



MCS Product Certificate

Date Issued	6th November 2023	Annual review date	21st January
Issue number	5	Original/Amendment	Original
Certificate number	KIWA00041	Page	1 of 15

MCS Product Certification Certificate Issued by Kiwa Ltd

MCS Product Certification Scheme Standards – MCS010, MCS011, MCS012
Model designations – see Appendix

Producer:

Business Address:
GSE Integration
5 rue Morand
Batiment Energy 5
Centre d'affaire Morand
93400 Saint Ouen
France

Factory/Warehouse Address:
GSE Integration
16 Quai Gustave Flaubert
Canteleu
76380
France

Manufacturer:

As Above

Kiwa Ltd declares that the products detailed in the Appendix have been assessed by Kiwa and meet the requirements of the above MCS Product Certification Standards.

Signed on behalf of Kiwa Ltd

Mark Crowther
MCS Certification Director
Kiwa Ltd

This certificate is subject to the producer continuing to comply with the Kiwa MCS Product Scheme Rules and ongoing Annual Surveillance



0217

CERTIFICATE

MCS Product Certificate



Appendix to Certificate KIWA00041

Page 2 of 15

The following products have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012

Product Name	Model Names	MCS Certificate Number
GSE IN-ROOF System - Portrait Version 2012	1575/1046; 1575/1053; 1575/1082; 1580/808; 1640/992; 1640/1001; 1640/1001/33; 1686/1016	MCS00041/006 IK
Range of Permissible Roof Pitch (degrees)	≥15° and ≤50°	
Compatible Roof Coverings	<ul style="list-style-type: none">• Tiles• Slates	
Roofing Substrate For certified wind uplift resistance in sound timber	Tested with 25 mm X 50 mm wooden battens	
Further notes on fixing (where relevant)	Mounting frame installation components listed in Annex II to this certificate	
Maximum Design Wind Uplift Calculated by dividing the characteristic wind uplift by the partial safety factor shown below	2.07 kPa <i>(with four single clamps holding each module)</i> 3.44 kPa <i>(with four pairs of clamps holding each module)</i>	
Partial (safety) factor(s)	1.44 <i>(with four single clamps holding each module)</i> 1.1 <i>(with four pairs of clamps holding each module)</i>	
Fire Classification	B _{ROOF} (t4)	
Limitations on Fire Classification	The fire performance rating determined to EN 13501-5:2005 + A1:2009 applies to the roofing kit when used to mount PV modules supported by testing and listed in Annex I to this certificate	

Signed on behalf of Kiwa Ltd

Mark Crowther - MCS Certification Director
Kiwa Ltd

This certificate is subject to the producer continuing to comply with the Kiwa MCS Product Scheme Rules and ongoing Annual Surveillance

CERTIFICATE

MCS Product Certificate



Appendix to Certificate KIWA00041

Page 3 of 15

The following products have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012

Product Name	Model Name	MCS Certificate Number
GSE IN-ROOF System - Landscape Version 2012	1559/1046; 1575/1082; 1580/808; 1640/992; 1650/992; 1660/992; 1670/992; 1675/992/33; 1680/992; 1686/1016; 1700/1016	MCS00041/007 IK
Range of Permissible Roof Pitch (degrees)	≥15° and ≤50°	
Compatible Roof Coverings	<ul style="list-style-type: none"> • Tiles • Slates 	
Roofing Substrate For certified wind uplift resistance in sound timber	Tested with 25 mm X 50 mm wooden battens	
Further notes on fixing (where relevant)	Mounting frame installation components listed in Annex II to this certificate	
Maximum Design Wind Uplift Calculated by dividing the characteristic wind uplift by the partial safety factor shown below	2.07 kPa <i>(with four single clamps holding each module)</i> 3.44 kPa <i>(with four pairs of clamps holding each module)</i>	
Partial (safety) factor(s)	1.44 <i>(with four single clamps holding each module)</i> 1.1 <i>(with four pairs of clamps holding each module)</i>	
Fire Classification	BROOF(t4)	
Limitations on Fire Classification	The fire performance rating determined to EN 13501-5:2005 + A1:2009 applies to the roofing kit when used to mount PV modules supported by testing and listed in Annex I to this certificate	

Signed on behalf of Kiwa Ltd

Mark Crowther
MCS Certification Director
Kiwa Ltd

This certificate is subject to the producer continuing to comply with the Kiwa MCS Product Scheme Rules and ongoing Annual Surveillance

CERTIFICATE

MCS Product Certificate



Appendix to Certificate KIWA00041

Page 4 of 15

The following products have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012

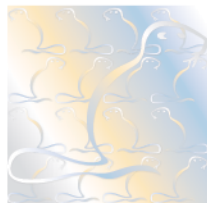
Product Name	Model Name	MCS Certificate Number
GSE IN-ROOF System - Portrait Version 2020	1710/1000; 1710/1005; 1710/1020; 1710/1025; 1710/1030; 1710/1040; 1710/1050; 1710/995; 1710/1010; 1710/1045; 1710/1055	MCS00041/008IK
Range of Permissible Roof Pitch (degrees)	≥15° and ≤50°	
Compatible Roof Coverings	<ul style="list-style-type: none"> • Tiles • Slates 	
Roofing Substrate For certified wind uplift resistance in sound timber	Tested with 25 mm X 50 mm wooden battens	
Further notes on fixing (where relevant)	Mounting frame installation components listed in Annex I to this certificate	
Maximum Design Wind Uplift Calculated by dividing the characteristic wind uplift by the partial safety factor shown below	2.07 kPa <i>(with four single clamps holding each module)</i> 3.44 kPa <i>(with four pairs of clamps holding each module)</i>	
Partial (safety) factor(s)	1.44 <i>(with four single clamps holding each module)</i> 1.1 <i>(with four pairs of clamps holding each module)</i>	
Fire Classification	B _{ROOF} (t4)	
Limitations on Fire Classification	The fire performance rating determined to EN 13501-5:2005 + A1:2009 applies to the roofing kit when used to mount PV modules supported by testing and listed in Annex I to this certificate	

