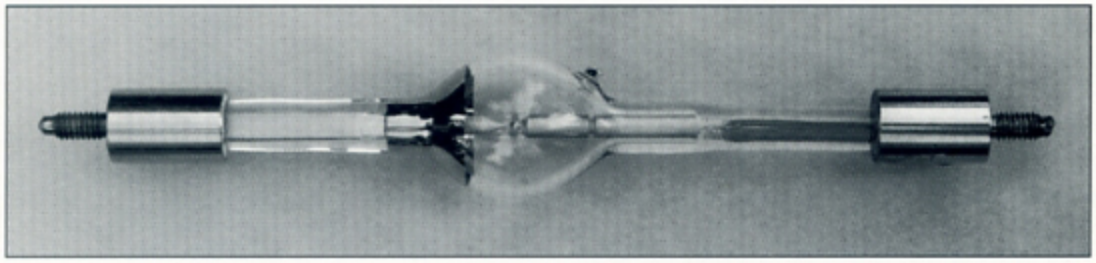
DEEP UV SHORT ARC LAMPS FOR PHOTOLITHOGRAPHY

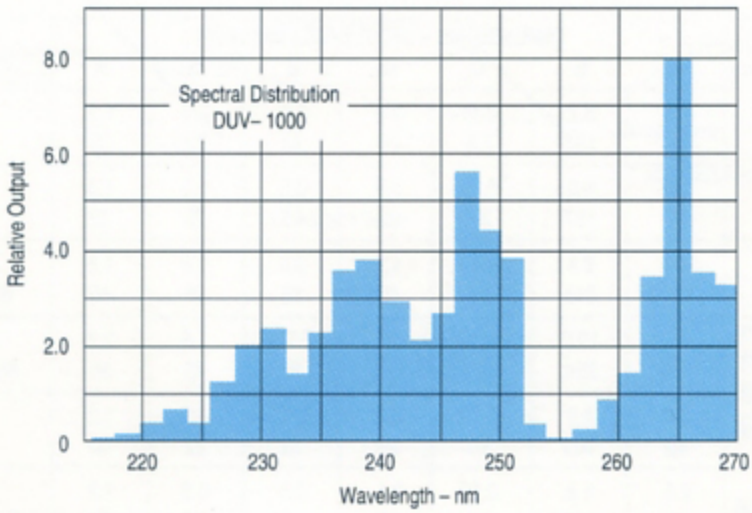
DUV Series



Advanced Radiation Corporation's series of Deep Ultraviolet (DUV) Short Arc Lamps for photolithography represent the state-of-the-art in design, manufacture, and performance of high intensity sources for short wavelength ultraviolet photoresist exposure.

Deep ultraviolet radiation is produced by a mercury-xenon plasma. The exact concentration and ratio of the plasma constituents must be carefully controlled during lamp manufacture to obtain the maximum input power to output radiation conversion. The eight DUV lamps described here represent the results of more than three years of research and development with the leading manufacturers of DUV exposure equipment and systems in the United States.

These lamps are ideally suited for several DUV photresist formulations. PMMA is sensitive from 210 to 260 nm; PMIPK, from 200 to 330 nm; the AZ2400 Series, from 240 to 310 nm; while the ODVR Series is sensitive from 200 to 315 nm.



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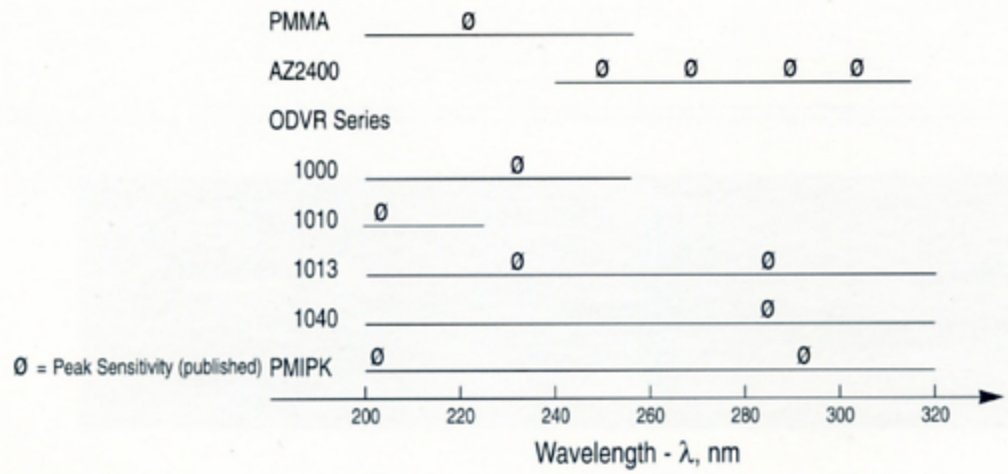
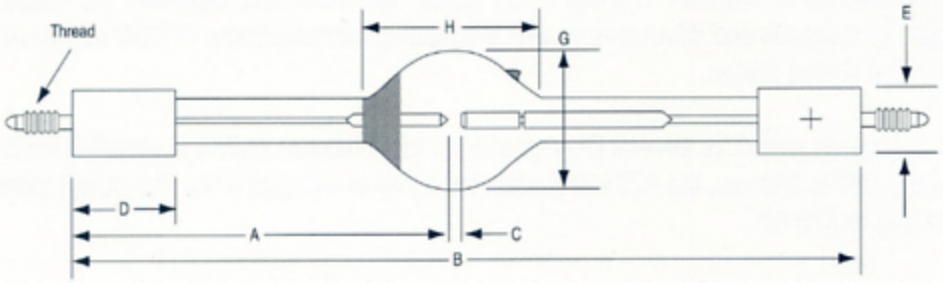
PHOTORESIST SPECTRAL SENSITIVITY CURVES



