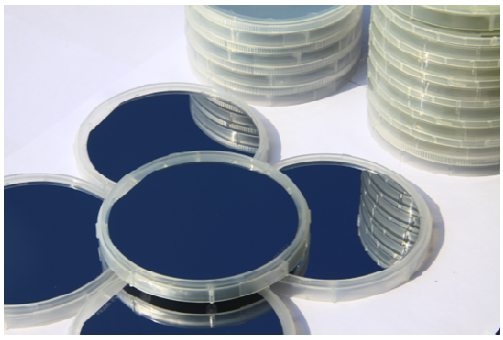
三代三结太阳能电池外延片
S-G3TJ4EU-S01

平均转换效率 ≥ 30%

主体设计

主要材料	GaInP/GaAs/Ge
尺寸	100mm±0.25mm
厚度	145μm±10μm
极性	N on P
平均重量	< 75mg/cm²

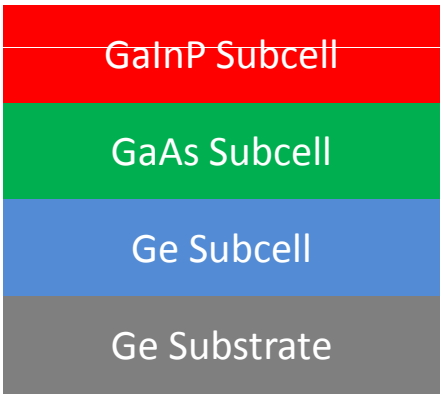
外延片



电学特性@AM0(135.3mW/cm²), 25℃

	BOL	1E15e/cm²
Voc (V)	2.75	2.48
Jsc (mA/cm²)	17.4	16.7
Vmp (V)	2.501	2.26
Jmp (mA/cm²)	16.70	15.68
Eff (%)	30.8	26.2

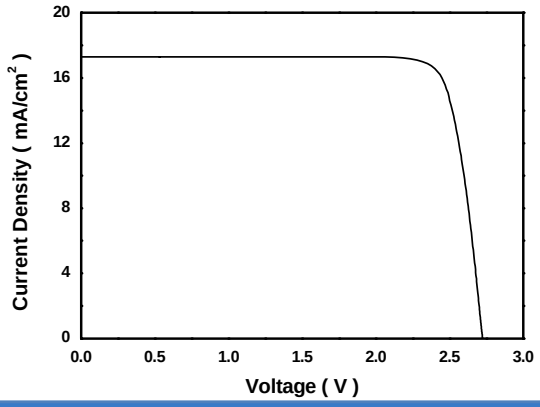
电池结构



温度系数

	BOL	1E15e/cm²
Voc (mV/℃)	-6.2	-6.5
Jsc (μA/cm²·℃)	11.5	11.3
Vmp (mV/℃)	-6.4	-6.8
Jmp (μA/cm²·℃)	10.1	10.3

I-V曲线



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电话：0086-22-58282806 传真：0086-22-58282581 网址：www.sanan-e.com

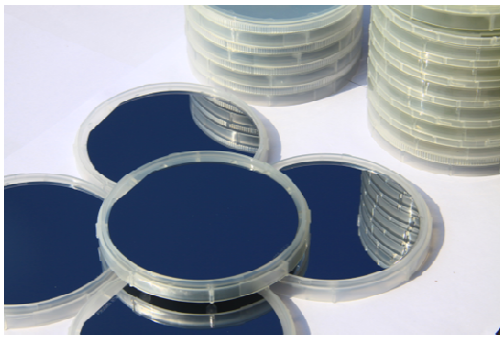
Epitaxial wafer of Triple junction solar cell
S-G3TJ4EU-S01

Average Efficiency≥ 30%

Main parameter

Material	GaInP/GaAs/Ge
Diameter	100mm±0.25mm
Thickness	145μm±10μm
Polarity	N on P
Weight	< 75mg/cm^2