Signed on behalf of Kiwa Ltd

Mark Crowther
MCS Certification Director
Kiwa Ltd

This certificate is subject to the producer continuing to comply with the Kiwa MCS Product Scheme Rules and ongoing Annual Surveillance

CERTIFICATE



MCS Product Certificate



Appendix to Certificate KIWA00041

Page 5 of 15

The following products have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012

Product Name	Model Name	MCS Certificate Number
GSE IN-ROOF System - Landscape Version 2020	1665/1020; 1675/1020; 1680/1020; 1685/1020; 1690/1020; 1695/1020; 1700/1020; 1740/1020; 1705/1020; 1720/1020	MCS00041/009 IK
Range of Permissible Roof Pitch (degrees)	≥15° and ≤50°	
Compatible Roof Coverings	<ul style="list-style-type: none"> • Tiles • Slates 	
Roofing Substrate For certified wind uplift resistance in sound timber	Tested with 25 mm X 50 mm wooden battens	
Further notes on fixing (where relevant)	Mounting frame installation components listed in Annex I to this certificate	
Maximum Design Wind Uplift Calculated by dividing the characteristic wind uplift by the partial safety factor shown below	2.07 kPa <i>(with four single clamps holding each module)</i> 3.44 kPa <i>(with four pairs of clamps holding each module)</i>	
Partial (safety) factor(s)	1.44 <i>(with four single clamps holding each module)</i> 1.1 <i>(with four pairs of clamps holding each module)</i>	
Fire Classification	B _{ROOF} (t4)	
Limitations on Fire Classification	The fire performance rating determined to EN 13501-5:2005 + A1:2009 applies to the roofing kit when used to mount PV modules supported by testing and listed in Annex I to this certificate	

Signed on behalf of Kiwa Ltd

Mark Crowther - MCS Certification Director
Kiwa Ltd

This certificate is subject to the producer continuing to comply with the Kiwa MCS Product Scheme Rules and ongoing Annual Surveillance

CERTIFICATE

MCS Product Certificate



Appendix to Certificate KIWA00041

Page 6 of 15

The following products have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012

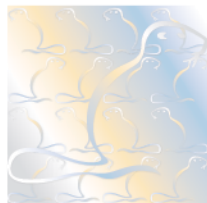
Product Name	Model Name	MCS Certificate Number
GSE IN-ROOF System – Half Portrait Version 2022	DPo_1650_995; DPo_1650_1070; DPo_1650_1100; DPo_1650_1135; DPo_1650_1140; DPo_1650_1160; DPo_1840_995; DPo_1840_1020; DPo_1840_1030; DPo_1840_1070; DPo_1840_1135 DPo_1650_1145; DPo_1840_1040; DPo_1840_1045; DPo_1840_1050; DPo_1840_1090; DPo_1840_1100	MCS00041/010 IK
Range of Permissible Roof Pitch (degrees)	≥15° and ≤50°	
Compatible Roof Coverings	<ul style="list-style-type: none"> • Tiles • Slates 	
Roofing Substrate For certified wind uplift resistance in sound timber	Tested with 25 mm X 50 mm wooden battens	
Further notes on fixing (where relevant)	Mounting frame installation components listed in Annex I to this certificate	
Maximum Design Wind Uplift Calculated by dividing the characteristic wind uplift by the partial safety factor shown below	2.07 kPa <i>(with four single clamps holding each module)</i> 3.44 kPa <i>(with four pairs of clamps holding each module)</i>	
Partial (safety) factor(s)	1.44 <i>(with four single clamps holding each module)</i> 1.1 <i>(with four pairs of clamps holding each module)</i>	
Fire Classification	B _{ROOF} (t4)	
Limitations on Fire Classification	The fire performance rating determined to EN 13501-5:2005 + A1:2009 applies to the roofing kit when used to mount PV modules supported by testing and listed in Annex I to this certificate	

Signed on behalf of Kiwa Ltd

Mark Crowther - MCS Certification Director
Kiwa Ltd

This certificate is subject to the producer continuing to comply with the Kiwa MCS Product Scheme Rules and ongoing Annual Surveillance

CERTIFICATE



MCS Product Certificate



Appendix to Certificate KIWA00041

Page 7 of 15

The following products have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012

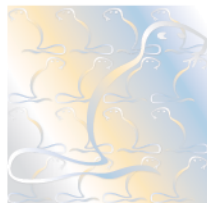
Product Name	Model Name	MCS Certificate Number
GSE IN-ROOF System – Half Portrait Version 2022	DPo_2030_995; DPo_2030_1050; DPo_2030_1055; DPo_2030_1135; DPo_2030_1305	MCS00041/010B IK
Range of Permissible Roof Pitch (degrees)	≥15° and ≤50°	
Compatible Roof Coverings	<ul style="list-style-type: none">• Tiles• Slates	
Roofing Substrate For certified wind uplift resistance in sound timber	Tested with 25 mm X 50 mm wooden battens	
Further notes on fixing (where relevant)	Mounting frame installation components listed in Annex I to this certificate	
Maximum Design Wind Uplift Calculated by dividing the characteristic wind uplift by the partial safety factor shown below	2.07 kPa <i>(with four single clamps holding each module)</i> 3.44 kPa <i>(with four pairs of clamps holding each module)</i>	
Partial (safety) factor(s)	1.44 <i>(with four single clamps holding each module)</i> 1.1 <i>(with four pairs of clamps holding each module)</i>	
Fire Classification	BROOF(t4)	
Limitations on Fire Classification	The fire performance rating determined to EN 13501-5:2005 + A1:2009 applies to the roofing kit when used to mount PV modules supported by testing and listed in Annex I to this certificate	

Signed on behalf of Kiwa Ltd

Mark Crowther - MCS Certification Director
Kiwa Ltd

This certificate is subject to the producer continuing to comply with the Kiwa MCS Product Scheme Rules and ongoing Annual Surveillance

CERTIFICATE



MCS Product Certificate



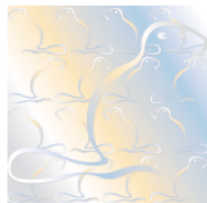
Annex I to Certificate KIWA00041

Page 8 of 15

The following PV modules have been identified as providing a BROOF(t4) fire classification when installed with the products covered by this certificate:

