

## Wafer Specifications

<b>Material Properties</b>	Crystal	Multicrystalline Silicon
	Oxygen concentration	$\leq 8 \times 10^{17}$ atoms/cm <sup>3</sup>
	Carbon concentration	$\leq 2 \times 10^{18}$ atoms/cm <sup>3</sup>
<b>Electrical Properties</b>	Specific resistivity	0.5-2.0 $\Omega$ cm
	Minority carrier lifetime ( $\mu$ -PCD photoconductive decay)	$\geq 1.8$ $\mu$ s
	Conduction type	P (Boron doped)
<b>Geometrical Properties</b>	Shape of wafer	Full Square
	Length of wafer edges	156.0 mm $\pm$ 0.5 mm
	Bevel edge width	2 $\pm$ 0.5 mm (hypotenuse)
	Bevel edge angle	45° $\pm$ 10°
	Average thickness	180 $\mu$ m $\pm$ 20 $\mu$ m, 200 $\mu$ m $\pm$ 20 $\mu$ m
	TTV	$\leq 50$ $\mu$ m
<b>Appearance</b>	Corner chips	Length <5mm
	Cracks and pin holes	Depth <0.5 mm
		Max. Number per wafer: 3
		No cracks and pinholes visible with naked eye
	Surface	As cut and cleaned
	Saw Marks	No stains visible with naked eye
		Depth $\leq 20$ $\mu$ m
	Crystal defects	No inclusions visible with naked eye
<b>Process</b>	Crystal growth technique	Direct Solidification
	Technique of Ingot formation	Casting by heat exchange method
	Squaring Technique	Wire sawing