



# Certificate of Compliance

**Certificate:** 80027925

**Master Contract:** 266494

**Project:** 80048181

**Date Issued:** 2021-01-12

**Issued to:** Longi Green Energy Technology Co., Ltd.  
No. 388, Middle Hangtian Road  
Chang'an District, Xi'an, Shaanxi, 710100  
China

**Attention:** Fei Zhuang

*The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only*



**Issued by:** Victor Wu  
Victor Wu

## **PRODUCTS**

CLASS - C531110 - POWER SUPPLIES-Photovoltaic Modules and Panels

CLASS - C531190 - POWER SUPPLIES-Photovoltaic Modules and Panels - Certified to US Standards

Mono-Crystalline-Si photovoltaic modules with maximum system voltage of 1000V or 1500 V dc, Safety Class II PV modules. Model series:

LR6-72-xxxM (xxx=320-350, in step of 5),  
LR6-72HV-xxxM (xxx=320-350, in step of 5),  
LR6-72BK-xxxM (xxx=320-350, in step of 5),  
LR6-72PE-xxxM (xxx=360-380, in step of 5),  
LR6-72PH-xxxM (xxx=360-380, in step of 5),  
LR6-72PB-xxxM (xxx=340-380, in step of 5),  
LR6-72HPB-xxxM (xxx=360-385, in step of 5),  
LR6-72HIB-xxxM (xxx=360-385, in step of 5),

LR6-60-xxxM (xxx=270-300, in step of 5),  
LR6-60HV-xxxM (xxx=270-300, in step of 5),  
LR6-60BK-xxxM (xxx=270-300, in step of 5),  
LR6-60PE-xxxM (xxx=300-320, in step of 5),  
LR6-60PH-xxxM (xxx=300-320, in step of 5),  
LR6-60PB-xxxM (xxx=280-320, in step of 5),  
LR6-60OP-xxxM (xxx=350-370, in step of 5),

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LR6-60OPB-xxxM (xxx=345-365, in step of 5),  
LR6-72OPH-xxxM (xxx=385-415, in step of 5),  
LR6-60OPH-xxxM (xxx=335-365, in step of 5),  
LR6-72HPH-xxxM (xxx=365-395, in step of 5),  
LR6-72HIH-xxxM (xxx=365-395, in step of 5),  
LR6-60HPH-xxxM (xxx=300-330, in step of 5),  
LR6-60HPB-xxxM (xxx=295-320, in step of 5),  
LR6-60HIB-xxxM (xxx=295-320, in step of 5),  
LR6-60HIH-xxxM (xxx=300-330, in step of 5),  
LR6-60ZPH-xxxM (xxx=335-355, in step of 5),

LR4-72HPB-xxxM (xxx=405-455, in step of 5),  
LR4-72HIB-xxxM (xxx=405-455, in step of 5),  
LR4-72HPH-xxxM (xxx=420-465, in step of 5),  
LR4-72HIH-xxxM (xxx=420-455, in step of 5),

**LR4-66HPH-xxxM (xxx=395-415, in step of 5),**  
**LR4-66HIH-xxxM (xxx=395-415, in step of 5),**

LR4-60HPB-xxxM (xxx=345-370, in step of 5),  
LR4-60HIB-xxxM (xxx=335-380, in step of 5),  
LR4-60HPH-xxxM (xxx=350-385, in step of 5),  
LR4-60HP-xxxM (xxx=350-385, in step of 5),  
LR4-60HIH-xxxM (xxx=350-380, in step of 5),  
LR4-60ZPB-xxxM (xxx=340-360, in step of 5),  
LR4-72ZPH-xxxM (xxx=420-440, in step of 5),  
LR4-78ZPH-xxxM (xxx=450-485, in step of 5),

LR5-66HPH-xxxM (xxx=480-500, in step of 5),  
LR5-72HPH-xxxM (xxx=525-555, in step of 5).