PV module manufacturer	PV module model names	MCS Certificate Number
Canadian Solar	CS3L-320P CS3L-325P CS3L-330P CS3L-335P CS3L-340P CS3L-345P CS3L-350P CS3L-355P CS3L-360P CS3L-365P CS3L-370P CS3L-375P CS3L-380P CS3L-xxxMS	BABT8767-11-03-320W BABT8767-11-03-325W BABT8767-11-03-330W BABT8767-11-03-335W BABT8767-11-03-340W BABT8767-11-03-345W BABT8767-11-03-350W BABT8767-11-03-355W BABT8767-11-03-360W BABT8767-11-03-365W BABT8767-11-03-370W BABT8767-11-03-375W BABT8767-11-03-380W BABT8767-36
European Energy World, S.L.	MEPVxxx BLACK (xxx = 240-310W in 5W steps)	BABT 8764-02
Hanwha Q CELLS GmbH	Q.PEAK DUO BLK-G9 330 Q.PEAK DUO BLK-G9 335 Q.PEAK DUO BLK-G9 340 Q.PEAK DUO BLK-G9 345 Q.PEAK DUO BLK-G9+ 330 Q.PEAK DUO BLK-G9+ 335 Q.PEAK DUO BLK-G9+ 340 Q.PEAK DUO BLK-G9+ 345 Q.PEAK DUO ML-G9 380 Q.PEAK DUO ML-G9 385 Q.PEAK DUO ML-G9 390 Q.PEAK DUO ML-G9 395 Q.PEAK DUO ML-G9+ 380 Q.PEAK DUO ML-G9+ 385 Q.PEAK DUO ML-G9+ 390 Q.PEAK DUO ML-G9+ 395 Q.PEAK DUO BLK ML-G9 365 Q.PEAK DUO BLK ML-G9 370 Q.PEAK DUO BLK ML-G9 375 Q.PEAK DUO BLK ML-G9 380 Q.PEAK DUO BLK ML-G9 385 Q.PEAK DUO BLK ML-G9+ 365 Q.PEAK DUO BLK ML-G9+ 370 Q.PEAK DUO BLK ML-G9+ 375 Q.PEAK DUO BLK ML-G9+ 380 Q.PEAK DUO BLK ML-G9+ 385	MCS PV0062/512 MCS PV0062/513 MCS PV0062/514 MCS PV0062/515 MCS PV0062/516 MCS PV0062/517 MCS PV0062/518 MCS PV0062/519 MCS PV0062/520 MCS PV0062/521 MCS PV0062/522 MCS PV0062/523 MCS PV0062/524 MCS PV0062/525 MCS PV0062/526 MCS PV0062/527 MCS PV0062/528 MCS PV0062/529 MCS PV0062/530 MCS PV0062/531 MCS PV0062/532 MCS PV0062/533 MCS PV0062/534 MCS PV0062/535 MCS PV0062/536 MCS PV0062/537
Hanwha Q CELLS GmbH	Q.PEAK DUO XL-G9 455 - Q.PEAK DUO XL-G9 460 Q.PEAK DUO XL-G9.2 455 - Q.PEAK DUO XL-G9.2 460 Q.PEAK DUO XL-G9.3 455 - Q.PEAK DUO XL-G9.3 460	MCS PV0062/538 - MCS PV0062/539 MCS PV0062/540 - MCS PV0062/541 MCS PV0062/542 - MCS PV0062/543
Hanwha Q CELLS GmbH	Q.PEAK DUO-G6 340 Q.PEAK DUO-G6 345 Q.PEAK DUO-G6 350 Q.PEAK DUO-G6 355 Q.PEAK DUO-G8 345 Q.PEAK DUO-G8 350 Q.PEAK DUO-G8 355	MCS PV0062/463 MCS PV0062/464 MCS PV0062/465 MCS PV0062/466 MCS PV0062/480 MCS PV0062/481 MCS PV0062/482

