A4-10

PURCHASE SPECIFICATION
Department: ASSCP / Corp. R&D

REV. 01

TECHNICAL SPECIFICATION

1. MATERIAL : 156 mm, n-type, pseudo square, CZ single crystal silicon wafer

2. APPLICATION : It is used as the starting material for Solar Photovoltaic cells.

SL.	CHARACTERISTICS	VALUE	UNIT
1.0	APPEARANCE	As cut cleaned	Unaided
1.1	SURFACE CONDITION		

Wafers after slicing shall be subjected to detergent solution cleaning process and ultrasonic degreasing process for removal of greases, stains etc. It shall be not be subjected to any kind of chemical etching.

1.2	SAW MARKS DEPTH	<=20 microns	
2.0	DIMENSIONS		
2.1	Size (Side to Side)	156±0.5 mm	
2.2	Size (Corner to Corner)	195.0±0.5 mm / 200.0 ±0.5 mm	
2.3	Shape	Pseudo Square	
2.4	Thickness	200±30 microns	
2.5	TTV (Total Thickness Variation)	<=30 microns	
2.6	BOW	<=70 microns	

3.0 CHARACTERISTICS

3.1 TYPE	N (Phosphorus doped)	
3.2 ORIENTATION	<100> ± 3.0 Deg.	
3.3 RESISTIVITY	0.5 – 2.0 Ohm.cm	
3.4 OXYGEN CONCENTRATION	$<=1 \times 10^{17}$	Atoms/CM^3
3.5 CARBON CONCENTRATION	$<=5 \times 10^{16}$	Atoms/CM^3
3.6 Life Time	> 20 micro seconds	
3.7 Dislocation Density	< 10 / CM^2	

4.0 PACKING

1. Wafers shall be kept sealed in polythene / polypropylene sachets.
2. Each sachets shall have not more than 100 wafers with a label giving manufacturer name, Ingot no., quantity, wire saw/ID saw cut and wafer characteristics.
3. Sachets shall be packed in thermocole boxes with soft spacers on both ends or in polyethylene foam packing to absorb transit-handling shocks. Final packing shall be in carton/wooden cases for easy handling. Wooden cases shall be suitable for airfreight.
4. Each lot must be accompanied with a test certificate containing actual values in the format given below.

For any technical clarification please contact –

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