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Solar Panel Guide Specification Data Sheet

**Canadian Solar Inc.
BiKu CS3U-375-400MB-AG
CS3U-390MB-AG**

Also available on the web at
EnergyPal.com/canadian-solar-inc-solar-panels/cs3u-390mb-ag



BiKu MODULE

NEW GENERATION BIFACIAL MODULE

FRONT POWER RANGE: 375W ~ 400W

UP TO 30% MORE POWER FROM THE BACK SIDE

CS3U-375 | 380 | 385 | 390 | 395 | 400MB-AG



FRONT

BACK



5BB cell



MBB cell

* Both 5BB and MBB modules will be supplied.

MORE POWER



Up to 30% more power from the back side



Low NMOT: 41 ± 3 °C
Low temperature coefficient (Pmax):
-0.36 % / °C



Better shading tolerance



linear power output warranty*



enhanced product warranty on materials and workmanship*

*According to the applicable Canadian Solar Limited Warranty Statement.

MORE RELIABLE



Lower internal current,
lower hot spot temperature



Minimizes micro-cracks and
snail trails



Heavy snow load up to 5400 Pa,
wind load up to 2400 Pa *



Fire Class A and Type 3 / Type 13

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001:2015 / Quality management system

ISO 14001:2015 / Standards for environmental management system

OHSAS 18001:2007 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730: VDE / CE / MCS / INMETRO

UL 1703 / IEC 61215 performance: CEC listed (US) / FSEC (US Florida)

UL 1703: CSA / IEC 61701 ED2: VDE / IEC 62716: VDE / IEC 60068-2-68: SGS
Take-e-way



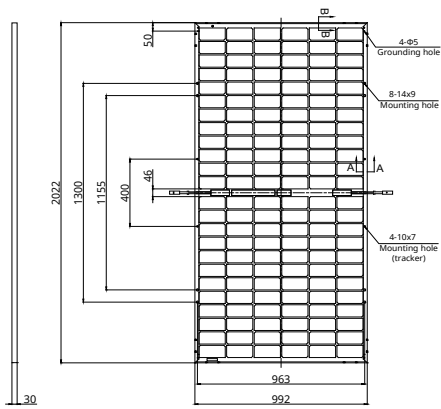
* As there are different certification requirements in different markets, please contact your local Canadian Solar sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. No. 1 module supplier for quality and performance/price ratio in IHS Module Customer Insight Survey. As a leading PV project developer and manufacturer of solar modules with over 36 GW deployed around the world since 2001.

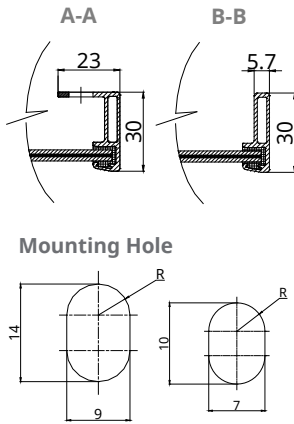
* For detailed information, please refer to Installation Manual.

ENGINEERING DRAWING (mm)