CERTIFICATE



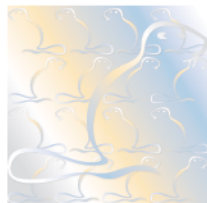
MCS Product Certificate



Annex I to Certificate KIWA00041

PV module manufacturer	PV module model names	MCS Certificate Number
Jinko Solar Co., Ltd.	JKM275M-60H 1684x1002x35 - JKM335M-60H 1684x1002x35 JKM275M-60HL 1684x1002x35 - JKM335M-60HL 1684x1002x35 JKM275M-60HB 1684x1002x35 - JKM335M-60HB 1684x1002x35 JKM275M-60H-V 1684x1002x35 - JKM335M-60H-V 1684x1002x35 JKM275M-60HB-V 1684x1002x35 - JKM335M-60HB-V 1684x1002x35 JKM340M-60H 1684x1002x35 - JKM350M-60H 1684x1002x35 JKM340M-60H-V 1684x1002x35 - JKM350M-60H-V 1684x1002x35 JKMS270M-60HB-MX3 1684x1002x35 - JKMS340M-60HB-MX3 1684x1002x35	MCS PV0163/3672 to MCS PV0163/3684 MCS PV0163/3685 to MCS PV0163/3697 MCS PV0163/3745 to MCS PV0163/3757 MCS PV0163/3896 to MCS PV0163/3908 MCS PV0163/3935 to MCS PV0163/3947 MCS PV0163/4054 to MCS PV0163/4056 MCS PV0163/4057 to MCS PV0163/4059 MCS PV0163/4220 to MCS PV0163/4234
Jinko Solar Co., Ltd.	JKM320M-6TL3-B 1692x1029x30 JKM325M-6TL3-B 1692x1029x30 JKM330M-6TL3-B 1692x1029x30 JKM335M-6TL3-B 1692x1029x30 JKM340M-6TL3-B 1692x1029x30 JKM345M-6TL3-B 1692x1029x30 JKM350M-6TL3-B 1692x1029x30 JKM355M-6TL3-B 1692x1029x30 JKM360M-6TL3-B 1692x1029x30 JKM365M-6TL3-B 1692x1029x30 JKM335N-6TL3-V 1692x1029x30 to JKM365N-6TL3-V 1692x1029x30 JKM320N-6TL3-B-V 1692x1029x30 to JKM365N-6TL3-B-V 1692x1029x30 JKM335N-6TL3 1692x1029x30 to JKM375N-6TL3 1692x1029x30 JKM320N-6TL3-B 1692x1029x30 to JKM365N-6TL3-B 1692x1029x30	MCS PV0163/4667 MCS PV0163/4668 MCS PV0163/4669 MCS PV0163/4670 MCS PV0163/4671 MCS PV0163/4672 MCS PV0163/4673 MCS PV0163/4674 MCS PV0163/4675 MCS PV0163/4676 MCS PV0163/4569 to MCS PV0163/4575 MCS PV0163/4559 to MCS PV0163/4568 MCS PV0163/4352 to MCS PV0163/4360 MCS PV0163/4342 to MCS PV0163/4351
LG Electronics Inc	LG365Q1C-V5 LG370Q1C-V5 LG375Q1C-V5 LG340Q1C-V5 LG345Q1C-V5 LG380Q1C-V5 LG350N1C-V5 LG355N1C/V5 LG315N1W-V5 LG320N1W-V5 LG325N1W-V5 LG330N1W-V5 LG335N1W-V5 LG340N1W-V5 LG315N1K-V5 LG320N1K-V5 LG325N1K-V5 LG330N1K-V5 LG335N1K-V5 LG340N1K-V5 LG345N1K-V5 LG350N1K-V5 LG355N1K-V5	BSI KM 564573/87/6 BSI KM 564573/87/7 BSI KM 564573/87/8 BSI KM 564573/88/1 BSI KM 564573/88/2 BSI KM 564573/88/3 BSI KM 564573/76/19 BSI KM 564573/76/13 BSI KM 564573/85/1 BSI KM 564573/85/2 BSI KM 564573/85/3 BSI KM 564573/85/4 BSI KM 564573/85/5 BSI KM 564573/85/6 BSI KM 564573/86/1 BSI KM 564573/86/2 BSI KM 564573/86/3 BSI KM 564573/86/4 BSI KM 564573/86/5 BSI KM 564573/86/6 BSI KM 564573/86/7 BSI KM 564573/86/8 BSI KM 564573/86/9
LG Electronics Inc	LG365Q1C-V5 LG370Q1C-V5 LG375Q1C-V5 LG340Q1C-V5 LG345Q1C-V5 LG380Q1C-V5 LG350N1C-V5 LG355N1C/V5 LG315N1W-V5 LG320N1W-V5 LG325N1W-V5 LG330N1W-V5 LG335N1W-V5 LG340N1W-V5 LG315N1K-V5 LG320N1K-V5 LG325N1K-V5 LG330N1K-V5 LG335N1K-V5 LG340N1K-V5 LG345N1K-V5 LG350N1K-V5 LG355N1K-V5	BSI KM 564573/87/6 BSI KM 564573/87/7 BSI KM 564573/87/8 BSI KM 564573/88/1 BSI KM 564573/88/2 BSI KM 564573/88/3 BSI KM 564573/76/19 BSI KM 564573/76/13 BSI KM 564573/85/1 BSI KM 564573/85/2 BSI KM 564573/85/3 BSI KM 564573/85/4 BSI KM 564573/85/5 BSI KM 564573/85/6 BSI KM 564573/86/1 BSI KM 564573/86/2 BSI KM 564573/86/3 BSI KM 564573/86/4 BSI KM 564573/86/5 BSI KM 564573/86/6 BSI KM 564573/86/7 BSI KM 564573/86/8 BSI KM 564573/86/9

