

4.2 Specifications

Specifications for the Model 50 are listed below:

Range of line widths: *150X:<0.3 to 8.0 micrometers
 100X:<0.3 to 12.5 micrometers
 50X:<1.0 to 25.0 micrometers
 10X:<5.0 to 125.0 micrometers

Nominal slit height: *150X: 2.6 micrometers
 100X: 4.0 micrometers
 50X: 8.0 micrometers
 10X: 40.0 micrometers

*Options

Threshold variable between 1% and 99%
Autofine (TM) Automatic Optical Focus
Nonvolatile Memory--Battery-backed CMOS
One-and Two-Dimensional Registration measurements available
Statistics Testing
Optional Data-Link II (SECS II compatible)

Edge-Sensing Programs (ESP):

1. Mask, Dark Line	9. Pitch, Insides
2. Mask, Light Line	10. Pitch, Outsides
3. Wafer Minimums	11. Wafer, Min/Inside
4. Wafer Insides	12. Wafer, Min/Outside
5. Wafer Outsides	13. Wafer, Inside/Min
6. Pitch, Dark/Light	14. Wafer, Inside/Outside
7. Pitch, Light/Dark	15. Wafer, Outside/Min
8. Pitch, Minimums	16. Wafer, Outside/Inside
	17. Pick-Any-Edge (Optional)

All programs include routines for rough or faint lines.

Precision: One sigma value better than 0.005 micrometers for chrome photomasks (measured with Nanometrics calibration mask, included with each Model 50 instrument).

Scan Time: Less than 5 seconds

Focus Time: From 5 to 25 seconds

Power: 250 watts
100 volts + 10%; 115 volts + 10%; 220 volts + 10%; 240 volts + 10%; 48 to 62 Hz.

Temperature: 65 to 85 degrees F (18 to 30 degrees C) Less than 3 degrees F (2 degrees C) variation from temperature at calibration

Humidity: Maximum 90% non-condensing

Dimension:

	Inches			Centimeters		
	H	W	D	H	W	D
Microscope & densitometer	31 3/4	13	17 5/8	80.64	33.02	44.77
Computer:	17 1/2	18 7/8	23 1/2	19.05	47.94	59.69
Terminal:	14 1/4	16 1/2	7 1/2	36.2	41.9	35.6
Keyboard:	3	16 1/2	7 1/2	7.6	41.9	19.0
Clean-room printer:	3 1/16	7 3/8	6 1/8	7.82	18.75	15.54
X-Y plotter:	5 5/16	17 3/16	10 1/2	14.5	43.7	26.6
Chart recorder:	4 3/4	9	10 1/2	11.88	22.50	28.75

Weight:

Microscope & densitometer: 65.0 pounds (29.5 kg.)

Computer: 54.3 pounds (24.7 kg.)

Anti-vibration stand: 7.0 pounds (3.2 kg.)

Terminal alone: 19.0 pounds (8.7 kg.)

Terminal with TV monitor: 80.4 pounds (35.0 kg.)

Keyboard: 3.0 pounds (1.4 kg.)

Clean-room printer: 3.5 pounds (1.6 kg.)

X-Y plotter: 17.1 pounds (7.8 kg.)

Chart recorder: 6.7 pounds (3.0 kg.)

Clearances: Sufficient space at rear for routing cables. No contact with wall or adjacent furniture that might transmit vibration or limit airflow