

# CST-NT10/54GDF

# 425-435W N-TOPCon

108 HALF-CELL BIFACIAL ALL-BLACK MODULE

## Characteristic



**High temperature power generation performance**  
n-type modules have a relatively low temperature coefficient. In combination with the lower module operating temperature, the power generation gain of around 2%.



**PID Resistance**  
Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.



**Higher Power**  
Output Module power increases 5-25% generally, bringing significantly lower LCOE and higher IRR.



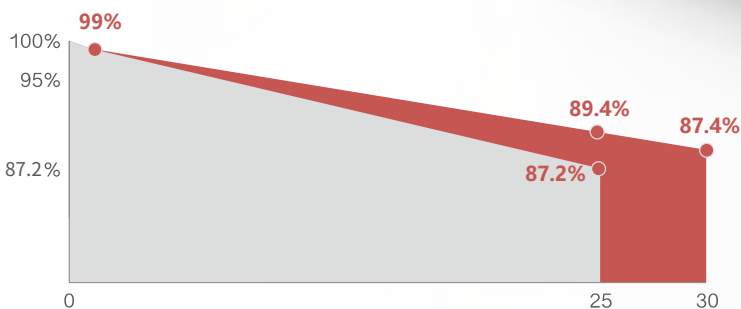
**Excellent Reliability**  
15 Year Product Warranty ; 30 Year Linear Power Warranty ; 0.40% Annual Degradation Over 30 years.

**22.3%**

Max Module  
Efficiency

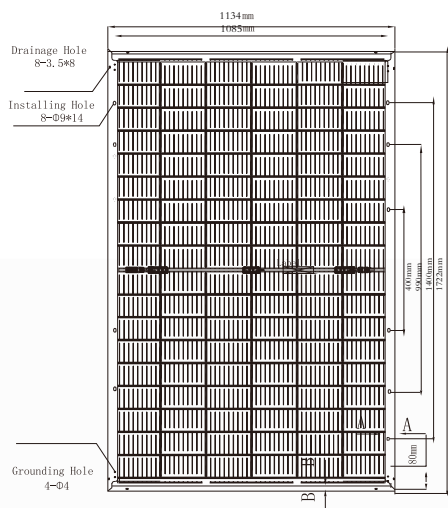
## Consort Linear Warranty

● PERC Standard ● CONSORT SOLAR Module

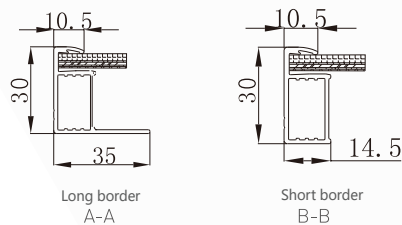


- 15 year Product Warranty
- 30 Year Linear Power Warranty
- 0.4% Annual Degradation Over 30 Years

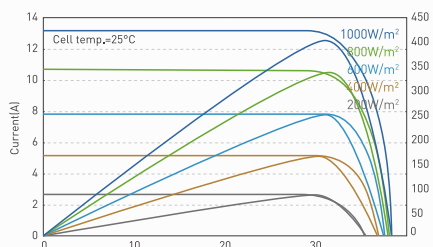
## ENGINEERING DRAWING (mm)



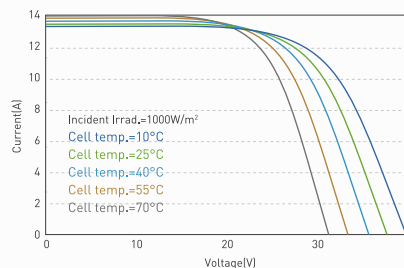
## FRAME CROSS SECTION (mm)