CERTIFICATE



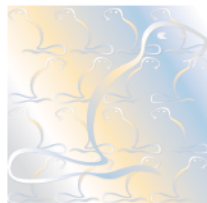
MCS Product Certificate



Annex I to Certificate KIWA00041

PV module manufacturer	PV module model names	MCS Certificate Number
LONGi Green Energy Technology Co., Ltd.	LR4-60HPB-xxxM LR4-60HPH-350M LR4-60HPH-355M LR4-60HPH-360M LR4-60HPH-365M LR4-60HPH-370M LR4-60HPH-375M	BABT 8771-02/01 BABT 8771-06/01-350W BABT 8771-06/01-355W BABT 8771-06/01-360W BABT 8771-06/01-365W BABT 8771-06/01-370W BABT 8771-06/01-375W
LONGi Green Energy Technology Co., Ltd.	LR6-60HPB-xxxM, (xxx=300-320, in 5W steps) LR6-60HPH-xxxM, (xxx=300-325, in 5W steps) LR6-60PB-xxxM	BABT 8771-01/00 BABT 8771-04/00 BABT 8771-11/00
Perlight Solar Co., Ltd.	PLM-xxxM-60 pcs 6" (where xxx = 220W - 300W in increments of 5W) PLM-xxxMB-60 pcs 6" (where xxx = 220W - 300W in increments of 5W) PLM-xxxM-60 pcs 6" (where xxx = 220W - 320W in increments of 5W) PLM-xxxMB-60 pcs 6" (where xxx = 220W - 320W in increments of 5W) PLM-xxxP-60 pcs 6" (where xxx = 190W - 295W in increments of 5W) PLM-xxxPB-60 pcs 6" (where xxx = 270W - 295W in increments of 5W) PLM-xxxPB-60 pcs 6" (where xxx = 195W - 295W in increments of 5W)	BBA 0005/1066 to BBA 0005/1082 BBA 0005/1189 to BBA 0005/1205 BBA 0005/2259 to BBA 0005/2262 BBA 0005/2263 to BBA 0005/2266 BBA 0005/1751 to BBA 0005/1772 BBA 0005/1888 to BBA 0005/1893 BBA 0005/2244 to BBA 0005/2258
REC Solar Pte Ltd	REC295NP - REC330NP	INT PV 21916/184 to INT PV 21916/191
REC Solar Pte Ltd	REC340AA - REC370AA REC340AA Black - REC370AA Black	INT PV 21916/192 to INT PV 21916/198 INT PV 21916/199 to INT PV 21916/205
Sapphire Solar Ltd	SSxxxM/60 (where xxx = 210W to 310W in increments of 5W)	BBA 0199/45 to BBA 0199/65
Shanghai JA Solar Tech Co Ltd.	JAM60S10-xxx/PR (xxx=315 to 345 in 5W steps) JAM60S10-xxx/MR (xxx=320 to 340 in 5W steps) JAM60S10-xxx/MR (where xxx=325-345 in 5W steps) JAM60S10-325/MR JAM60S10-330/MR JAM60S10-335/MR JAM60S10-340/MR JAM60S10-345/MR JAM60S10-xxx/PR JAM60S10-315/PR JAM60S10-320/PR JAM60S10-325/PR JAM60S10-330/PR JAM60S10-335/PR JAM60S10-340/PR JAM60S10-345/PR JAM60S10-330/MB JAM60S10-335/MB JAM60S10-340/MB JAM60S10-345/MB JAM60S10-320/BP JAM60S10-325/BP JAM60S10-330/BP	BABT 8515-152 BABT 8515-165 BABT 8515-165-R1 BABT 8515-165-R1-325W BABT 8515-165-R1-330W BABT 8515-165-R1-335W BABT 8515-165-R1-340W BABT 8515-165-R1-345W BABT 8515-200 BABT 8515-200-315W BABT 8515-200-320W BABT 8515-200-325W BABT 8515-200-330W BABT 8515-200-335W BABT 8515-200-340W BABT 8515-200-345W BABT 8515-202-330W BABT 8515-202-335W BABT 8515-202-340W BABT 8515-202-345W BABT 8515-204-320W BABT 8515-204-325W BABT 8515-204-330W
Shanghai JA Solar Tech Co Ltd.	JAM60S17-xxx/PR (xxx=315 to 345 in 5W steps) JAM60S17-xxx/PR (where xxx=315-325 in 5W steps) JAM60S17-315/PR JAM60S17-320/PR JAM60S17-325/PR JAM60S17-xxx/MR (xxx=320 to 340 in 5W steps) JAM60S17-xxx/MR (where xxx=315-325 in 5W steps) JAM60S17-315/MR JAM60S17-320/MR JAM60S17-325/MR JAM60S17-330/MR JAM60S17-335/MR	BABT 8515-163 BABT 8515-163-R1 BABT 8515-163-R1-315W BABT 8515-163-R1-320W BABT 8515-163-R1-325W BABT 8515-164 BABT 8515-164-R1 BABT 8515-164-R1-315W BABT 8515-164-R1-320W BABT 8515-164-R1-325W BABT 8515-210-330W BABT 8515-210-335W

CERTIFICATE



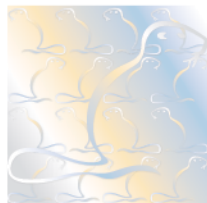
MCS Product Certificate



Annex I to Certificate KIWA00041

PV module manufacturer	PV module model names	MCS Certificate Number
Shanghai JA Solar Tech Co Ltd.	JAM60S20-355/MR JAM60S20-360/MR JAM60S20-365/MR JAM60S20-370/MR JAM60S20-375/MR JAM60S20-380/MR JAM60S20-385/MR JAM60S20-390/MR	BABT 8515-208-R27-355W BABT 8515-208-R27-360W BABT 8515-208-R27-365W BABT 8515-208-R27-370W BABT 8515-208-R27-375W BABT 8515-208-R27-380W BABT 8515-208-R27-385W BABT 8515-208-R27-390W
Shanghai JA Solar Tech Co Ltd.	JAM60S21-355/MR JAM60S21-360/MR JAM60S21-365/MR JAM60S21-370/MR JAM60S21-375/MR	BABT 8515-224-355W BABT 8515-224-360W BABT 8515-224-365W BABT 8515-224-370W BABT 8515-224-375W
Sharp Electronics GmbH	NU-JC320B NU-JC330	BABT8775-001 BABT8775-002
Sunpower Corp.	SPR-MAX2-340 1690x1046x40 SPR-MAX2-350 1690x1046x40 SPR-MAX2-360 1690x1046x40 SPR-MAX3-400 1690x1046x40 SPR-MAX3-395 1690x1046x40 SPR-MAX3-370 1690x1046x40 SPR-MAX3-390 1690x1046x40	MCS PV0102/92 & MCS PV0280/46 MCS PV0102/93 & MCS PV0280/47 MCS PV0102/94 & MCS PV0280/48 MCS PV0102/100 & MCS PV0280/54 MCS PV0102/105 & MCS PV0280/59 MCS PV0102/98 & MCS PV0280/52 MCS PV0102/99 & MCS PV0280/53
Trina Solar Co., Ltd.	TSM-325DE06M(II) 1698x1004x35 TSM-330DE06M(II) 1698x1004x35 TSM-335DE06M(II) 1698x1004x35 TSM-325DE06M.08(II) 1698x1004x35 TSM-330DE06M.08(II) 1698x1004x35 TSM-335DE06M.08(II) 1698x1004x35 TSM-315DD06M.05(II) 1698x1004x35 TSM-320DD06M.05(II) 1698x1004x35 TSM-325DD06M.05(II) 1698x1004x35 TSM-330DD06M.05(II) 1698x1004x35 TSM-335DD06M.05(II) 1698x1004x35 TSM-340DE06M(II) 1698x1004x35 TSM-335DE06M(II) 1690x996x35 TSM-340DE06M(II) 1690x996x35 TSM-340DE06M.08(II) 1698x1004x35 TSM-330DE06M.08(II) 1690x996x35 TSM-335DE06M.08(II) 1690x996x35 TSM-340DE06M.08(II) 1690x996x35 TSM-320DD06M.05(II) 1690x996x35 TSM-325DD06M.05(II) 1690x996x35 TSM-330DD06M.05(II) 1690x996x35 TSM-345DE06M.08(II) 1698x1004x35 TSM-335DD06M.05(II) 1690x996x35 TSM-340DD06M.05(II) 1690x996x35 TSM-335DD06M.05(II) 1698x1004x35 TSM-340DD06M.05(II) 1698x1004x35	MCS PV0183/1697 MCS PV0183/1698 MCS PV0183/1699 MCS PV0183/1700 MCS PV0183/1701 MCS PV0183/1702 MCS PV0183/1703 MCS PV0183/1704 MCS PV0183/1705 MCS PV0183/1706 MCS PV0183/1707 MCS PV0183/1747 MCS PV0183/1748 MCS PV0183/1749 MCS PV0183/1750 MCS PV0183/1751 MCS PV0183/1752 MCS PV0183/1753 MCS PV0183/1754 MCS PV0183/1755 MCS PV0183/1756 MCS PV0183/1791 MCS PV0183/1792 MCS PV0183/1793 MCS PV0183/1794 MCS PV0183/1795 MCS PV0183/1796
Trina Solar Co., Ltd.	TSM-355DE08M(II) 1763x1040x35 - TSM-370DE08M(II) 1763x1040x35 TSM-355DE08M.08(II) 1763x1040x35 - TSM-375DE08M.08(II) 1763x1040x35 TSM-375DE08M(II) 1763x1040x35 - TSM-380DE08M(II) 1763x1040x35 TSM-380DE08M.08(II) 1763x1040x35 TSM-355DE08M.08(II) 1763x1040x40 - TSM-370DE08M.08(II) 1763x1040x40 TSM-375DE08M(II) 1763x1040x40 - TSM-380DE08M(II) 1763x1040x40 TSM-375DE08M.08(II) 1763x1040x40 - TSM-380DE08M.08(II) 1763x1040x40	MCS PV0183/1761 to MCS PV0183/1764 MCS PV0183/1769 to MCS PV0183/1773 MCS PV0183/1774 to MCS PV0183/1775 MCS PV0183/1776 MCS PV0183/1765 to MCS PV0183/1768 MCS PV0183/1777 to MCS PV0183/1778 MCS PV0183/1779 to MCS PV0183/1780
WuXi Suntech Power Co Ltd	STP300S-20/Wfh STP305S-20/Wfh	BBA 0198/34 BBA 0198/35 for both certification was 10/08/2018 - 18/08/2021