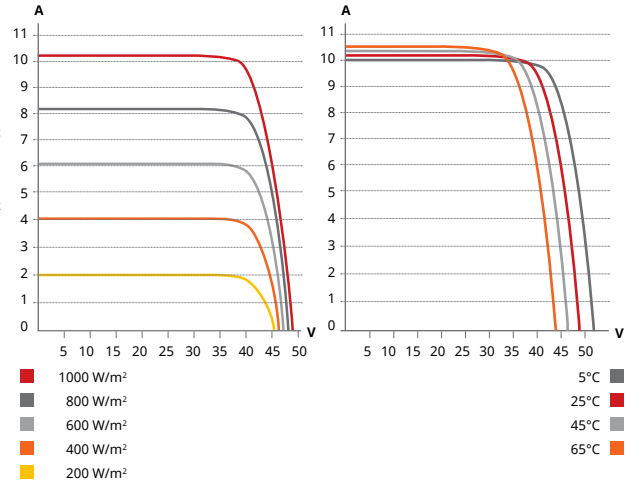
Rear View



Frame Cross Section



CS3U-390MB-AG / I-V CURVES



ELECTRICAL DATA | STC*

| | Nominal Max. Power (Pmax) | Opt. Operating Voltage (Vmp) | Opt. Operating Current (Imp) | Open Circuit Voltage (Voc) | Short Circuit Current (Isc) | Module Efficiency | |
|------------------------|---------------------------|------------------------------|------------------------------|----------------------------|-----------------------------|-------------------|--------|
| CS3U-375MB-AG | 375 W | 39.8 V | 9.43 A | 47.6 V | 9.93 A | 18.70% | |
| Bifacial Gain** | 5% | 394 W | 39.8 V | 9.90 A | 47.6 V | 10.43 A | 19.64% |
| | 10% | 413 W | 39.8 V | 10.37 A | 47.6 V | 10.92 A | 20.59% |
| | 20% | 450 W | 39.8 V | 11.32 A | 47.6 V | 11.92 A | 22.43% |
| | 30% | 488 W | 39.8 V | 12.26 A | 47.6 V | 12.91 A | 24.33% |
| CS3U-380MB-AG | 380 W | 40.0 V | 9.50 A | 47.8 V | 10.01 A | 18.94% | |
| Bifacial Gain** | 5% | 399 W | 40.0 V | 9.98 A | 47.8 V | 10.51 A | 19.89% |
| | 10% | 418 W | 40.0 V | 10.45 A | 47.8 V | 11.01 A | 20.84% |
| | 20% | 456 W | 40.0 V | 11.40 A | 47.8 V | 12.01 A | 22.73% |
| | 30% | 494 W | 40.0 V | 12.35 A | 47.8 V | 13.01 A | 24.63% |
| CS3U-385MB-AG | 385 W | 40.2 V | 9.58 A | 48.0 V | 10.09 A | 19.19% | |
| Bifacial Gain** | 5% | 404 W | 40.2 V | 10.06 A | 48.0 V | 10.59 A | 20.14% |
| | 10% | 424 W | 40.2 V | 10.54 A | 48.0 V | 11.1 A | 21.14% |
| | 20% | 462 W | 40.2 V | 11.50 A | 48.0 V | 12.11 A | 23.03% |
| | 30% | 501 W | 40.2 V | 12.45 A | 48.0 V | 13.12 A | 24.98% |
| CS3U-390MB-AG | 390 W | 40.4 V | 9.66 A | 48.2 V | 10.17 A | 19.44% | |
| Bifacial Gain** | 5% | 410 W | 40.4 V | 10.14 A | 48.2 V | 10.68 A | 20.44% |
| | 10% | 429 W | 40.4 V | 10.63 A | 48.2 V | 11.19 A | 21.39% |
| | 20% | 468 W | 40.4 V | 11.59 A | 48.2 V | 12.2 A | 23.33% |
| | 30% | 507 W | 40.4 V | 12.56 A | 48.2 V | 13.22 A | 25.28% |
| CS3U-395MB-AG | 395 W | 40.6 V | 9.73 A | 48.4 V | 10.25 A | 19.69% | |
| Bifacial Gain** | 5% | 415 W | 40.6 V | 10.22 A | 48.4 V | 10.76 A | 20.69% |
| | 10% | 435 W | 40.6 V | 10.70 A | 48.4 V | 11.28 A | 21.69% |
| | 20% | 474 W | 40.6 V | 11.68 A | 48.4 V | 12.3 A | 23.63% |
| | 30% | 514 W | 40.6 V | 12.65 A | 48.4 V | 13.33 A | 25.63% |
| CS3U-400MB-AG | 400 W | 40.8 V | 9.81 A | 48.6 V | 10.33 A | 19.94% | |
| Bifacial Gain** | 5% | 420 W | 40.8 V | 10.30 A | 48.6 V | 10.85 A | 20.94% |
| | 10% | 440 W | 40.8 V | 10.79 A | 48.6 V | 11.36 A | 21.94% |
| | 20% | 480 W | 40.8 V | 11.77 A | 48.6 V | 12.40 A | 23.93% |
| | 30% | 520 W | 40.8 V | 12.75 A | 48.6 V | 13.43 A | 25.92% |