## I-V/P-V CURVE AT DIFFERENT IRRADIATION (425W)



## I-V CURVE AT DIFFERENT TEMPERATURE (425W)



## Electrical Characteristics (STC/NMOT)

| PV module model                | CST-NT10/54GDF<br>415 |       | CST-NT10/54GDF<br>420 |       | CST-NT10/54GDF<br>425 |       | CST-NT10/54GDF<br>430 |       | CST-NT10/54GDF<br>435 |       |
|--------------------------------|-----------------------|-------|-----------------------|-------|-----------------------|-------|-----------------------|-------|-----------------------|-------|
|                                | STC                   | NMOT  | STC                   | NMOT  | STC                   | NMOT  | STC                   | NMOT  | STC                   | NMOT  |
| Maximum Power - Pmax(W)        | 415                   | 312   | 420                   | 316   | 425                   | 319   | 430                   | 323   | 435                   | 327   |
| Open Circuit Voltage - Voc(V)  | 38.35                 | 36.43 | 38.50                 | 36.57 | 38.64                 | 36.70 | 38.90                 | 36.95 | 39.06                 | 37.10 |
| Short Circuit Current - Isc(A) | 13.65                 | 11.01 | 13.73                 | 11.07 | 13.78                 | 11.12 | 13.83                 | 11.18 | 13.91                 | 11.31 |
| Voltage at Pmax-Vmp(V)         | 31.95                 | 30.02 | 32.16                 | 30.22 | 32.39                 | 30.43 | 32.60                 | 30.63 | 32.81                 | 30.83 |
| Current at Pmax-Imp(A)         | 12.99                 | 10.39 | 13.06                 | 10.44 | 13.12                 | 10.49 | 13.19                 | 10.55 | 13.26                 | 10.60 |
| Module Efficiency-ηm(%)        | 21.3                  |       | 21.5                  |       | 21.8                  |       | 22.0                  |       | 22.3                  |       |
| Power Output Tolerance(W)      | 0~+5                  |       |                       |       |                       |       |                       |       |                       |       |

STC: Irradiance 1000 W/m, Module Temperature 25°C, Air Mass AM1.5

NMOT: Irradiance 800 W/m, Ambient Temperature 20°C, Wind Speed 1m/s

## Electrical Characteristics with different power bin (reference to 10% Irradiance ratio)

|                                | 457   | 462   | 468   | 473   | 479   |
|--------------------------------|-------|-------|-------|-------|-------|
| Maximum Power - Pmax(W)        | 457   | 462   | 468   | 473   | 479   |
| Open Circuit Voltage - Voc(V)  | 38.35 | 38.50 | 38.64 | 38.90 | 39.06 |
| Short Circuit Current - Isc(A) | 15.07 | 15.16 | 15.23 | 15.31 | 15.39 |
| Voltage at Pmax-Vmp(V)         | 31.95 | 32.16 | 32.39 | 32.60 | 32.81 |
| Current at Pmax-Imp(A)         | 14.29 | 14.37 | 14.43 | 14.51 | 14.58 |

## Mechanical Data

|                     |  |
|---------------------|--|
| Number of Cells     | N-type Mono-crystalline 108 pieces (54x2)                                    |
| External Dimensions | 1722X1134X30mm   |
| Weight              | 24.4kg   |
| Front glass         | High transparency solar glass 2.0mm  |
| Back glass          | High transparency solar glass 2.0mm  |
| Frame               | Black/Silver, Anodized aluminum alloy  |
| Junction Box        | IP68 rated   |
| Output Cables       | 4.0mm <sup>2</sup> , 280 mm in length, length can be customized/UV resistant |
| Number Of Diodes    | 3  |
| Wind/Snow Load      | 2400Pa/5400Pa  |
| Connector           | MC compatible  |
| Bifaciality         | 80±5%  |

## Temperature Characteristics

|   |            |
|---|------------|
| Nominal Module Operating Temperature (NMOT) | 45±2°C     |
| Isc Temperature Coefficient                 | +0.045%/°C |
| Voc Temperature Coefficient                 | -0.25%/°C  |
| Pmax Temperature Coefficient                | -0.29%/°C  |

## Maximum Ratings

|                             |           |
|-----------------------------|-----------|
| Operational Temperature     | -40~+85°C |
| Maximum System Voltage      | 1500V DC  |
| Voc Temperature Coefficient | 30A       |

Power measurement error +/- 3%

## Packaging Configuration

|                           |            |
|---------------------------|------------|
| Module per box            | 36 pieces  |
| Modules per 40' container | 936 pieces |