CERTIFICATE



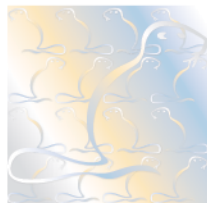
MCS Product Certificate



Annex I to Certificate KIWA00041

PV module manufacturer	PV module model names	MCS Certificate Number
WuXi Suntech Power Co Ltd	STP345S-B60/Wnh STP375S-B60/Wnh STP380S-B60/Wnh STP385S-B60/Wnh STP375S-B60/Wnhm STP380S-B60/Wnhm STP385S-B60/Wnhm STP345S-B60/Wnhb STP350S-B60/Wnhb STP355S-B60/Wnhb STP360S-B60/Wnhb STP365S-B60/Wnhb STP370S-B60/Wnhb STP375S-B60/Wnhb STP380S-B60/Wnhb STP385S-B60/Wnhb	BBA 0198/299 BBA 0198/365 BBA 0198/366 BBA 0198/367 BBA 0198/368 BBA 0198/369 BBA 0198/370 BBA 0198/305 BBA 0198/306 BBA 0198/307 BBA 0198/308 BBA 0198/309 BBA 0198/310 BBA 0198/371 BBA 0198/372 BBA 0198/373
Trina Solar Co Ltd	Trina Solar Vertex TSM-xxxDE09.0y (x=Power; y={8 ; 5})	MCS PV0183/1805 to MCS PV0183/1810 MCS PV0183/1811 to MCS PV0183/1816 MCS PV0183/1817 to MCS PV0183/1822 MCS PV0183/1823 to MCS PV0183/1828 MCS PV0183/1829 to MCS PV0183/1834 MCS PV0183/1835 to MCS PV0183/1840
Shanghai JA Solar Tech Co Ltd	JA Solar JAM54S30-xxx/MR/yyyy (xxx = Power ; yyyy = Voltage)	BABT 8515-229-390W BABT 8515-229-395W BABT 8515-229-400W BABT 8515-229-405W BABT 8515-229-410W BABT 8515-229-415W BABT 8515-230-390W BABT 8515-230-395W BABT 8515-230-400W BABT 8515-230-405W BABT 8515-230-410W BABT 8515-230-415W BABT 8515-231-390W BABT 8515-231-395W BABT 8515-231-400W BABT 8515-231-405W BABT 8515-231-410W BABT 8515-231-415W
Shanghai JA Solar Tech Co Ltd	JA Solar JAM54S31-xxx/MR/yyyy (xxx = Power ; yyyy = Voltage)	BABT 8515-232-385W BABT 8515-232-390W BABT 8515-232-395W BABT 8515-232-400W BABT 8515-232-405W BABT 8515-233-385W BABT 8515-233-390W BABT 8515-233-395W BABT 8515-233-400W BABT 8515-233-405W BABT 8515-234-385W BABT 8515-234-390W BABT 8515-234-395W BABT 8515-234-400W BABT 8515-234-405W
SolarEdge Technologies Ltd.	SolarEdge Smart Module yPVxxx-R60DzMG (xxx = Power ; y = {S,Ø} ; z = {B,W})	BABT8787-101-345W to BABT8787-101-370W BABT8787-102-345W to BABT8787-102-370W BABT8787-103-345W to BABT8787-103-370W BABT8787-104-345W to BABT8787-104-370W
Hanwha Q CELLS GmbH	Q.PEAK DUO zzz ML-Gy (y = 10 ; 10+) , {zzz = BLK ; Ø}	MCS PV0062/562 - MCS PV0062/568 MCS PV0062/569 - MCS PV0062/575 MCS PV0062/576 - MCS PV0062/582 MCS PV0062/583 - MCS PV0062/589 MCS PV0062/590 - MCS PV0062/596 MCS PV0062/597 - MCS PV0062/603 MCS PV0062/604 - MCS PV0062/610 MCS PV0062/611 - MCS PV0062/617
Hanwha Q CELLS GmbH	Q.PEAK DUO zzz ML-Gy (y = 11 ; 11+) , {zzz = BLK ; Ø}	MCS PV0062/634 - MCS PV0062/639 MCS PV0062/640 - MCS PV0062/645 MCS PV0062/646 - MCS PV0062/651 MCS PV0062/652 - MCS PV0062/657
European Energy World, S.L.	Eurener MEPVxxx V1(xxx = power)	BABT8806-105-390W to BABT8806-105-415W
European Energy World, S.L.	Eurener MEPVxxx X (xxx = power)	BABT8806-103-295W to BABT8806-103-380W