Wafer photograph



Electronic properties@AM0(135.3mW/cm^2), 25℃

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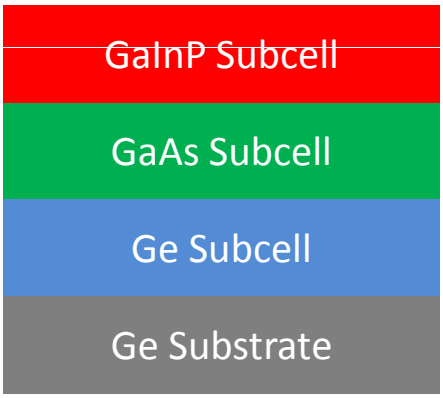
Schematic structure



Thermal coefficient

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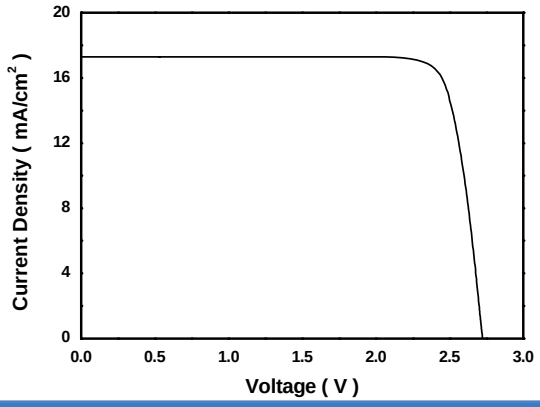
I-Vcurves



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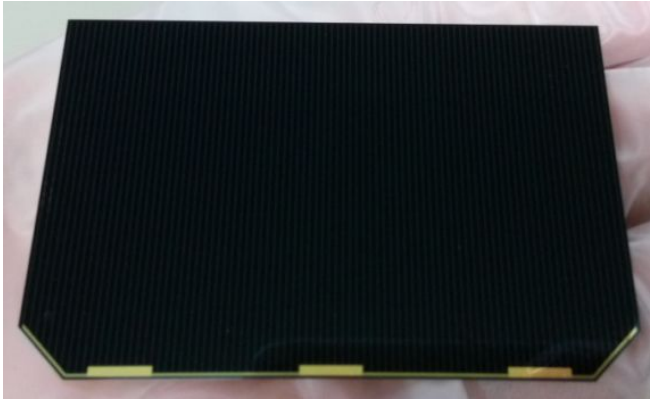
三代三结太阳能电池芯片
S-G3TJ46A

平均转换效率 ≥ 30%

主体设计

主要材料	GaInP/GaAs/Ge
减反射膜	TiO_x/Al_2O_3
电极主要材料	Ag/Au
尺寸	40±0.2mm×60.5±0.2mm
厚度	145μm±10μm
极性	N on P
平均重量	< 75mg/cm2

空间太阳能电池芯片



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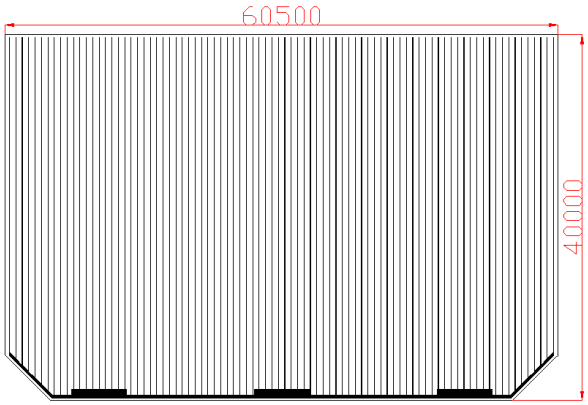
电池结构



温度系数

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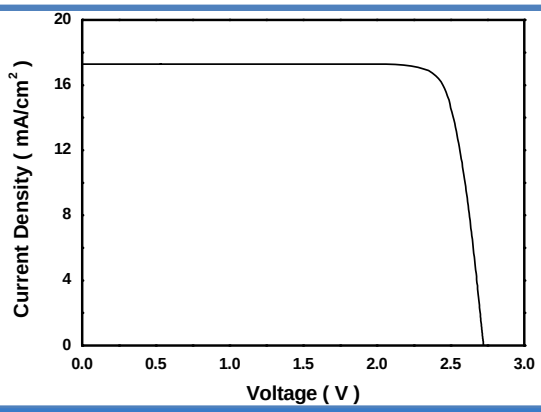
I-V曲线



