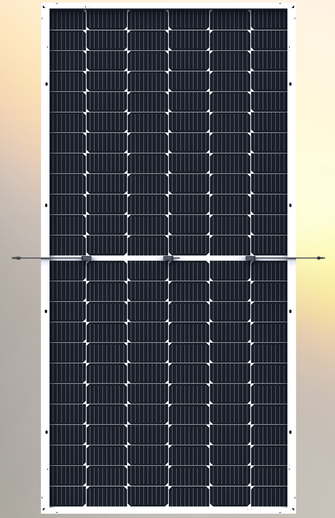
Back



Over 80% bifaciality ,
5%-30% additional power gain
from back side

400 mm NA hole added,
suitable for tracking systems

Ultra slim split junction box
for unshaded back side

1500V

Fully certified for 1,500v
system voltage

30-year power warranty ,
low LID with 1.5% degradation
in the first year

Certified salt mist and
ammonia resistance,
ideal for harsh climates

Anti-PID

Ensured PID resistance
through cell process and
module material optimization

Trinasolar

i-TOPCon TECHNOLOGY EMPOWERED

DUOMAX N

N-type Bifacial, More Profitable Power Generation in 30 Years

LinkedIn:

Trina Solar

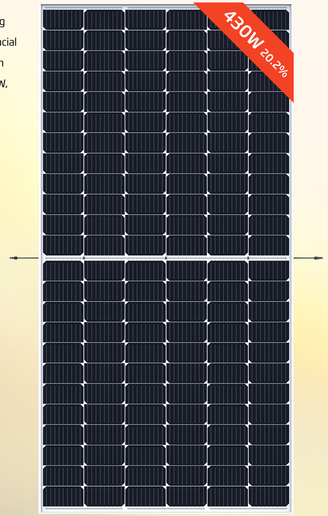
Website:

www.trinasolar.com

The Duomax N Module

Trina Solar has further enhanced the cutting-edge TOPCon technology, developing N-type i-TOPCon bifacial cells. Duomax N bifacial modules are now in mass production, with an industry-leading output power of up to 430W, ranking the top in the industry.

Front



i-TOPCon

N-type i-TOPCon cell
Efficiency ≥23%

Dual Glass structure with
high reliability

Minimized micro-cracks
and snail trails

Fire class A certified

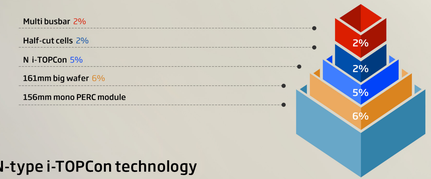
5400Pa
2400Pa

Suitable for tracking system
thanks to high static load

Excellent IAM
(Incident Angle Modifier)
and low light performance
certified by 3rd party

Outstanding Technology

The Duomax N module integrates N-type bifacial i-TOPCon cells with over 80% bifaciality, multi-busbar (MBB) design, dual-side and half-cut technologies, which greatly improves the actual power generation.



1 N-type i-TOPCon technology

- Self-developed and named by Trina Solar State Key Lab, with a 24.58% (Front) world-record lab efficiency confirmed by the ISFH CalTeC in 2019

- Less than 1% light induced degradation

- Unique cell design to ensure revolutionary breakthrough on cell efficiency, 23%(front) average cell efficiency in mass production

- 10 patents, including 9 invention patents

2 MBB technology

- Uniform appearance, nearly zero reflection
- Optimal performance with micro light trapping effect
- Rare chance of power loss due to micro-cracking

3 Half-cut technology

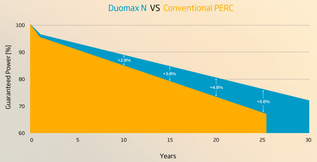
- High reliability with strong resistance against hotspots
- Better generation capacity with lower internal resistance and working temperature
- Higher power output in case of shading

High Energy Generation of Duomax N

The Duomax N modules feature a lower temperature coefficient and low light induced degradation (LID), greatly improving the actual power output. They also provide an extra 5% to 30% power generation from their back side, and feature a 30-year power warranty.

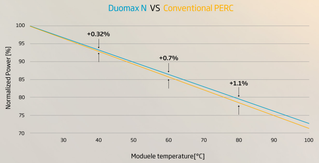
Low degradation

Duomax N modules have a 30-year warranty with 1.5% degradation in the first year and average 0.5% annual degradation afterwards, which guarantees more power than conventional PERC modules throughout the whole lifecycle.



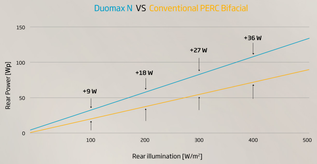
Low temperature coefficient

With the better temperature coefficient, which is -0.35%, Duomax N will suffer less power loss caused by temperature rise and achieve higher power generation than conventional PERC modules.



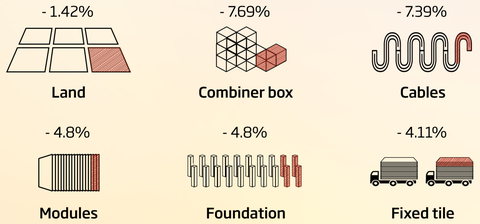
High bifacial gain

Duomax N modules could get more back side power gain than conventional PERC bifacial modules with the increase of the rear illumination.



BOS Savings of Duomax N

420W DUOMAX N VS. Mono PERC



LCOE Reduction of Duomax N

	Power generation	LCOE	IRR
10% back side power gain	14.20%	10.11%	1.59%
15% back side power gain	19.39%	12.08%	2.27%

Project site: Tochigi-ken, Japan
Project capacity: 3.125MW

Better Performance with Tracking Systems

Duomax N is ideal for Utility-scale projects with a bifaciality rate of up to 80%. Paired with a tracker, you can achieve a 1+1>2 effect and improve the return on your investment. Trina Solar's proprietary TrinaPro solution for solar power plants integrates premium components such as Duomax N modules, smart trackers and inverters. TrinaPro focuses on optimization, safety and high revenues over the lifetime of the system, giving full play to maximum value of the power station.

Hardware-software integration

Design + product +project integrated management

Smart control and O&M on an integrated platform

TrinaPro