CERTIFICATE



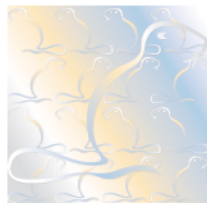
MCS Product Certificate



Annex I to Certificate KIWA00041

PV module manufacturer	PV module model names	MCS Certificate Number
Hengdian Group DMEGC Magnetics Co., Ltd.	DM380M10-54HBB DM385M10-54HBB DM390M10-54HBB DM395M10-54HBB DM400M10-54HBB DM405M10-54HBB DM410M10-54HBB DM415M10-54HBB	BABT 8586-217-380W BABT 8586-217-385W BABT 8586-217-390W BABT 8586-217-395W BABT 8586-217-400W BABT 8586-217-405W BABT 8586-217-410W BABT 8586-217-415W
Phono Solar Technology Co., Ltd	PS385M6H-18/VH PS390M6H-18/VH PS395M6H-18/VH PS400M6H-18/VH PS405M6H-18/VH PS410M6H-18/VH PS415M6H-18/VH PS385M6-18/VH PS390M6-18/VH PS395M6-18/VH PS400M6-18/VH PS405M6-18/VH PS410M6-18/VH PS415M6-18/VH	BABT8758-164-385W BABT8758-164-390W BABT8758-164-395W BABT8758-164-400W BABT8758-164-405W BABT8758-164-410W BABT8758-164-415W BABT8758-174-385W BABT8758-174-390W BABT8758-174-395W BABT8758-174-400W BABT8758-174-405W BABT8758-174-410W BABT8758-174-415W
LONGi Green Energy Technology Co., Ltd.	LR5-54HPB-390M LR5-54HPB-395M LR5-54HPB-400M LR5-54HPB-405M LR5-54HPB-410M LR5-54HPB-415M LR5-54HPB-420M LR5-54HPB-425M LR5-54HPH-395M LR5-54HPH-400M LR5-54HPH-405M LR5-54HPH-410M LR5-54HPH-415M LR5-54HPH-420M LR5-54HPH-425M LR5-54HPH-430M LR5-54HPH-435M LR5-54HIH-395M LR5-54HIH-400M LR5-54HIH-405M LR5-54HIH-410M LR5-54HIH-415M LR5-54HIH-420M LR5-54HIH-425M LR5-54HIH-430M LR5-54HIH-435M LR5-54HIB-390M LR5-54HIB-395M LR5-54HIB-400M LR5-54HIB-405M LR5-54HIB-410M LR5-54HIB-415M LR5-54HIB-420M LR5-54HIB-425M LR5-54HTH-405M LR5-54HTH-410M LR5-54HTH-415M LR5-54HTH-420M LR5-54HTH-425M LR5-54HTH-430M LR5-54HTH-435M LR5-54HTH-440M LR5-54HTH-445M LR5-54HTH-450M LR5-54HTB-400M LR5-54HTB-405M LR5-54HTB-410M LR5-54HTB-415M LR5-54HTB-420M LR5-54HTB-425M LR5-54HTB-430M LR5-54HTB-435M LR5-54HTB-440M	BABT8771-30/00-390W BABT8771-30/00-395W BABT8771-30/00-400W BABT8771-30/00-405W BABT8771-30/00-410W BABT8771-30/00-415W BABT8771-30/00-420W BABT8771-30/00-425W BABT8771-32/00-395W BABT8771-32/00-400W BABT8771-32/00-405W BABT8771-32/00-410W BABT8771-32/00-415W BABT8771-32/00-420W BABT8771-32/00-425W BABT8771-32/00-430W BABT8771-32/00-435W BABT8771-31/00-395W BABT8771-31/00-400W BABT8771-31/00-405W BABT8771-31/00-410W BABT8771-31/00-415W BABT8771-31/00-420W BABT8771-31/00-425W BABT8771-31/00-430W BABT8771-31/00-435W BABT8771-29/00-390W BABT8771-29/00-395W BABT8771-29/00-400W BABT8771-29/00-405W BABT8771-29/00-410W BABT8771-29/00-415W BABT8771-29/00-420W BABT8771-29/00-425W BABT8771-29/00-430W BABT8771-29/00-435W BABT8771-33/00-405W BABT8771-33/00-410W BABT8771-33/00-415W BABT8771-33/00-420W BABT8771-33/00-425W BABT8771-33/00-430W BABT8771-33/00-435W BABT8771-33/00-440W BABT8771-33/00-445W BABT8771-33/00-450W BABT8771-34/00-400W BABT8771-34/00-405W BABT8771-34/00-410W BABT8771-34/00-415W BABT8771-34/00-420W BABT8771-34/00-425W BABT8771-34/00-430W BABT8771-34/00-435W BABT8771-34/00-440W