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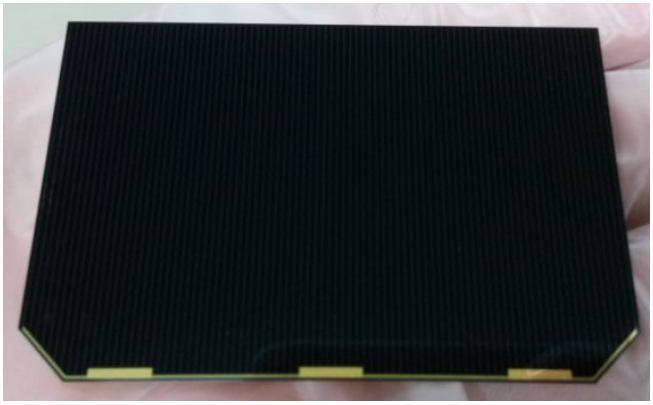
Triple junction solar cell
S-G3TJ46A

Average Efficiency≥ 30%

Main parameter

Material	GaInP/GaAs/Ge
ARC	TiO_x/Al_2O_3
Electrode	Ag/Au
Size	40±0.2mm×60.5±0.2mm
Thickness	145μm±10μm
Polarity	N on P
Weight	< 75mg/cm2

Space solar cell chip



Electronic properties@AM0(135.3mW/cm^2), 25℃

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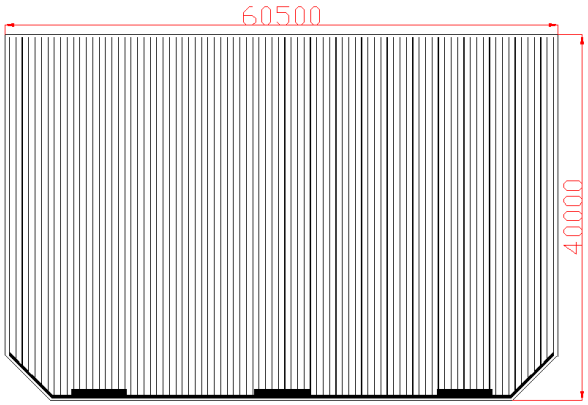
Cell design



Thermal coefficient

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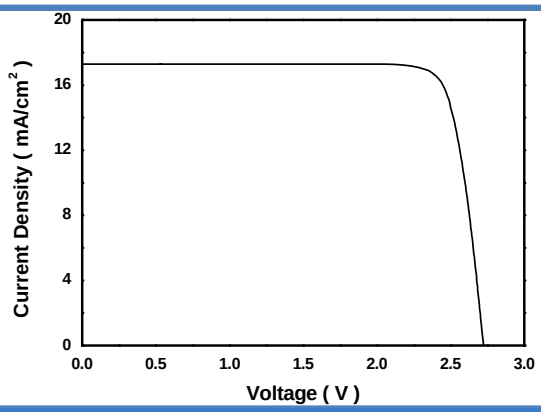
I-V curve



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三代三结太阳能电池芯片
S-G3TJ48A

平均转换效率 ≥ 30%

主体设计

主要材料	GaInP/GaAs/Ge
减反射膜	TiO_x/Al_2O_3
电极主要材料	Ag/Au
尺寸	40±0.2mm×80±0.2mm
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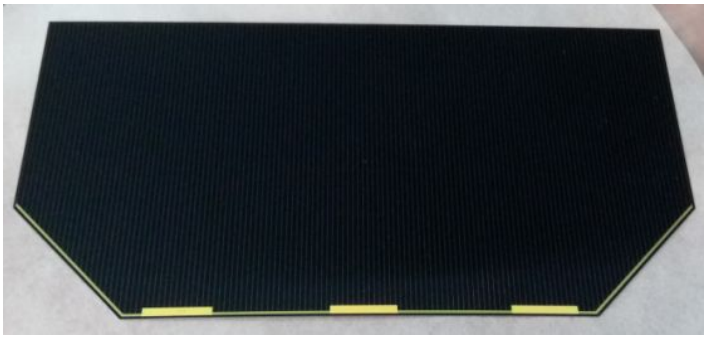

