Bragg Master Line Narrowed Lasers

EX-BM Bragg Master Series Excimer Lasers

The Bragg Master series of lasers offers line narrowed single wavelength excimer lasers in affordable high reliability systems. The EX5BM, EX10BM and EX50BM are ideal sources for applications requiring line narrowed 193nm and 248nm lasers for spectroscopy, inspection and lithography. Bragg Master lasers offer simultaneously, high temporal and high spatial coherence for FBG and lithography applications.

EX5BM Specifications

PARAMETER	**ArF**	**KrF**
Wavelength nm	193	248
Energy Max. mJ	5	10
Linewidth pm	**40**	**35**
Spectral Line shape	**Gaussian**	
Tunability	**+/- 200pm**	**+/- 200pm**
Average power @ 250Hz ,W	0.25	2.0
Average Power @ 500Hz, W	0.45	3.5
Dynamic gas lifetime pulses to 50% energy	5E6	10E6
Shelf life to 50% energy	3 days	10 days
Pulse length, ns	8	10
Repetition rate max. Hz	250/500/1000	
Stability	< 2% standard deviation	
Tube Service	2 Billion Pulses	
Beam Size	3 X 6 mm	
Divergence	1 X 2 mrad full angle	
Cooling	Air	
Timing Jitter	2nS Standard Deviation	
Weight	16kg	

EX10BM Specifications

PARAMETER	**ArF**	**KrF**
Wavelength nm	193	248
Energy Max. mJ	10	20
Linewidth pm	**40**	**35**
Spectral Line shape	**Gaussian**	
Tunability	**+/- 200pm**	**+/- 200pm**
Average power @ 350Hz ,W	1.5	3.0
Average Power @ 600Hz, W	2.5	5.0
Dynamic gas lifetime pulses to 50% energy	15E6	30E6
Shelf life to 50% energy	30 days	60 days
Pulse length, ns	10	12
Repetition rate max. Hz	350/600/1000	
Stability	< 2% standard deviation	
Tube Service	2 Billion Pulses	
Beam Size	3 X 8 mm	
Divergence	1 X 2 mrad full angle	
Cooling	Air	
Timing Jitter	2nS Standard Deviation	
Weight	40kg	

A < 10pm linewidth version of the ArF 193nm and KrF 248nm BraggMaster is also available.

EX-BM Bragg Master Series Excimer Lasers

The EX10BM laser is optimized to produce high spatial and temporal coherence lengths at 193nm and 248nm primarily for FBG fabrication. Spatial and temporal coherence lengths are both much longer than standard excimer lasers. A thermally stabilized line narrowing module maintains solid wavelength stability.

Other laser systems provide either longer spatial or longer temporal coherence. Up to 7cm temporal coherence length is available in a line narrowed system and upto 1800µm spatial coherence length is available with unstable resonator optics.

The EX10BM offers an economic method of simultaneously obtaining long spatial and temporal coherence.

Comparison of Spatial and temporal coherence properties

EX10BM

PARAMETER	ArF	KrF
Wavelength nm	193	248
Temporal Coherence, µm	5000	5000
Spatial Coherence, µm	>500	>1200
Beam Uniformity	+ / - 5%	

Standard EX10

PARAMETER	ArF	KrF
Wavelength nm	193	248
Temporal Coherence, µm	75	170
Spatial Coherence, µm	70	180
Beam Uniformity	+ / - 5%	

EX50LN

PARAMETER	ArF	KrF
Wavelength nm	193	248
Temporal Coherence, µm	> 4cm	> 7cm
Spatial Coherence, µm	70	180
Beam Uniformity	+ / - 5%	

EX10 Unstable Resonator

PARAMETER	ArF	KrF
Wavelength nm	193	248
Temporal Coherence, µm	75	170
Spatial Coherence, µm	> 700	> 1800
Beam Uniformity	+ / - 5%	

GAM LASER INC.
6901 TPC Drive #300
ORLANDO, FL 32822
Phone : 407-851-8999
Fax : 407-850-0700
Email : Sales@ gamlaser.com
Web : www.gamlaser.com

MADE IN USA

GAM LASER, INC ***Hard Science***