

ENGINEERED WITH EXCELLENCE



HYPERSOL

HIGH EFFICIENCY N-TOPCon PV MODULES



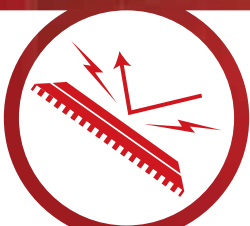
Higher efficiency



Lower degradation rate



Better low light performance



Superior hail test performance

ø 45mm hail test passed from third party laboratory with impact velocity up to 27m/s
Applicable with Glass (2mm) to Glass (2mm) Module and Glass (3.2mm) to Backsheet Module



Maximum Efficiency %

23.14

Cell Type

M10_R

Wattage Up to

625W

Cell Number

144

HYPERSOL

HIGH EFFICIENCY N-TOPCon PV MODULES

Hypersol, the latest PV module from Vikram Solar is powered with N-TOPCon cell with higher efficiency.

- Proved to have lower degradation rate, low light performance, higher bi-faciality which contributes to more generation throughout
- Improved longevity, excellent anti-PID performance via optimized process & materials control and lesser susceptibility to LID & LeTID
- Duly customized for utility as well as rooftop solar projects, across geographies & climate conditions

Hypersol modules are an amalgamation of endurance and agility, a fusion of quality and performance, a blend of balance and flexibility.



Manufacturing of TOPCon module



Highly Automated Production Line

- Multistage EL and digitalized visual inspection resulting in defect free modules
- Implemented engineering excellence ensures top notch quality
- High-capacity stringer with integrated laser cutting and string EL facility
- Double side heating and stacking laminator

Core USPs of TOPCon cell based modules



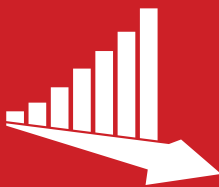
Improved bifacial factor

- In comparison to the PERC module which has a bifacial factor of 70%, the TOPCon module has a modified bifacial factor up to 85%
- The corresponding power boost is around 30% from rear side with suitable albedo



Better low light performance

- TOPCon modules will have more energy generation hours in a day
- Average energy gain of 1.5-3% as compared to PERC modules



Lower degradation rate

- N-type TOPCon cell shows low degradation due to absence of Boron which is the main reason of LID and also low Hydrogen solubility in n-type lowers the formation of H-bond which, results in low degradation

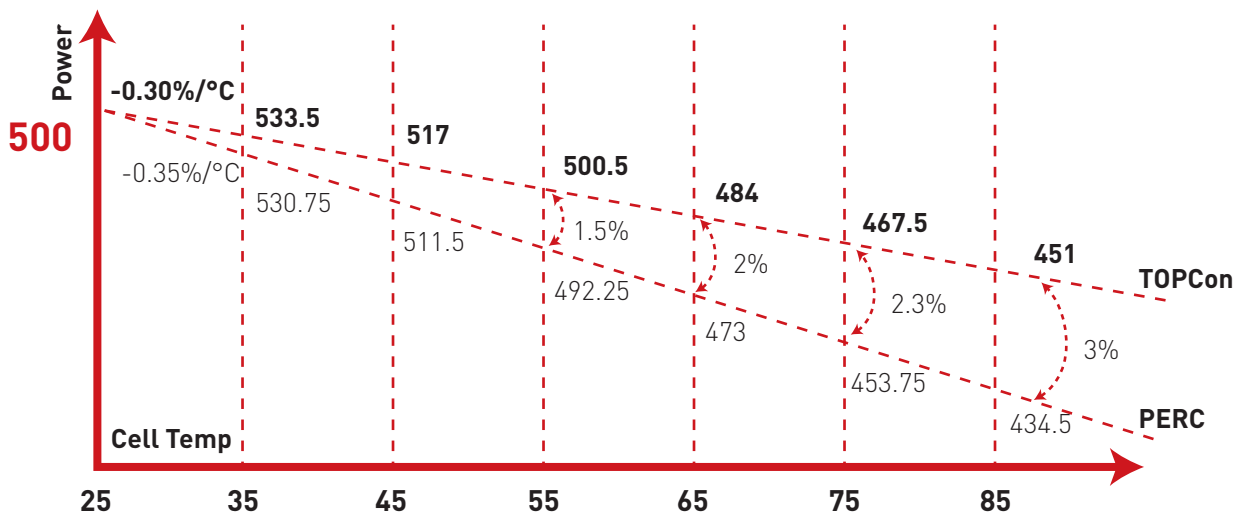


Advanced warranty

- First year degradation will be 1%
- Linear annual degradation, of our TOPCon module is 0.4%, whereas it is 0.50% for PERC counterparts

Improved Temperature Coefficient

Temperature coefficient of TOPCon cell is approximately 15% lower than PERC cell which will increase power generation and reduce power loss at higher temperature.



Why Hypersol?

Lower LCOE

- Lower balance of systems cost
- Improved value proposition of the product with competitive ROI

0% negative power tolerance

- Positive power tolerance of up to 0 ~ 4.99Wp
- Module Imp binning radically reduces string mismatch losses

Improved longevity

- Excellent anti-PID performance via optimized process and materials control
- Lower susceptibility to LID & LeTID

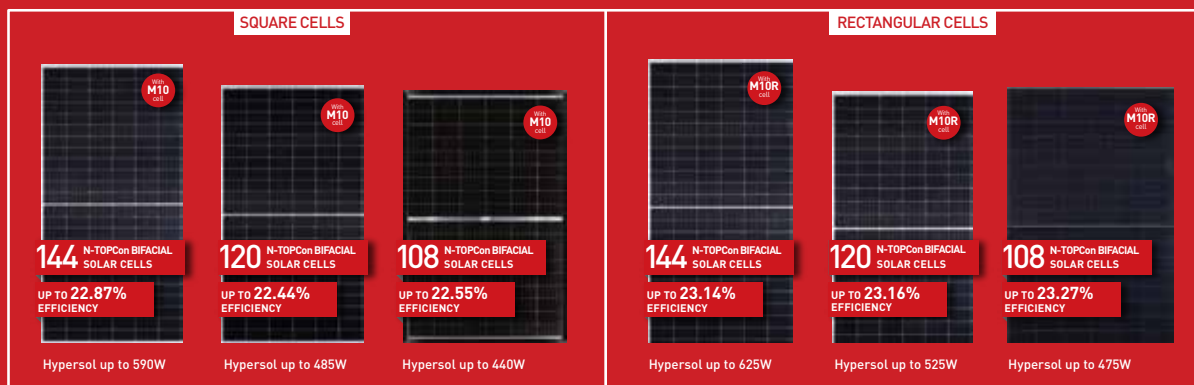
Premium performance parameters

- Topcon solar cell up to 85% bifaciality, brings higher energy yield from rear side
- Lower temperature coefficient minimizing generation losses at high temperature

Suited for rooftop installation*

- Light weight modules
- Aesthetically appealing with higher efficiency

*Modules with 108, 120 cell



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