

## SHORT PULSE OPTICAL TECHNOLOGY

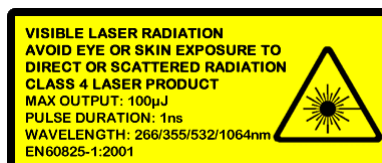


Elforlight SPOT lasers produce pulse widths of < 2ns at repetition rates from single shot up to >50 kHz.

The short pulses are created by a combination of short cavity lengths and a novel fast electro-optic q-switching technique.

Applications include laser induced fluorescence, time resolved fluorescence, micromachining, biotechnology, plasma generation, remote sensing, photo acoustic imaging, MALDI mass spectrometry and MALDI imaging.

Model Name	SPOT-10-500-1064	SPOT-10-100-532	SPOT-10-200-532	SPOT-10-100-355	SPOT-10-50-266
Wavelength	1064nm	532nm	532nm	355nm	266nm
Maximum Pulse Energy	50µJ	10µJ	20µJ	10µJ	5µJ
Minimum Pulse Width	< 2ns	< 1.8ns	< 1.8ns	<1.5ns	< 1.5ns
Repetition Rate	Single shot to > 50kHz				
Jitter	< +/- 1ns from external trigger input (typ.0.5ns)				
Power Stability	<+/- 2 % over 8 hours				
Spatial Mode	TEM <sub>00</sub> , M <sup>2</sup> < 1.2				
Beam Diameter	~ 1mm				
Operating temp.	10-35 deg. C				
Laser Head Size	220mm long x 122mm x 60mm				
Controller Size	350mmx 260mm x 120mm				
Frequency Control	TTL trigger input required at up to 50kHz				
Cooling	Air cooled				
Power requirement	100 - 240 VAC, 50 / 60 Hz Max 100W				



Elforlight Ltd, 4b Brunel Close, Daventry, Northants NN11 8RB, UK

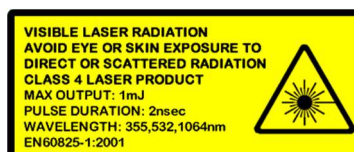
Tel +44(0)1327 300069 | Fax +44(0)1327 300076

Web: [www.elforlight.com](http://www.elforlight.com) | Email: [info@elforlight.com](mailto:info@elforlight.com)

## FQS Q-SWITCHED SERIES LASERS



Model Name	FQS-400-1-1064	FQS-200-1-532	FQS-100-1-355
Wavelength	1064nm	532nm	355nm
Pulse Energy @ 1kHz	> 400µJ	> 200µJ	> 100µJ
Spatial Mode	TEM <sub>00</sub> , M <sup>2</sup> < 1.2		
Repetition Rate	Up to 10kHz	Up to 10kHz	Up to 10kHz
Minimum Pulse Width	< 5ns	< 5ns	< 4ns
Jitter	< +/- 1ns (typ. +/- 0.5ns) WRT ext. trigger input		
Beam Diameter	1mm at output aperture		
Beam Divergence	< 1mRad at 1mm diameter		
Polarization	>100:1		
Laser Head Size	240mm x 210mm x 100mm		
Power supply	2U high 19 inch rack		
Control	RS232		
Cooling	Air cooled		
Power requirement	100 - 240 VAC, 50 / 60 Hz Max 1000W		



Elforlight Ltd, 4b Brunel Close, Daventry, Northants NN11 8RB, UK

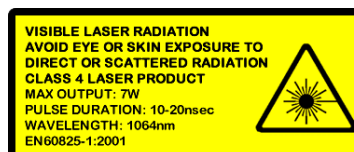
Tel +44(0)1327 300069 | Fax +44(0)1327 300076

Web: [www.elforlight.com](http://www.elforlight.com) | Email: [info@elforlight.com](mailto:info@elforlight.com)

