



Reliability & Innovation in Solar PV

Kuwait, December 2018

JinkoSolar Co., Ltd.

Jinko Solar
Building Your Trust in Solar

1 Introduction

2 Ensuring Reliability in your PV Modules

3 Cheetah

Global Presence



8 Global factories

31 Subsidiaries/offices

90 Countries with customers

12,000 Employees

9.8 GW
Capacity

33.7 GW
Delivered

Product range

Eagle Poly



Half-cell



**Smart
Module**



Eagle Dual



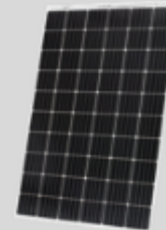
Eagle 12 BB



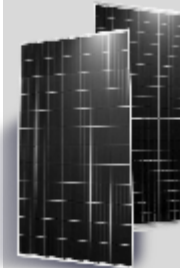
**Eagle Mono
PERC**



Bi-Facial



Cheetah

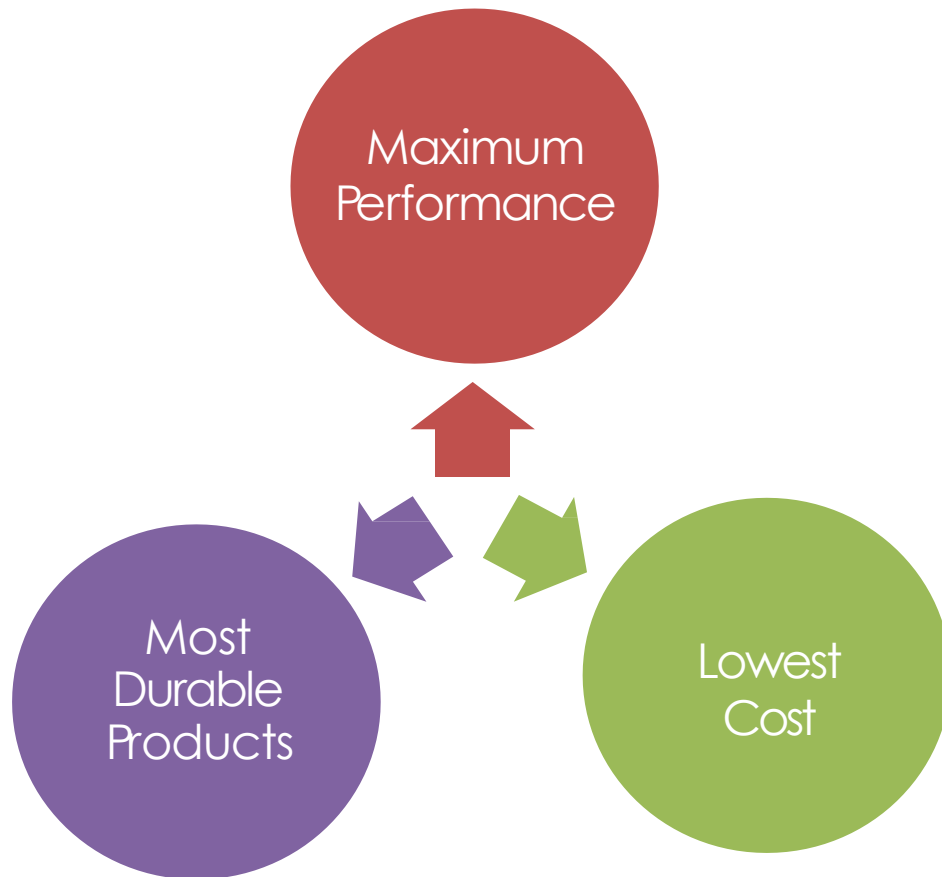


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Conflicting demands



Is tier 1 good enough?

Own Brand

Own Manufacture

6 x 1.5Mwp projects in 2 years

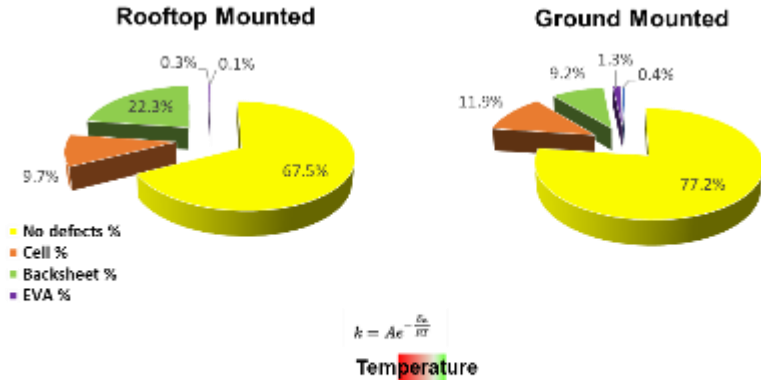
Non Development Bank

Tracked in Bloomberg Database

Easy To Achieve?

