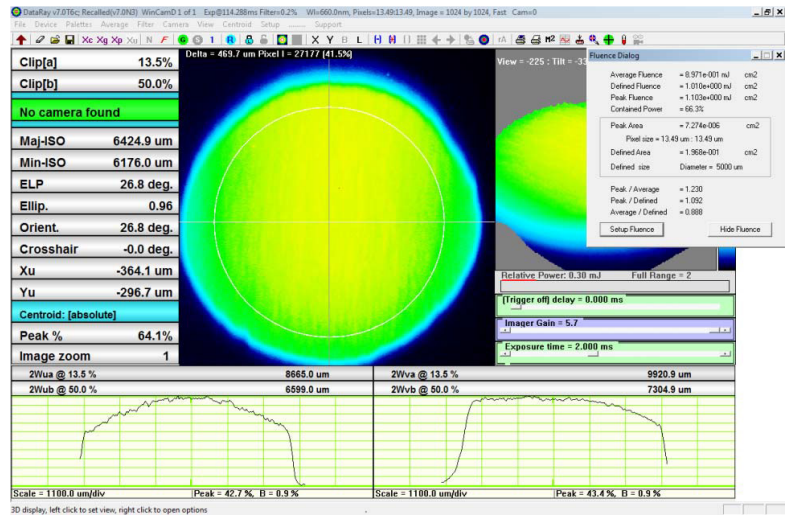


## UV Converter

Profiling UV beams can be challenging for several reasons. Firstly, harsh UV light can deteriorate sensors over time. Secondly, options are limited for profiling large diameter UV lasers.

UV converters address both of these problems. The UV beam impinges on a carefully chosen rugged UV crystal that fluoresces in the visible region. The fluorescence is reimaged onto a DataRay beam profiling camera for quick and easy analysis.

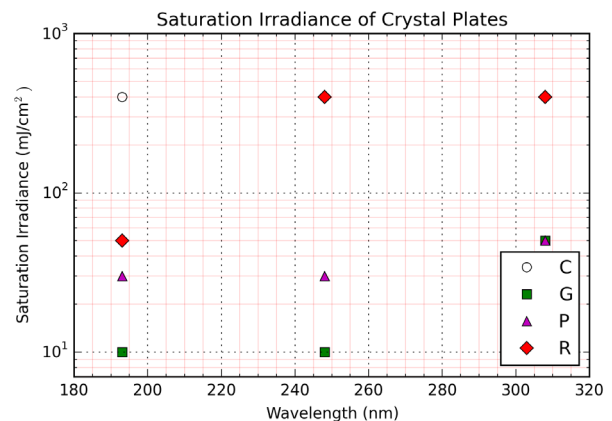
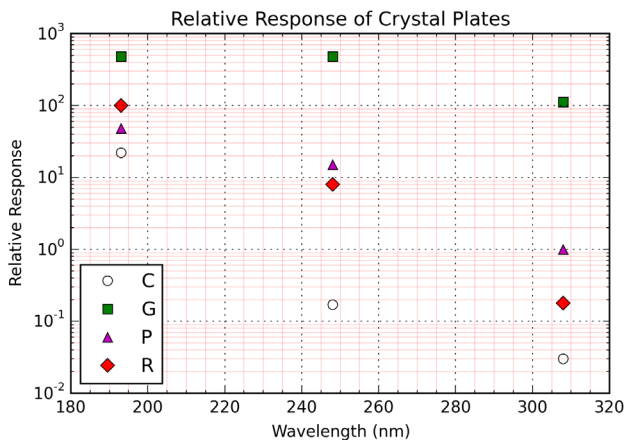


### System Features

- High resolution: to 2  $\mu\text{m}$  on a collimated beam
- Excellent crystal linearity: 5 to 6 decades
- Excellent long-term crystal stability:  $>10^7$  pulses
- Add-on option to WinCamD series cameras
- Beam sizes from 50  $\mu\text{m}$  to 33 x 33 mm
- Four crystal faceplates options optimized for different wavelength ranges
- Coated crystal option for coherence lengths  $\geq 1$  mm
- High dynamic range adjustment: integral iris diaphragm, f/2.8 to f/28, adds a 100:1 dynamic adjustment range to the cameras dynamic range, particularly useful when dealing with pulsed lasers
- High damage threshold: 500 mJ/cm<sup>2</sup>, 1.5 W/cm<sup>2</sup>, 4 W max

### Applications

- Excimer lasers
- UV beams and lasers to x-ray
- Deep UV (DUV) and Extreme UV (EUV)



## Crystal Options

Crystal	Primary application	$\lambda$ nm Band	Relative response			Saturation mJ/cm <sup>2</sup>			Decay time $\mu$ sec	Max Rep Rate kHz
			193 nm	248 nm	308 nm	193 nm	248 nm	308 nm		
C	193 nm	110 to 225	22	0.17	0.03	400	X	X	3 - 5	20 - 30
G	Wide $\lambda$ , low fluence	1 to 400	480	480	112	10	10	50	0.5	200
P	$\lambda < 350$ , high fluence, fast	110 to 350	48	15	1	30	30	50	5	20
R	Wide $\lambda$ , high fluence, slow	110 to 532	100	8	0.18	50	400	400	3,000	.03

## UV Converter Models

# Aperture/crystal/sensor size	Aperture mm	Crystal FOV	Configuration	OAL mm	Diam mm	Camera Format
BSF 08 x 12	8	4.8 x 6.4	Axial cylinder	82	35	1/2"
BSF 08 x 23				93		2/3"
BSF 08 x LCM		99		1"		
BSF 12 x 12	12	7.2 x 9.6		103		1/2"
BSF 12 x 23				112		2/3"
BSF 12 x LCM		140		1"		
BSF 23 x 12	23	13.8 x 18.4		123		1/2"
BSF 23 x 23				108		2/3"
BSF 23 x LCM		122		1"		
BSF 47 x 12, 23, LCM	47	33.2 x 33.2		125		75

## Camera Models for use with UV converters

Model	S-WCD-LCM	S-BC2-HR	S-BC2-XHR
Format	1"	1/2"	1/2"
Smallest beam	55 $\mu$ m	52 $\mu$ m	32 $\mu$ m
CW/ Pulsed	CW/Pulsed	CW	CW