



# THREE PHASE STRING INVERTER 50-66 KW

**CSI-50K-T480GL01-UB | CSI-60K-T480GL01-UB  
CSI-66K-T480GL01-UB**

Canadian Solar's grid-tied, transformer-less string inverters help accelerate the use of three-phase string architecture for commercial rooftop and small ground-mount applications. An NRTL approved, cost-effective alternative to central inverters, these inverters are modular design building blocks that provide high yield and enable significant BoS cost savings. They provide up to 98.8% conversion efficiency, a wide operating range of 200-850 V<sub>DC</sub>, and four MPPTs for maximum energy harvest.



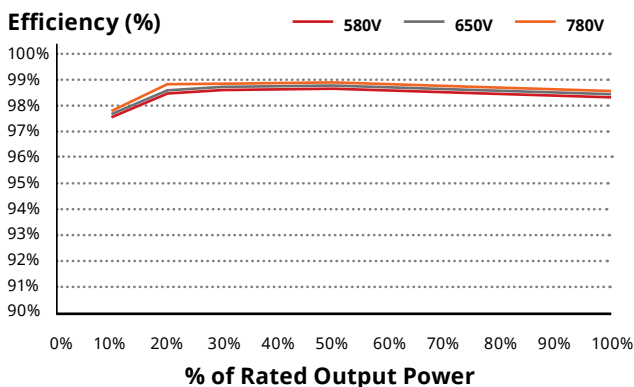
**standard warranty, extension up to 20 years**

## KEY FEATURES

- Maximum efficiency of 98.8%, CEC efficiency of 98.4%
- 4 MPPTs to achieve higher system efficiency
- Transformerless design
- High switching frequency and ultra fast MPPT (<5 sec.) for maximum efficiency over a wide load range
- Compatible with SunSpec or Tigo Transmitter

## EFFICIENCY CURVE

CSI-66KTL-GS@480 V



\*For detailed information, please refer to the Installation Manual.

## CSI SOLAR CO., LTD.

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## HIGH RELIABILITY

- Advanced thermal design with fan assisted cooling
- Ground-fault detection and interruption circuit
- AFCI Integrated (per UL1699B, factory enabled option)

## BROAD ADAPTIBILITY

- NEMA 4X (IP65), outdoor application
- Utility interactive controls: active power derating, reactive power control and over frequency derating
- Separable wiring box design
- Integrated DC and AC load rated disconnects
- Wide MPPT range for flexible string sizing
- 0-90 degree installation angle
- AC terminals compatible with copper and aluminum conductors (Al with bimetallic terminal)
- Supports up to 16 DC string inputs (4 per MPPT)

**CSI SOLAR CO., LTD.** is committed to providing high quality solar products, solar system solutions and services to customers around the world. As a leading PV project developer and manufacturer of solar modules with over 46 GW deployed around the world since 2001.