## FQ Q-SWITCHED SERIES LASERS



Model Name	FQ-800-5-Y-1064	FQ-70-100-V-1064
Wavelength	1064nm	
Average Power	4W at 5kHz	7W at 100kHz
Spatial Mode	TEM <sub>00</sub> , M <sup>2</sup> < 1.5	
Repetition Rate	Up to 10kHz	10 to 100kHz
Pulse Width	10-15ns	< 20ns at < 50kHz
Power Stability	< +/- 2 % over 1 hour	
Pulse to Pulse Stab.	< +/- 3%	
Beam Diameter	2mm at output aperture	
Beam Divergence	< 1mRad at 2mm diameter	
Polarization	>100:1	
Laser Head Size	132mm x 110mm x 376mm	
Power supply	2U high 19 inch rack	
Control	RS232	
Cooling	Air cooled	
Power requirement	100 - 240 VAC, 50 / 60 Hz Max 1000W	



Elforlight Ltd, 4b Brunel Close, Daventry, Northants NN11 8RB, UK

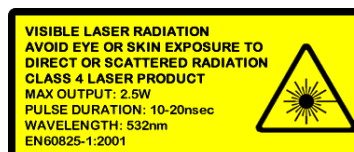
Tel +44(0)1327 300069 | Fax +44(0)1327 300076

Web: [www.elforlight.com](http://www.elforlight.com) | Email: [info@elforlight.com](mailto:info@elforlight.com)

## FQ Q-SWITCHED SERIES LASERS



<b>Model Name</b>	<b>FQ-500-532</b>
<b>Wavelength</b>	<b>532nm</b>
<b>Average Power</b>	<b>2.5W at 5kHz</b>
<b>Spatial Mode</b>	<b>TEM<sub>00</sub>, M<sup>2</sup> &lt; 1.2</b>
<b>Repetition Rate</b>	<b>Up to 15kHz</b>
<b>Pulse Width</b>	<b>12-15ns at 5kHz</b>
<b>Power Stability</b>	<b>&lt; +/- 2 % over 1 hour</b>
<b>Pulse to Pulse Stab.</b>	<b>&lt; +/- 3%</b>
<b>Beam Diameter</b>	<b>2mm at output aperture</b>
<b>Beam Divergence</b>	<b>&lt; 1mRad at 2mm diameter</b>
<b>Polarization</b>	<b>&gt;100:1</b>
<b>Laser Head Size</b>	<b>132mm x 110mm x 376mm</b>
<b>Power supply</b>	<b>2U high 19 inch rack</b>
<b>Control</b>	<b>RS232</b>
<b>Cooling</b>	<b>Air cooled</b>
<b>Power requirement</b>	<b>100 - 240 VAC, 50 / 60 Hz Max 1000W</b>



Elforlight Ltd, 4b Brunel Close, Daventry, Northants NN11 8RB, UK

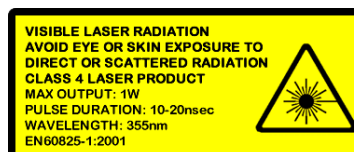
Tel +44(0)1327 300069 | Fax +44(0)1327 300076

Web: [www.elforlight.com](http://www.elforlight.com) | Email: [info@elforlight.com](mailto:info@elforlight.com)

## FQ Q-SWITCHED SERIES LASERS



Model Name	FQ-60-80-V-355	FQ-200-80-V-355	FQ-500-30-V-355
Wavelength	355nm		
Average Power	>60mW	>200mW	500mW
Spatial Mode	TEM <sub>00</sub> , M <sup>2</sup> < 1.5		
Repetition Rate	>80kHz	80-100kHz	30kHz
Beam Diameter	2mm at output aperture		
Beam Divergence	< 1mRad at 2mm diameter		
Polarization	>100:1		
Laser Head Size	132mm x 110mm x 376mm		
Power supply	2U high 19 inch rack		
Control	RS232		
Cooling	Air cooled		
Power requirement	100 - 240 VAC, 50 / 60 Hz Max 1000W		



Elforlight Ltd, 4b Brunel Close, Daventry, Northants NN11 8RB, UK

Tel +44(0)1327 300069 | Fax +44(0)1327 300076

Web: [www.elforlight.com](http://www.elforlight.com) | Email: [info@elforlight.com](mailto:info@elforlight.com)