AutoEL IV SPECIFICATIONS

OPERATING PRINCIPLE : Null Seeking

OPERATING WAVELENGTH: 405nm, 546nm, 633nm (BW = $\pm$ 5nm)

RESOLUTION & ACCURACY at 633nm:

Polarizer or Analyzer	0.05°
DELTA	0.1°
PSI	0.05°

Resolution and accuracy of measured film thickness and film or substrate refractive index depends on the film-substrate system and the film thickness. 3 to 10 angstroms and 0.01 refractive index units are typical for silicon oxide films on silicon.

ANGLE OF INCIDENCE:

Pin Locations 70° $\pm .02^{\circ}$ and 90° $\pm .02^{\circ}$

MEASURING TIME:

Typical	17 seconds	
Maximum	*50 seconds	*Add 10 seconds for print-out & 10 seconds for wave-length change.

DISPLAY:

Display film thickness, index order thickness or substrate N and K as well as prompting message to the operator.

DIGITAL OUTPUT:

Serial ASCII, RS-232
SEMI Equipment Communication Standard - II

SAMPLE STAGE:

The standard sample stage has vertical adjustment plus tilt adjustment about vertex of angle of incidence and about axis formed by intersection of plane of sample. Maximum sample size 150mm.

DATA REDUCTION:

Double absorbing film data reduction software similar to the double transparent film software but with the additional capability of calculating the parameters for single or double absorbing films, as well as non-absorbing films. SECS II compatibility permits replacement of the operator initiated functions by an external computer, and provides complete data transmission of measured and computed results to an external computer. Poly/oxide, poly/nitride data reduction also included.