

MaxUV™

J25LP-MUV & J45LP-MUV

High Damage Threshold DUV Laser Energy Detectors

*“High damage threshold,
high rep rate, high output.”*



J45LP-MUV (left) and J25LP-MUV

Our new MaxUV laser energy detectors—models **J25LP-MUV** and **J45LP-MUV**—set the standard of performance for all large area, DUV pyroelectric detectors. These two detectors are the first in a family of products designed to be faster, more sensitive, more uniform, and less susceptible to damage in deep ultraviolet (157 to 351 nm).

These detectors incorporate a resilient new coating technology—MaxUV—that enhances the performance of these large pyroelectrics over previous DUV detectors. The laser damage threshold is 5 times greater when measured at 193 nm with a

20 nsec pulse than that of black paint or chrome. Voltage responsivity is 20 times higher than our JMAX43 DUV detector, with a response time that is 10 times faster.

The net result of these performance differences is that there is now a better solution for your challenging DUV excimer laser measurement task. Whether it's 157, 193, 248, 266, 308 or 351 nm, you can't find another laser energy detector that performs as well.

J25LP-MUV and J45LP-MUV are compatible with all of our analog and digital pulse energy meters.

High damage threshold, high rep rate, high output. That's MaxUV.

Features

- High DUV damage threshold: 250 mJ/cm²
- Good spatial uniformity: ± 5%
- High voltage responsivity: 5 to 15 V/J
- Large area: 25 and 45 mm diameter
- Low profile
- NIST-traceable calibration

Applications

- Excimer pulse energy
- Excimer pulse stability
- DUV process control
- Pulse energy control loop
- Dose monitor
- Pulsed DUV laser calibration
- DUV optics characterization

Compatibility

- 3sigma
- EPM1000/2000
- JM-Analog
- EM400/500
- JD501



J25LP-MUV & J45LP-MUV

High Damage Threshold DUV Laser Energy Detectors

Compatible with:



3sigma Laser Energy/Power Meter



EM400 and EM500 Laser Energy Meters



EPM1000 Laser Energy/Power Meter



JM-Analog Analog/Digital OEM Energy Module

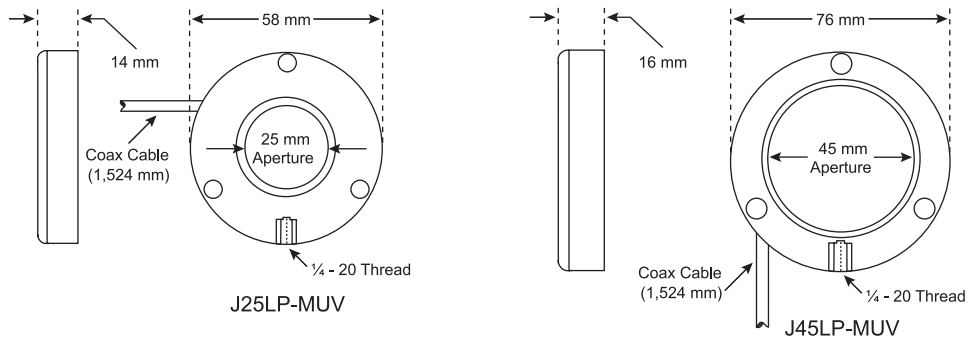
Specifications

	J25LP-MUV	J45LP-MUV
Detector Diameter (mm)	25	45
Wavelength Range (μm)	0.15 to 1.1	0.15 to 1.1
Energy Range	0.2 mJ to 1 J	0.4 mJ - 2 J
Max Avg Power (W)	2	2
Responsivity (typical) (V/J)	15	5
Max Rep Rate (pps)	400	200
Max Pulse Width (μs)	30	60
Standard Cal Wavelength (nm)	193	193
Calibration Uncertainty @ 193 nm (\pm %)	3	3
Spatial Uniformity (\pm %)	(4 mm beam) 5	(6 mm beam) 5
Damage Threshold @ 193 nm (mJ/cm^2)	250	250

Advantages of MaxUV Detectors

- Damage threshold $250 \text{ mJ}/\text{cm}^2$ @ 193nm: 5 times greater than black paint or chrome
- High rep rate: 10 times that of our JMAX43
- Spatial uniformity $\pm 5\%$: 2 to 3 times better than JMAX43 probes
- High R_v : 10 times higher than JMAX43
- Less susceptible to microphonic output due to mechanical noise

Mechanical Details



R_v Spectral Correction for EnergyMax Coatings