Is this the right tool?

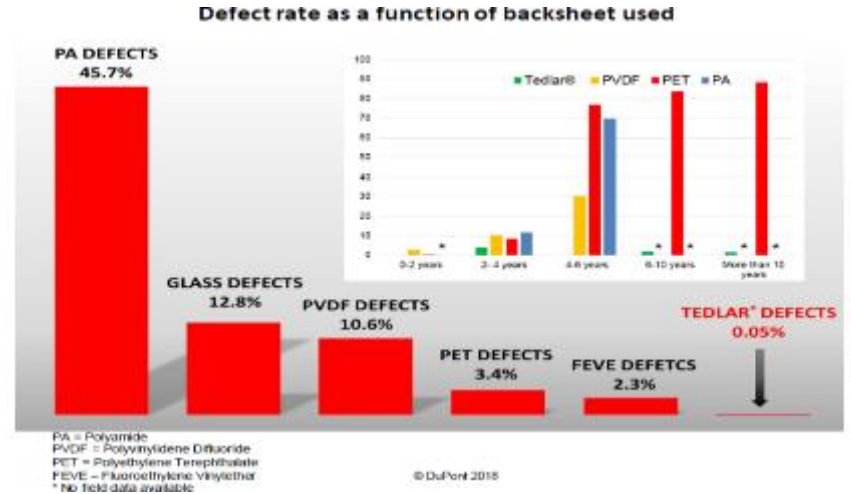
Application Sensitivity



Higher defect rates for rooftop vs ground installations. Differences are likely due to higher temperatures for rooftop systems

Source: DuPont Field Survey 2017

Material Sensitivity



Third party Due Diligence

Characteristics									
Light Rating - 100 W/m²									
Electrical Characteristics - 100 W/m²									
Parameter	Value	Parameter	Value	Parameter	Value	Parameter	Value	Parameter	Value
Open Circuit Voltage	37.1V	Short Circuit Current	3.25A	Maximum Power	1200W	Efficiency	21.5%	Temperature Coefficient	-0.45%/°C
...

DO YOU TRUST THE PRODUCT?

Before Production: Product Qualification Program

1. Evaluate the factory
2. Consult DNV GL extended reliability and performance reports



DO YOU TRUST THE PROCESS?

During Production: Statistical Batch Testing

1. Verify BOM qualification
2. Factory oversight during production for the project
3. Test samples from each batch produced for the project



HAVE YOU VERIFIED THE LONG-TERM PERFORMANCE?

Ongoing: Field Testing

1. Quantify operating capacity
2. Monitor and check system health
3. Analyze system performance using advanced analytics

1 Introduction

2 Selecting your PV Modules

3 Cheetah

Solar
JinkO

Building Your Trust in Solar



The New **Jinko**^{Solar} Cheetah

380W / 385W / 390W / 395W / 400W

(18.89% / 19.14% / 19.38% / 19.63% / 19.88%)

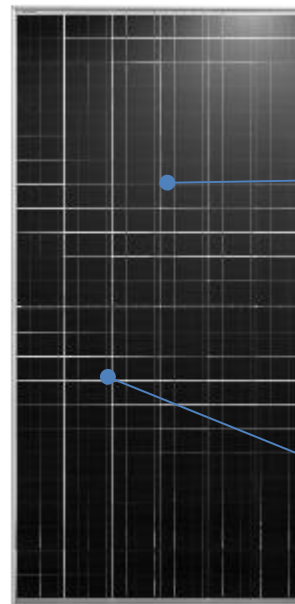
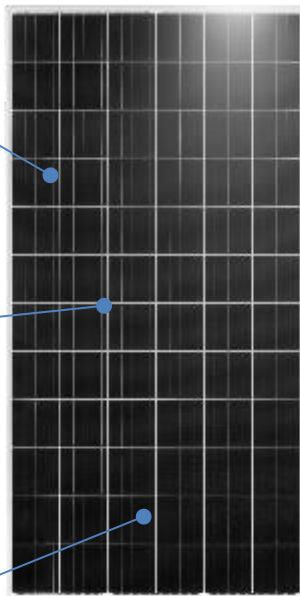
Cheetah Mono PERC Module Efficiency