PHYSICAL DIMENSIONS

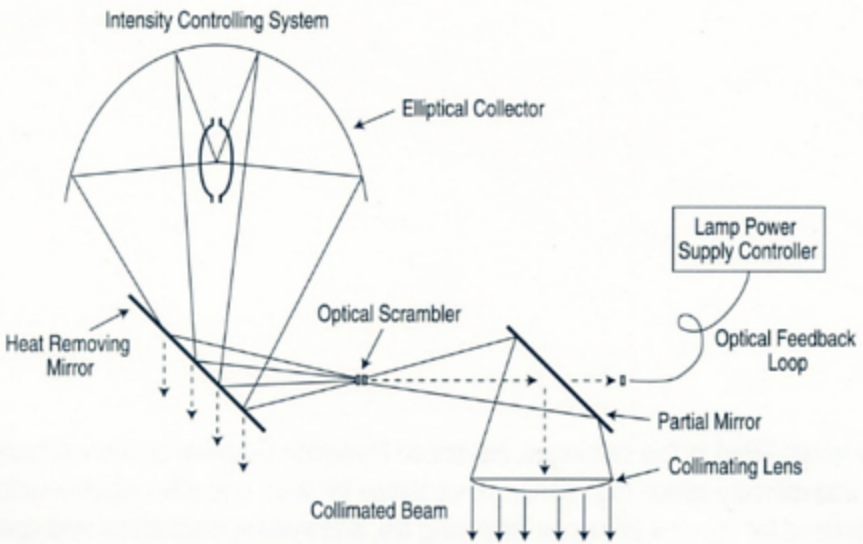


MODEL	DIMENSIONS – INCHES/MILLIMETERS							BASE CONFIG.
	A	B	C	D	E	G	H	
DUV-350	2.5 63	5.2 132	0.11 2.8	0.8 20	0.5 13	0.9 22	1.2 30	8-32
DUV-500	2.8 71	6.2 157	0.11 2.8	0.8 20	0.5 13	1.0 25	1.3 32	8-32
DUV-1000	4.5 114	9.8 248	0.14 3.4	1.9 48	0.6 16	1.5 38	1.8 45	Metric 6mmx1.0
DUV-2000	4.6 118	10.0 254	0.15 3.8	1.5 38	0.75 19	1.8 45	2.2 56	Metric 8mmx1.25
DUV-350-30118	1.9 48	4.2 105	0.12 3.1	0.8 20	0.5 13	0.9 22	1.2 30	8-32
DUV-500-30036	2.5 65	5.8 147	0.12 3.1	0.8 20	0.5 13	0.9 22	1.2 30	8-32
DUV-500-30055	2.7 68	5.9 150	0.12 3.1	0.8 20	0.5 13	1.0 25	1.3 32	Metric 5mmx0.9
DUV-500-30056	2.7 68	5.9 150	0.12 3.1	0.8 20	0.5 13	1.0 25	1.3 32	Metric 5mmx0.9

ELECTRICAL SPECIFICATIONS

MODEL	POWER (Watts)	OPER. VOLTAGE (Volts)	CURRENT (NOM.) (Amps)
DUV-350	350	31-37	10.3
DUV-500	500	31-37	14.7
DUV-1000	1000	28-34	32.3
DUV-2000	2000	35-41	52.6
DUV-350-30118	350	31-37	10.3
DUV-500-30036	500	32-38	14.3
DUV-500-30055	500	22-28	20.0
DUV-500-30056	500	31-37	14.7

TYPICAL DUV OPTICAL SYSTEM AND WAFER PLANE IRRADIANCE



6-9 mW/cm²* for DUV-350
10-14 mW/.cm²* for DUV-500
20-27 mW/cm²* for DUV-1000
45-55 mW/cm²* for DUV-2000

*Data furnished by the Hybrid Technology Group

In addition to the lamps listed in this catalogue, Advanced Radiation Corporation manufactures other mercury, xenon, and mercury-xenon high performance lamps for laser and other electro-optical systems. Each lamp is optimized for spectral efficiency, operating life, and system mechanical and optical interfacing. In addition to our standard lines of high intensity arc lamps ARC designs and manufactures special lamps for new applications. We invite your inquiries and will provide application assistance.

Information furnished by Advanced Radiation Corporation is believed to be accurate and reliable; however, no responsibility is assumed by ARC for its use.

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