

# $\ll$ UNIBOND<sup>TM</sup> $\gg$ WAFERS



Quality : PRIME Diameter : 200mm

Commercial Part xxxx-xxx-01

Product description: 5000/10000Å +/-200Å - base HR

## **Top silicon layer**

Parameters	Measurement equipment	Min	Target	Max	Unit
	/conditions				
Metrology edge	All parameters			5	mm
exclusion					
SOI mean thickness	(2)	480	500	520	nm
+/- 3sigma					
Conductivity type	P type				
Dopant	Boron				
Resistivity	SEMI M1 (1)	8.5		11.5	<b>Ohmc</b>
					m
Crystal orientation	SEMI M1 (1)	-0.5	(100)	+0.5	deg
Crystal Growth Method	CZ cop free				
Light Point Defects (LPD)	SP1>0.2µm threshold (2)			200	Count
Area Count (LAD)	SP1>0.8µm threshold (2)		30	Count	
Bonding voids	Visual inspection > 0.5 mm diameter (2)			none	Count
Surface defects (visual)	Edge chips, scratch, slip, stain (2)			none	Count
HF Defects	(2)			1	DEF/c
					m2
surface	VPD-ICPMS (2)			5	E10
contamination_Fe					at/cm <sup>2</sup>
surface	VPD-ICPMS (2)			5	E10
contamination_Cu					at/cm <sup>2</sup>
surface	VPD-ICPMS (2)			5	E10
contamination_Cr					at/cm <sup>2</sup>
surface	VPD-ICPMS (2)			5	E10
contamination_Ni					at/cm <sup>2</sup>
surface metal	VPD-ICPMS (2)			5	E10
contamination_Zn					at/cm <sup>2</sup>
surface	VPD-ICPMS (2)			5	E10

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contamination_Na				at/cm <sup>2</sup>
surface	VPD-ICPMS (2)		5	E10
contamination_Ca				at/cm <sup>2</sup>
surface	VPD-ICPMS (2)		5	E10
contamination_Al				at/cm <sup>2</sup>
Surface roughness	Mirror polished			

## **Buried oxide**

Parameters	Measurement equipment /conditions	Min	Target	Max	Unit
Metrology edge exclusion	All parameters			5	mm
Mean thickness	(2)	900	1000	1100	nm
Within wafer thickness standard	(2)			4	nm
deviation					

## **Mechanical parameters**

Parameters	Measurement equipment	Min	Target	Max	Unit
	/conditions				
Metrology edge exclusion	All parameters			5	mm
Thickness	SEMI M1 (1)	710	725	740	μm
Diameter	SEMI M1 (1)	199.8	200	200.2	mm
TTV	(1)			5	μm
SFQR max	Site size : 25 x 25 mm (1)			0.15	μm
Warp	(2)			60	μm

# **Handle wafer**

Parameters	Measurement equipment	Min	Target	Max	Unit
	/conditions				



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Metrology edge exclusion	All parameters			5	mm
Notch orientation axis	SEMI M1 (1)	-1	<110>	+1	deg
Conductivity type	N/A				
Resistivity	SEMI M1 (1)	750	1000		Ohmc
					m
Crystal orientation	SEMI M1 (1)	-0.5	(100)	+0.5	deg
Crystal Growth	Standard CZ				
Method					
Carbon Content	ASTM F1391 (1)			0.3	ppma
Oxygen Content	ASTM F1188 (1) - max :	13			new
	N/S				ppma
Backside surface	WSB / Oxidized				
Lasermark	backside				

<sup>(1)</sup> Data based on bulk silicon measurements(2) Data based on Soitec internal measurements procedure

### **Packing & Labelling**

Packaging boxes are Ultrapak boxes. Maximum wafer number per box is 25. Double vacuum seal protects each box. Transport packaging are reinforced by cardboard containers, in which the boxes are held in place and protected by performed shells. Two labels are affixed, one on the inner Ultrapak box and the other one on the outer aluminum bag. Labels contain commercial part reference, quantity, production date, lot number and additional product information.

#### **General Information**

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