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

** Bifacial Gain: The additional gain from the back side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

ELECTRICAL DATA

| | |
|----------------------------|--|
| Operating Temperature | -40°C ~ +85°C |
| Max. System Voltage | 1500 V (IEC/UL) or 1000 V (IEC/UL) |
| Module Fire Performance | TYPE 3 / Type 13 (UL 1703) or CLASS A (IEC61730) |
| Max. Series Fuse Rating | 25 A |
| Application Classification | Class A |
| Power Tolerance | 0 ~ + 5 W |
| Power Bifaciality* | 70 % |

* Power Bifaciality = $P_{max_{rear}} / P_{max_{front}}$, both $P_{max_{rear}}$ and $P_{max_{front}}$ are tested under STC, Bifaciality Tolerance: $\pm 5 \%$

* The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. Canadian Solar Inc. reserves the right to make necessary adjustment to the information described herein at any time without further notice. Please be kindly advised that PV modules should be handled and installed by qualified people who have professional skills and please carefully read the safety and installation instructions before using our PV modules.

ELECTRICAL DATA | NMOT*

| | Nominal Max. Power (Pmax) | Opt. Operating Voltage (Vmp) | Opt. Operating Current (Imp) | Open Circuit Voltage (Voc) | Short Circuit Current (Isc) |
|----------------------|---------------------------|------------------------------|------------------------------|----------------------------|-----------------------------|
| CS3U-375MB-AG | 280 W | 37.2 V | 7.54 A | 44.8 V | 8.01 A |
| CS3U-380MB-AG | 284 W | 37.4 V | 7.60 A | 45.0 V | 8.07 A |
| CS3U-385MB-AG | 288 W | 37.6 V | 7.66 A | 45.1 V | 8.14 A |
| CS3U-390MB-AG | 292 W | 37.7 V | 7.72 A | 45.3 V | 8.2 A |
| CS3U-395MB-AG | 295 W | 37.9 V | 7.78 A | 45.5 V | 8.26 A |
| CS3U-400MB-AG | 299 W | 38.1 V | 7.84 A | 45.7 V | 8.33 A |

* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

MECHANICAL DATA

| Specification | Data |
|------------------------------------|---|
| Cell Type | Mono-crystalline |
| Cell Arrangement | 144 [2X (12 X6)] |
| Dimensions | 2022 x 992 x 30 mm (79.6 x 39.1 x 1.18 in) |
| Weight | 25.7 kg (56.7 lbs) |
| Front / Back Glass | 2.0 mm heat strengthened glass |
| Frame | Anodized aluminium alloy |
| J-Box | IP68, 3 diodes |
| Cable | 4.0 mm ² (IEC), 12 AWG (UL) |
| Cable Length (Including Connector) | Portrait: 400 mm (15.7 in) (+) / 280 mm (11.0 in) (-); landscape: 1400 mm (55.1 in); leap-frog connection: 1670 mm (65.7 in)* |
| Connector | T4 series or H4 UTX or MC4-EVO2 |
| Per Pallet | 35 pieces |
| Per Container (40' HQ) | 770 pieces or 595 pieces (only for US and Canada) |

* For detailed information, please contact your local Canadian Solar sales and technical representatives.

TEMPERATURE CHARACTERISTICS

| Specification | Data |
|--------------------------------------|--------------|
| Temperature Coefficient (Pmax) | -0.36 % / °C |
| Temperature Coefficient (Voc) | -0.29 % / °C |
| Temperature Coefficient (Isc) | 0.05 % / °C |
| Nominal Module Operating Temperature | 41 \pm 3°C |

PARTNER SECTION

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