

Configuration Sheet

Unpatterned Surface Inspection System

Vendor / Model

KLA-Tencor Surfscan 6420

1 Equipment description:

- 1.1 Purpose: Unpatterned Surface Inspection System, to monitor: Bare silicon wafers and bare silicon wafers with films surface particles and defects.
- 1.2 Model: KLA-Tencor Surfscan 6420
- 1.3
- 1.4 Vintage: 1996

2 System configuration:

- 2.1 Currently Configured for 150mm/200mm Wafer Size
- 2.2 Handler: 150mm/200mm
- 2.3 Robot Type: PUCK arm 150mm/200mm Vacuum
- 2.4 Laser: 30mW Argon Laser, 488nm wavelength, blue laser
- 2.5 Operator Interface: Trackball and keyboard standard
- 2.6 PC configurations:
 - 2.6.1 OS: Windows 98
- 2.7 SFS6XX0 software version: 4.2

3 Facilities

3.1 Dimensions:

3.1.1 Height: 168 cm (66")

3.1.2 Width: 75 cm (29.50")

3.1.3 Depth: 87.63 cm (34.50")

3.1.4 Service clearance on all sides: 18" of space on both sides

24" in the rear are required

3.2 Weight:

3.2.1 Instrument: ~ 240 kg (530 lb)

3.2.2 Shipping: ~ 300 kg (670 lb)

3.3 Facilities:

3.3.1 Vacuum: Minimum 24"Hg ; 0.5cfm (0.2361/S)

3.3.2 Power: 1 Phase 200V/220V VAC, 50/60Hz

4 Acceptance Criteria

Cassette Calibration Test:

INDEX	RIGHT INDEX	
CALIBRATION NUMBER	WAFER #24	WAFER #2
1		
2		
3		
4		
5		
Percent Difference (0.5%Max)		

Note: Test the left indexer. (62x0 only)

Cassette Catalog Test:

Cassette Size	Cassette Manufacturer	Cassette Model	Pass/Fai

LPD Uniformity Test:

Measurement Region	Measurement Mean (um)	STD DEV	CV%
Left Side			
Right Side			
Center			
Bottom			
Top			

Max Mean = _____

Min Mean = _____

Formula: Uniformity Ratio = Max Mean / Min Mean

Uniformity Ratio = _____ (<= 1.05)

PSL Sphere count Repeatability Test:

Mean	1	2	3	4	5	6	7	8	9	10
Count										

Mean = _____

STD = _____

CV%= _____

Formula: CV% = (STD / Mean Count) * 100

Note: The calculated CV% should be less than 0.5% for 62x0

The calculated CV% should be less than 0.5% for 6400

The calculated CV% should be less than 1% for 6420

Remark: STD wafer particle size 0.495um