| <b>SYSTEM/TECHNICAL DATA</b>        |   |   |                            |
|-------------------------------------|---|---|----------------------------|
| <b>MODEL NAME</b>                   | <b>CSI-50K-T480GL01-UB</b>  | <b>CSI-60K-T480GL01-UB</b>                  | <b>CSI-66K-T480GL01-UB</b> |
| <b>DC INPUT</b>                     |   |   |                            |
| Max. DC Input Voltage               |   | 1000 V <sub>DC</sub>                        |                            |
| Operating DC Input Voltage Range    |   | 200-850 V <sub>DC</sub>                     |                            |
| Start-up DC Input Voltage/Power     |   | 200 V                                       |                            |
| Number of MPP Trackers              |   | 4   |                            |
| MPPT Voltage Range                  | 568-850 V <sub>DC</sub>   | 526-850 V <sub>DC</sub>                     | 579-850 V <sub>DC</sub>    |
| Operating Current (Imp)             |   | 114 A (28.5 A per MPPT)                     |                            |
| Max. Input Current (Isc)            |   | 220 A (55 A per MPPT)                       |                            |
| Number of DC Inputs                 |   | 16 (4 per MPPT)                             |                            |
| DC Disconnection Type               |   | Load rated DC switch                        |                            |
| <b>AC OUTPUT</b>                    |   |   |                            |
| Rated AC Output Power               | 50 kW   | 60 kW                                       | 66 kW                      |
| Max. AC Output Power                | 50 kW   | 60 kW                                       | 66 kW                      |
| Rated Output Voltage                |   | 480 V <sub>AC</sub>                         |                            |
| Output Voltage Range <sup>1</sup>   |   | 422.4 - 528 V <sub>AC</sub>                 |                            |
| Grid Connection Type                |   | 3 $\Phi$ /PE                                |                            |
| Nominal AC Output Current @480 Vac  | 60.2 A  | 72.2 A                                      | 79.4 A                     |
| Rated Output Frequency              |   | 60 Hz                                       |                            |
| Output Frequency Range <sup>2</sup> |   | 59.5 - 60.5 Hz                              |                            |
| Power Factor                        |   | 1 default ( $\pm$ 0.8 adjustable)           |                            |
| Current THD                         |   | < 3 %                                       |                            |
| AC Disconnection Type               |   | Load rated AC switch                        |                            |
| <b>SYSTEM</b>                       |   |   |                            |
| Topology                            |   | Transformerless                             |                            |
| Max. Efficiency                     | 98.8 %  | 98.7 %                                      | 98.8 %                     |
| CEC Efficiency                      |   | 98.4 %                                      |                            |
| Night Consumption                   |   | < 1 W                                       |                            |
| <b>ENVIRONMENT</b>                  |   |   |                            |
| Protection Degree                   |   | NEMA 4X                                     |                            |
| Cooling                             |   | Intelligent Redundant Cooling               |                            |
| Operating Temperature Range         |   | - 13 °F to + 140 °F / - 25 °C to + 60 °C    |                            |
| Storage Temperature Range           |   | -40 °F to + 158 °F / -40 °C to + 70 °C      |                            |
| Operating Humidity                  |   | 0 - 100 %                                   |                            |
| Operating Altitude                  |   | 13,123.4 ft / 4000 m                        |                            |
| Audible Noise                       |   | <60 dBA @ 1 m                               |                            |
| <b>DISPLAY AND COMMUNICATION</b>    |   |   |                            |
| Display                             |   | LCD + LED                                   |                            |
| Communication                       |   | Standard: RS485 (Modbus)                    |                            |
| <b>MECHANICAL DATA</b>              |   |   |                            |
| Dimensions (W / H / D)              |   | 24.8 x 47.5 x 14.7 in / 630 x 1206 x 374 mm |                            |
| Weight <sup>3</sup>                 |   | 172 lb / 78 kg                              |                            |
| Installation Angle                  |   | 0-90 degrees from horizontal                |                            |
| DC Inputs                           |   | 20 A standard                               |                            |
| <b>SAFETY</b>                       |   |   |                            |
| Safety and EMC Standard             | UL 1741:2010 IEEE 1547.1:2005 IEEE 1547A:2014 UL1699B, CSA C22.2#107.1:2016 Ed.4        |   |                            |
| Grid Standard                       | IEEE 1547:2003  |   |                            |
| Smart-Grid Features                 | Voltage-Ride Thru, Frequency-Ride Thru, Soft-Start, Volt-Var, Frequency-Watt, Volt-Watt |   |                            |

1. "Output Voltage Range" may differ according to specific grid standard.
2. "Output Frequency Range" may differ according to specific grid standard.
3. "Net Weight" tolerance  $\pm$  1kg

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. CSI Solar CO., LTD. reserves the right to make necessary adjustment to the information described herein at any time without notice.

Caution: For professional use only. The installation and handling of PV equipment requires professional skills and should only be performed by qualified professionals. Please read the safety and installation instructions before using the product.

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