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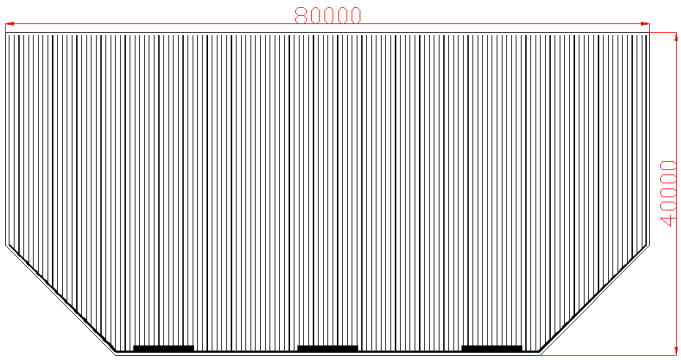

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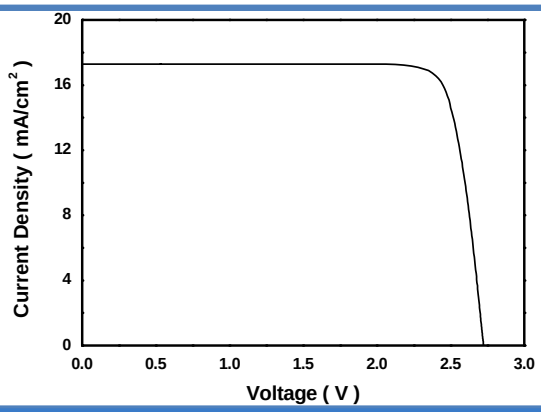

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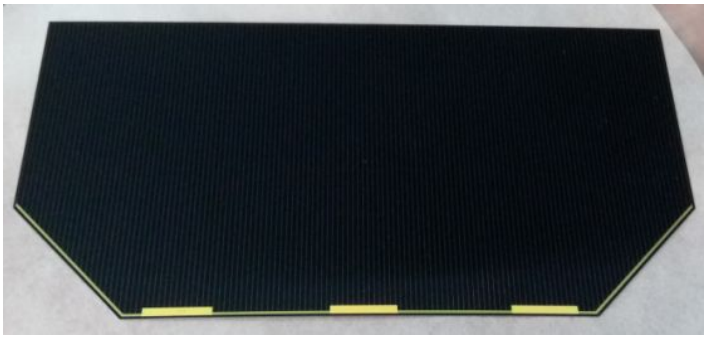
Triple junction space solar cell
S-G3TJ48A

Average efficience≥ 30%

Main parameter

Material	GaInP/GaAs/Ge
ARC	TiO_x/Al_2O_3
Electrode	Ag/Au
Size	40±0.2mm×80±0.2mm
Thickness	145μm±10μm
Polarity	N on P
Weight	< 75mg/cm2

Photograph of the space solar cell



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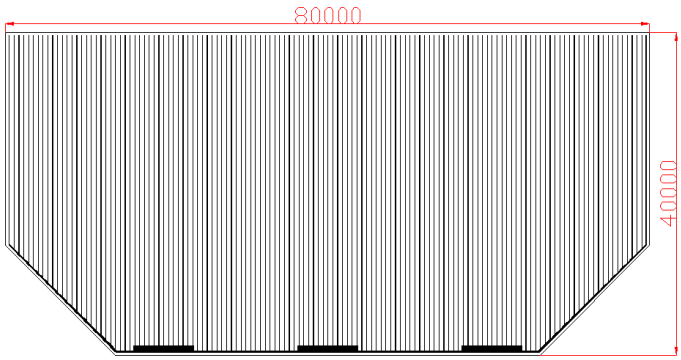
Cell design



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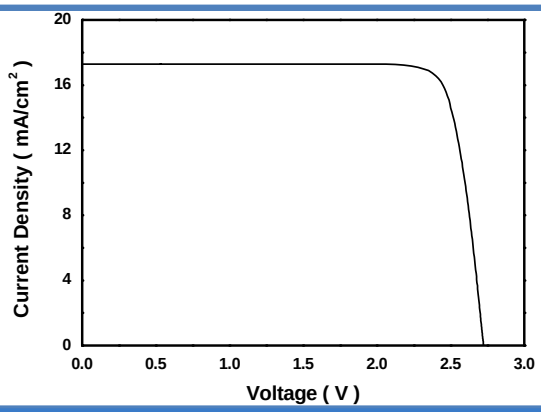
I-Vcurve



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