)	± 2			
Pulse energy stability (1-sigma, KrF) (%)	1			

Facilities

Electrical:	Models PM-848, PM-846: 3-phase, 4-wire, 208 V or 400 V, 4.5 kW 50 / 60 Hz
	Models PM-844, PM-842: 1-phase, 200 – 240 V, 50 / 60 Hz, 1.5 kW
Cooling water:	5°-20°C, 40-60 psig
	848, 846 models: 10 liters / minute 844, 842 models: 5 liters / minute
Laser gases:	Kr or Xe rare gas, F ₂ or HCl halogen gas, Ne and He buffer gases; or Pre-mixed gas Compressed air or nitrogen (for EasyClean optics gate valves & beam shutter)
Shipping Weight	848, 846 models: 570 kg
	844, 842 models: 550 kg

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



www.lightmachinery.com

LightMachinery

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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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