Note:

1. All electrical data are shown as relative to standard test conditions (STC) (1 000 W/m<sup>2</sup>, (25 ± 2) °C, AM 1,5 according to IEC 60904-3).
2. Manufacturer's stated tolerance is ±3% for Voc and Pm, and Isc.
3. All modules model with suffix 'HV' after '72' or '60', can be used in PV system with maximum system voltage 1500 V dc.
4. All modules model with suffix 'BK' after '72' or '60', are black modules (substrate is in black color).
5. All modules model with suffix 'PH' after '72' or '60', are modules with PERC cells used in maximum system voltage of 1500 V dc.
6. All modules model with suffix 'PE' after '72' or '60', are modules with PERC cells used in maximum system voltage of 1000 V dc.
7. All modules model with suffix 'PB' after '72' or '60', are black modules with PERC cell (substrate is in black color).
8. All modules model with suffix 'OPH' after '72' or '60', are modules with 1/6 cut cells used in maximum system voltage of 1500 V dc.



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9. All modules model with suffix 'HPH' or 'HIH' after '72' or '66' or '60', are modules with 1/2 cut cells used in maximum system voltage of 1500 V dc.
10. All modules model with suffix 'HPB' after '72' or '60', are black modules with 1/2 cut cells used in maximum system voltage of 1000 V dc.
11. LR6 is for models with 156mm cells, LR4 is for models with 166mm cells, LR5 is for models with 182mm cells.
12. For details related to rating, size, configuration, etc. reference should be made to CSA Certification Record or the descriptive report.
13. All modules model with suffix 'ZPH' after '72' or '60', are modules with 1/2 cut cells, total cells no. is 144 or 120, Zero Clearance Perc used in maximum system voltage of 1500 V dc.
14. All modules model with suffix 'ZPB' after '72' or '60', are black modules with 1/2 cut cells, total cells no. is 144 or 120, Zero Clearance Perc used in maximum system voltage of 1500 V dc.
15. All modules model with suffix 'ZPH' after '78' or '72' or '60', are modules with 1/2 cut cells, total cells no. is 156 or 144 or 120, Zero Clearance Perc used in maximum system voltage of 1500 V dc.
16. All modules model with suffix 'OP' after '60', are modules with 1/5 cut cells used in maximum system voltage of 1000 V dc.
17. All modules model with suffix 'OPB' after '60', are modules with 1/5 cut cells used in maximum system voltage of 1000 V dc, black color.
18. The operating ambient temperature of these devices may exceed 40°C at full load for all wire sizes if it is determined suitable in the field use application.

### **APPLICABLE REQUIREMENTS**

CSA-C22.2 No. 61730-1:19	Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction, 2019-12
CSA-C22.2 No. 61730-2:19	Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing, 2019-12
UL 61730-1 First Edition	Photovoltaic (PV) Module Safety Qualification - Part 1: Requirements for Construction, 2017-12-04, revision date 2020-04-30
UL 61730-2 First Edition	Photovoltaic (PV) Module Safety Qualification - Part 2: Requirements for Testing, 2017-12-04, revision date 2020-04-30



## *Supplement to Certificate of Compliance*

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*The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.*

