

J.A. Woollam Co.

MRS Booth 1002

Ellipsometry Solutionssm for your Thin Film Characterization.



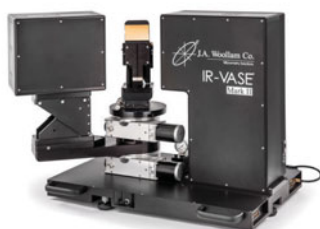
J.A. Woollam Co. has the world's widest variety of **Spectroscopic Ellipsometers** with **8** different models to non-destructively characterize thin film thickness and optical constants. After **29** years, over **15,000** samples characterized in our lab, and over **150** patents – we are the Ellipsometry Experts.

Ellipsometry Solutions



alpha-SE[®]

Designed for low cost and ease-of-use, the alpha-SE is perfect for routine measurements of thin film thickness and refractive index. Compact base with three manually-selectable angles of incidence and a spectral range which includes 180 wavelengths from 380-900nm.



IR-VASE[®]

The IR-VASE is the first and only spectroscopic ellipsometer to combine the chemical sensitivity of FTIR spectroscopy with thin films sensitivity of spectroscopic ellipsometry. Spectral range includes 1.7 to 30 microns (333 to 5900 wavenumbers).



RC2[®]

The RC2 design builds on 25 years of experience. It combines the best features of previous models with innovative new technology: dual rotating compensators, achromatic compensator design, advanced light source, and next generation spectrometer design.



VASE[®]

The VASE is our most accurate and versatile research ellipsometer for all types of materials: semiconductors, dielectrics, organics, metals, multi-layers, and more. Now available with the widest spectral range from ultraviolet to infrared.

1 H 1.00794 Hydrogen	2 He 4.002602 Helium																
3 Li 6.941 Lithium	4 Be 9.012182 Beryllium	5 B 10.811 Boron	6 C 12.0107 Carbon	7 N 14.0067 Nitrogen	8 O 15.9994 Oxygen	9 F 18.9984032 Fluorine	10 Ne 20.1797 Neon										
11 Na 22.98976928 Sodium	12 Mg 24.305 Magnesium	13 Al 26.9815386 Aluminum	14 Si 28.0855 Silicon	15 P 30.973762 Phosphorus	16 S 32.06 Sulfur	17 Cl 35.453 Chlorine	18 Ar 39.948 Argon										
19 K 39.0983 Potassium	20 Ca 40.078 Calcium	21 Sc 44.955912 Scandium	22 Ti 47.887 Titanium	23 V 50.9415 Vanadium	24 Cr 51.9961 Chromium	25 Mn 54.938045 Manganese	26 Fe 55.845 Iron	27 Co 58.933195 Cobalt	28 Ni 58.6934 Nickel	29 Cu 63.546 Copper	30 Zn 65.38 Zinc	31 Ga 69.723 Gallium	32 Ge 72.64 Germanium	33 As 74.9216 Arsenic	34 Se 78.96 Selenium	35 Br 79.904 Bromine	36 Kr 83.798 Krypton
37 Rb 85.4678 Rubidium	38 Sr 87.62 Strontium	39 Y 88.90585 Yttrium	40 Zr 91.224 Zirconium	41 Nb 92.90638 Niobium	42 Mo 95.96 Molybdenum	43 Tc 98.0 Technetium	44 Ru 101.07 Ruthenium	45 Rh 102.9055 Rhodium	46 Pd 106.42 Palladium	47 Ag 107.8682 Silver	48 Cd 112.411 Cadmium	49 In 114.818 Indium	50 Sn 118.71 Tin	51 Sb 121.76 Antimony	52 Te 127.6 Tellurium	53 I 126.90447 Iodine	54 Xe 131.293 Xenon
55 Cs 132.9054 Cesium	56 Ba 137.327 Barium	57 La 138.90547 Lanthanum	58 Ce 140.12 Cerium	59 Pr 140.90766 Praseodymium	60 Nd 144.242 Neodymium	61 Pm 144.91288 Promethium	62 Sm 150.36 Samarium	63 Eu 151.964 Europium	64 Gd 157.25 Gadolinium	65 Tb 158.92535 Terbium	66 Dy 162.5 Dysprosium	67 Ho 164.93032 Holmium	68 Er 167.259 Erbium	69 Tm 168.93421 Thulium	70 Yb 173.054 Ytterbium	71 Lu 174.967 Lutetium	
87 Fr 223 Francium	88 Ra 226 Radium	89 Ac 227 Actinium	90 Th 232.0377 Thorium	91 Pa 231.03688 Protactinium	92 U 238.02891 Uranium	93 Np 237 Neptunium	94 Pu 244 Plutonium	95 Am 243 Americium	96 Cm 247 Curium	97 Bk 247 Berkelium	98 Cf 251 Californium	99 Es 252 Einsteinium	100 Fm 257 Fermium	101 Md 258 Mendelevium	102 No 259 Nobelium	103 Lr 262 Lawrencium	

58 Ce 140.116 Cerium	59 Pr 140.90766 Praseodymium	60 Nd 144.242 Neodymium	61 Pm 144.91288 Promethium	62 Sm 150.36 Samarium	63 Eu 151.964 Europium	64 Gd 157.25 Gadolinium	65 Tb 158.92535 Terbium	66 Dy 162.5 Dysprosium	67 Ho 164.93032 Holmium	68 Er 167.259 Erbium	69 Tm 168.93421 Thulium	70 Yb 173.054 Ytterbium	71 Lu 174.967 Lutetium
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