CERTIFICATE



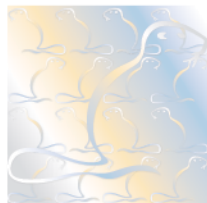
MCS Product Certificate



Annex I to Certificate KIWA00041

CERTIFICATE

PV module manufacturer	PV module model names	MCS Certificate Number
WuXi Suntech Power Co Ltd	STP390S-C54/Umh	BBA 0198/485
	STP395S-C54/Umh	BBA 0198/486
	STP400S-C54/Umh	BBA 0198/487
	STP405S-C54/Umh	BBA 0198/488
	STP410S-C54/Umh	BBA 0198/489
	STP390S-C54/Umhb	BBA 0198/490
	STP395S-C54/Umhb	BBA 0198/491
	STP400S-C54/Umhb	BBA 0198/492
	STP405S-C54/Umhb	BBA 0198/493
	STP410S-C54/Umhb	BBA 0198/494
	STP390S-C54/Umhm	BBA 0198/495
	STP395S-C54/Umhm	BBA 0198/496
	STP400S-C54/Umhm	BBA 0198/497
	STP405S-C54/Umhm	BBA 0198/498
	STP410S-C54/Umhm	BBA 0198/499
	STP415S-C54/Umhm	BBA 0198/509
	STP420S-C54/Umhm	BBA 0198/510
	STP425S-C54/Umhm	BBA 0198/511
	STP430S-C54/Umhm	BBA 0198/512
	STP435S-C54/Umhm	BBA 0198/513
	STP415S-C54/Umhb	BBA 0198/514
	STP420S-C54/Umhb	BBA 0198/515
	STP425S-C54/Umhb	BBA 0198/516
	STP430S-C54/Umhb	BBA 0198/517
	STP435S-C54/Umhb	BBA 0198/518
	STP405S-C54/Nmhm+	BBA 0198/519
	STP410S-C54/Nmhm+	BBA 0198/520
	STP415S-C54/Nmhm+	BBA 0198/521
	STP420S-C54/Nmhm+	BBA 0198/522
	STP425S-C54/Nmhm+	BBA 0198/523
	STP430S-C54/Nmhm+	BBA 0198/524
	STP435S-C54/Nmhm+	BBA 0198/525
	STP405S-C54/Nmhb+	BBA 0198/526
	STP410S-C54/Nmhb+	BBA 0198/527
	STP415S-C54/Nmhb+	BBA 0198/528
	STP420S-C54/Nmhb+	BBA 0198/529
	STP425S-C54/Nmhb+	BBA 0198/530
	STP430S-C54/Nmhb+	BBA 0198/531
	STP435S-C54/Nmhb+	BBA 0198/532
	STP415S-C54/Nshm	BBA 0198/570
	STP420S-C54/Nshm	BBA 0198/571
	STP425S-C54/Nshm	BBA 0198/572
	STP430S-C54/Nshm	BBA 0198/573
	STP435S-C54/Nshm	BBA 0198/574
STP410S-C54/Nshb	BBA 0198/575	
STP415S-C54/Nshb	BBA 0198/576	
STP420S-C54/Nshb	BBA 0198/577	
STP425S-C54/Nshb	BBA 0198/578	
STP430S-C54/Nshb	BBA 0198/579	



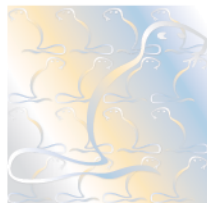
MCS Product Certificate



Annex I to Certificate KIWA00041

PV module manufacturer	PV module model names	MCS Certificate Number
European Energy World, S.L	MEPV295X1 MEPV300X1 MEPV305X1 MEPV310X1 MEPV315X1 MEPV320X1 MEPV325X1 MEPV330X1 MEPV335X1 MEPV340X1 MEPV345X1 MEPV350X1 MEPV355X1 MEPV360X1 MEPV365X1 MEPV370X1 MEPV375X1 MEPV380X1 MEPV385X1 MEPV390X1 MEPV395X1 MEPV400X1 MEPV405X1 MEPV410X1 MEPV415X1 MEPV420X1 MEPV425X1 MEPV430X1 MEPV435X1 MEPV440X1 MEPV445X1 MEPV450X1 MEPV455X1 MEPV460X1	BABT8806-104-295W BABT8806-104-300W BABT8806-104-305W BABT8806-104-310W BABT8806-104-315W BABT8806-104-320W BABT8806-104-325W BABT8806-104-330W BABT8806-104-335W BABT8806-104-340W BABT8806-104-345W BABT8806-104-350W BABT8806-104-355W BABT8806-104-360W BABT8806-104-365W BABT8806-104-370W BABT8806-104-375W BABT8806-104-380W BABT8806-104-385W BABT8806-104-390W BABT8806-104-395W BABT8806-104-400W BABT8806-104-405W BABT8806-104-410W BABT8806-104-415W BABT8806-104-420W BABT8806-104-425W BABT8806-104-430W BABT8806-104-435W BABT8806-104-440W BABT8806-104-445W BABT8806-104-450W BABT8806-104-455W BABT8806-104-460W
Shanghai JA Solar Tech Co Ltd.	JAM72S20-430/MR JAM72S20-435/MR JAM72S20-440/MR JAM72S20-445/MR JAM72S20-450/MR JAM72S20-455/MR JAM72S20-460/MR JAM72S20-465/MR JAM72S20-470/MR	BAPT 8515-207-R27-430W BAPT 8515-207-R27-435W BAPT 8515-207-R27-440W BAPT 8515-207-R27-445W BAPT 8515-207-R27-450W BAPT 8515-207-R27-455W BAPT 8515-207-R27-460W BAPT 8515-207-R27-465W BAPT 8515-207-R27-470W

CERTIFICATE



MCS Product Certificate



Annex II to Certificate KIWA00041

Page 15 of 15

The following components are common for the product systems that have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012

Mounting frame installation components
GSE Flashing Hook
Middle Clamp Hxx - Steel - Black - In Roof
End Clamp Hxx - Steel - Black - In Roof
GSE Integration Screw - 6.3mmx60mm - Grey
GSE Integration Screw - 6.3mmx60mm - Black
Left Wedge for Simple Clamp - In Roof
Right Wedge for Simple Clamp - In Roof
EPDM Cell for Screw - In Roof (25x21 EP. 5mm)
Pre-Compressed Seal - 20 x 40mm 5.5m (roll)
Flexalu Waterproof Strip Black 330mm (5 m roll)
Flexalu Waterproof Strip Black 500mm (5 m roll)
Flexalu Waterproof Strip Red 500mm (5 m roll)
Roof-Underlay Screen (75 m ² roll)
Universal Top Centre Flashing - Black L 1500mm
Top Junction Flashing - Black L 375mm
Top Corner Piece Flashing - Black L1400mm (To Join Module to Top Centre Flashings)
Pop Rivet 4x8 (Fixations Rivet for Top Centre Flashing)
Lateral Flashing - Black
Lateral Flashing P30 - Black
Top Left Corner Flashing - Black
Top Right Corner Flashing - Black

CERTIFICATE