Power roadmap

Industry leading cell tech.
(158.75mmx158.75mm)

Full-Cell

Half-Cell

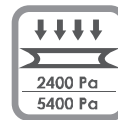
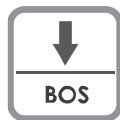


Avg. 7Wp power up compared to Cheetah full-cell

Less heat loss

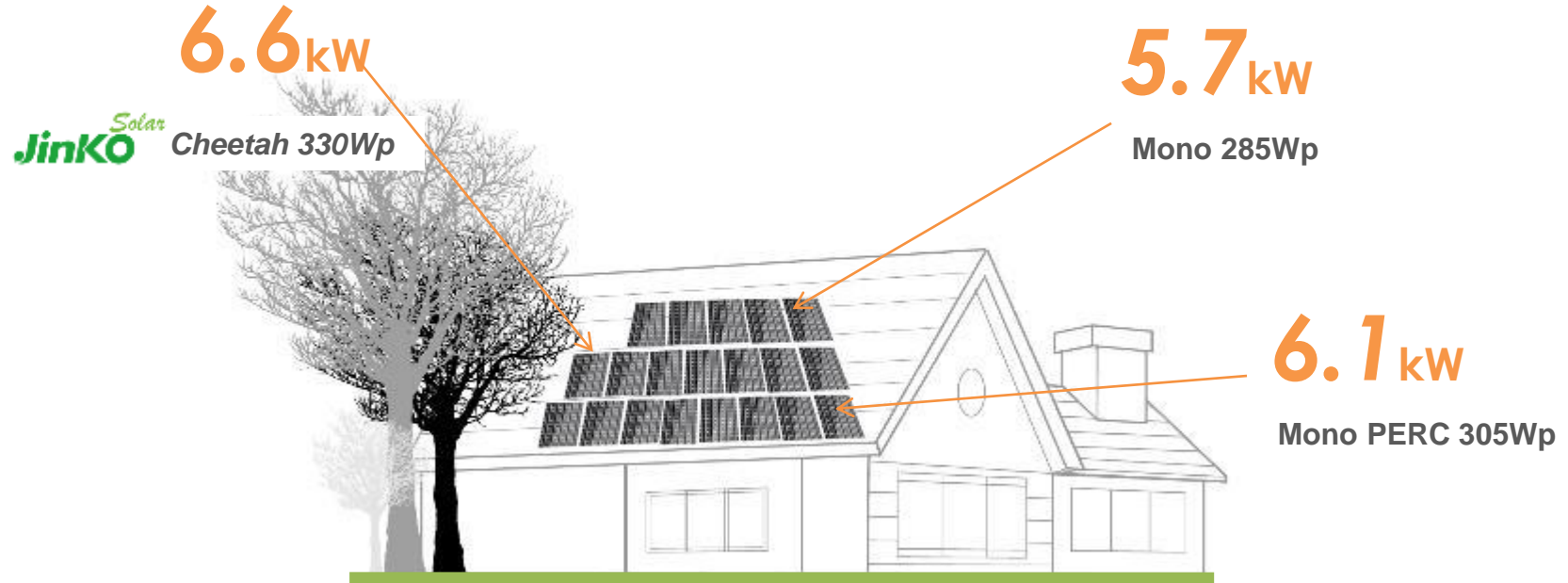
Avg. 8Wp power up compared to 156.75mm Mono PERC

Less BOS cost



Cheetah

* The capacity of a solar power system with 20 module (60 Cells)



The power output of Cheetah reaches 330Wp this year which is a great solution for home owners who want to get more electricity from their roof or save roof space for future system expansion.

Cheetah



With Eagle Mono PERC 72p

With Cheetah HC 72p

***Example** : North America - 100MW Project

	Mono PERC 375Wp	Cheetah 390Wp	Cheetah HC 400Wp
No. of Module	266,682	256,412	250,016
No. of 40' Container	428	449	437
Plant Area	1,861,185 m ²	1,828,804 m ²	1,809,316 m ²
Area Increment	0	-1.74%	-2.79%
Length of Steel Structure	529.1 km	513.9 km	501.0 km
Steel Structure Increment	0	-2.88%	-5.31%



Thank You!