### Product Certification History

Project	Date	Description
80048181	2021-01-12	Update report to include: (1) New encapsulation and substrate combinations, (a) “Changzhou Sveck Photovoltaic New Material Co., Ltd.”, type “SV-15296” above cells, type “SV-15297W” below cells, with “Jolywood (Suzhou) Sunwatt Co., Ltd.”, type “TFB-30(plus)””; (b) “Shanghai HIUV New Materials Co., Ltd.”, type “S201MT1” above cells, type “S201W” below cells, with “Jolywood (Suzhou) Sunwatt Co., Ltd.”, type “TFB-30(plus)””; (2) New model series LR4-66HPH-xxxM (xxx=395 to 415) and LR4-66HH-xxxM (xxx=395 to 415).
80063163	2020-12-18	Update report to include new model series LR5-72HPH-xxxM and LR5-66HPH-xxxM, using halved cut cell M10B9B.
80048180	2020-12-07	Update report to include: (1) Alternative superstrate , “Shanxi Rishengda New Material Technology Co., Ltd.”, type “AR coated tempered glass 2.8mm”; (2) Alternative substrate, “Suzhou First PV Material Co., Ltd.”, type “BEC-306D”; (3) New encapsulation and substrate combinations; (4) Alternative junction box adhesive, “Chengdu Guibao Science & Technology Co., Ltd.”, type “888N”; (5) Alternative frame adhesive, “Chengdu Guibao Science & Technology Co., Ltd.”, type “888N”; (6) Alternative potting material, “Chengdu Guibao Science & Technology Co., Ltd.”, type “4808”; (7) Alternative potting material, “JIANGSU TIANCHEN NEW MATERIALS CO LTD”, type “HT6360”; (8) Alternative fixing tape, manufactured by “Cybrid Technologies Inc”, type “FF3665”.
80055541	2020-11-02	Update report 80027925 to add new design for model series LR6-60OP-xxxM and LR6-60OPB-xxxM.
80055320	2020-09-25	Update report 80027925 to add new designed model series LR4-78ZPH-xxxM, alternate cell M6B6B, and cell manufacturer LONGI KUCHING SDN BHD.
80048179	2020-09-04	Update report to include: (1) Alternative superstrate glasses with reduced thickness, manufactured by Xinfuxing and Topray, with thickness reduction from 3.2mm to 2.8mm; (2) New encapsulation and substrate combinations; (3) Alternative fixing tape, manufactured by “Yantai Darbond Technology Co., Ltd.”, type “DT-9609”.
80052303	2020-08-18	Update report to include new frame design with new end rail size 15mm and 13mm, alternate laminate design without change in clearance and creepage.
80052563	2020-08-18	Update report to include alternate white encapsulation F406PS/F806W, SV-15296/SV-15297W, and the combination of approved 3 white encapsulates with



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		by Crown BF-TM4, and diode manufacturer as requested, alternate fixing tape UV-T, and missed 4.0 x 0.3mm string interconnector in project 80027422(Ed. 5).
80042860	2020-07-24	Update report to add new 30 mm x 30mm frame design for LR4-60HPH model series.
80042752	2020-07-24	Update report to add alternate substrate MGTPE390.
80037991	2020-06-17	Update report to add model series using new cell M6E6B, by Vina Cell technology Co., Ltd., and flux SF105.
80036991	2020-06-17	Update report to add alternate encapsulate S201W, with combination of substrate TPP1 and TPP.
80027404	2020-06-10	Update report to add alternate substrates ETT15S-1, TPP1, TFB-30(plus) used in maximum system voltage of 1500V dc, and ETT10S-7, TPP, used in maximum system voltage of 1000V dc.
80024182	2020-04-27	Update report to add model series LR6-60ZPH-xxxM, LR6-60ZPB-xxxM and LR6-72ZPH-xxxM with new cells M2B6B and M6B6B, add model series LR4-60HPH-xxxM with maximum system voltage of 1000V dc.
80035966	2020-03-20	Update report to add alternate cells interconnectors, and alternate output wiring compartments PV-LR02A, PV-LR02C, PV-LR03A, PV-LR03C, PV-LR04A.
80027422	2020-03-20	Update report to add alternate cells M6B9B and M6E9B, interconnectors, and alternate module sizes for models with 9bb M6 cells.
80034137	2020-02-27	Update report to add new model series LR4-72HPB-xxxM, LR4-72HPH-xxxM, LR4-60HPB- xxxM, LR4-60HPH-xxxM, with new cell M6E6B.
80023863	2020-02-20	Update report to add model series using new cells M2C5B, M2C6B, M6C6B, and related model series.
80030666	2020-01-09	Update report to add combinations of materials and new model series, as a reference of Test Report No. 704061802022-05, 704061802022-06 by TÜV SÜD Certification and Testing (China) Co., Ltd, and previous CSA Projects.
80027925	2019-12-17	Original certification