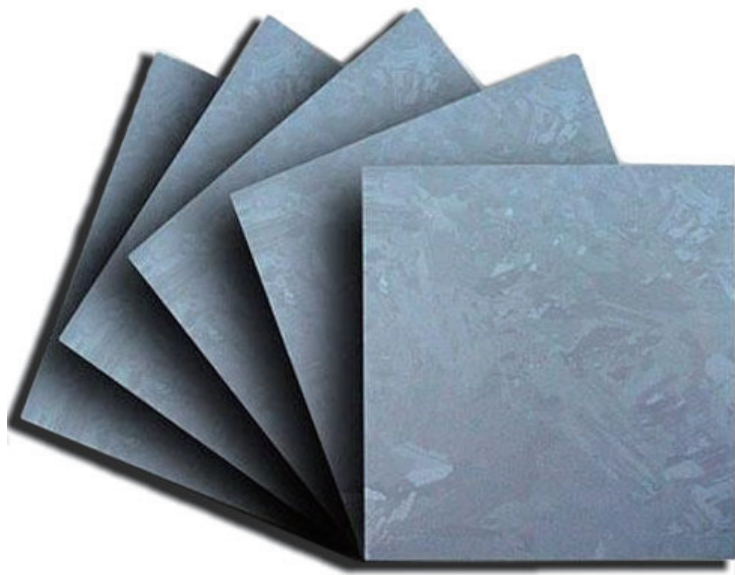


Polycrystalline Solar Wafer



Overview

Red Solar has a solar wafer capacity of 400MW. The production line is built with self-developed saw machine. By employing diamond wire cutting process, the productivity is improved and the cost is largely reduced. With self-developed high efficiency polycrystalline manufacturing technology, the solar wafer is optimized in micro structure, and its dislocation, stacking fault and other crystal defects have been effectively controlled. Therefore, it can achieve a lower carbon, oxygen and metal impurity concentration, longer minority carrier lifetime and more uniform doping distribution.

Conductivity type	P
Dimension	$156 \times 156 \pm 0.5 \text{ mm}$
Diagonal length	$219 \pm 0.5 \text{ mm}$
Chamfer size	$1.5 \pm 0.5 \text{ mm}$
Thickness	$200 \pm 20 \mu\text{m}$
Angle between adjacent sides	$90^\circ \pm 0.1^\circ$
Resistivity	$1.0 \sim 3.0 \Omega \cdot \text{cm}$
Minority carrier lifetime	$\geq 1.5 \mu\text{s}$
Oxygen concentration	$< 8 \times 10^{17} \text{ atoms/cm}^3$
Carbon concentration	$< 5 \times 10^{17} \text{ atoms/cm}^3$
Metal impurity	Fe, Cr, Ni, Cu, Zn
concentration	TMI: $\leq 1 \times 10^{-6} \text{ ppmw}$
Boron concentration	$\leq 0.30 \text{ ppmw}$