



**GLOBAL LIMITED WARRANTY FOR TRINA SOLAR BRAND
CRYSTALLINE SOLAR PHOTOVOLTAIC MODULES**

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Global Limited Warranty

Trina Solar Co., Ltd (“Trina Solar”) hereby grants the following Global Limited Warranty to the first customer installing (for its own use) (the “Buyer”) any of the specified (and no other) brand models of solar photovoltaic modules of Trina Solar listed below and remaining at the original place of installation without having them moved or disassembled after initial installation (the “Products”):

1) Warranted Products

This Global Limited Warranty shall only apply to the following Products:

a) P-type Poly of Back Sheet Products

(i)

TSM-***PA03	TSM-***PA05	TSM-***PA05.05	TSM-***PA05.08	TSM-***PA05A
TSM-***PA05A.05	TSM-***PA05A.08	TSM-***PA14	TSM-***PA14A	TSM-***PA05.002
TSM-***PA05.052	TSM-***PA05.082	TSM-***PC03	TSM-***PC05	TSM-***PC05.01
TSM-***PC05.05	TSM-***PC05.08	TSM-***PC05A	TSM-***PC05A.05	TSM-***PC05A.08
TSM-***PC05B	TSM-***PC05B.05	TSM-***PC05B.08	TSM-***PC14	TSM-***PC14.08
TSM-***PC14A	TSM-***PC05A.002	TSM-***PC05A.052	TSM-***PC05A.082	TSM-***PC05A.003
TSM-***PC14.002	TSM-***PC14.082	TSM-***PC06	TSM-***PC06.08	TSM-***PC05A.08(II)
TSM-***PC14(II)	TSM-***PC14.08(II)	TSM-***PC05A.002(II)	TSM-***PC05A.052(II)	TSM-***PC05A.082(II)
TSM-***PC14.002(II)	TSM-***PC14.082(II)	TSM-***PD05	TSM-***PD05.05	TSM-***PD05.08
TSM-***PD05.50	TSM-***PD05.002	TSM-***PD05.052	TSM-***PD05.082	TSM-***PD14
TSM-***PD14.08	TSM-***PD14.002	TSM-***PD05(II)	TSM-***PD05.05(II)	TSM-***PD05.08(II)
TSM-***PD14(II)	TSM-***PD14.08(II)	TSM-***PD05.00S	TSM-***PD05.05S	TSM-***PD05.08S
TSM-***PD05.05U	TSM-***PD05.08U	TSM-***PD05.00C	TSM-***PD05.05C	TSM-***PD05.08C
TSM-***PD05.00D	TSM-***PD05.05D	TSM-***PD05.08D	TSM-***PD14.00C	TSM-***PE05A
TSM-***PE05A.08	TSM-***PE14A	TSM-***PE14A.08	TSM-***PE05A(II)	TSM-***PE05A.08(II)
TSM-***PE14A(II)	TSM-***PE14A.08(II)	TSM-***PE05H	TSM-***PE05H.08	TSM-***PE14H
TSM-***PE14H.08	TSM-***PD05H	TSM-***PD14H	TSM-***PD05HB.09	TSM-***PE15H
TSM-***PE15H.08	TSM-***PE15H.09	TSM-***PE06H	TSM-***PE06H.08	TSM-***PE06H.09
TSM-***PE15A	TSM-***PE15A.08	TSM-***PE15A.09	TSM-***PE06A	TSM-***PE06A.08
TSM-***PE06A.09	TSM-***PD06H	TSM-***PD06H.05	TSM-***PD06H.08	TSM-***PD06H.09
TSM-***PD15H	TSM-***PD15H.08	TSM-***PD15H.09	TSM-***PC06A	

(ii)

TSM-***PA05.10	TSM-***PA05.15	TSM-***PA05.18	TSM-***PA05A.10	TSM-***PA05A.15
TSM-***PA05A.18	TSM-***PC05.10	TSM-***PC05.15	TSM-***PC05.18	TSM-***PC05A.10
TSM-***PC05A.15	TSM-***PC05A.18	TSM-***PC05A.10(II)	TSM-***PC05A.15(II)	TSM-***PC05A.18 (II)
TSM-***PD05.T0	TSM-***PD05.T8	TSM-***PD05.10	TSM-***PD05.15	TSM-***PD05.18
TSM-***PD14.T0	TSM-***PD14.T8	TSM-***PD14.10	TSM-***PD14.15	TSM-***PD14.18
TSM-***PD05.T0(II)	TSM-***PD05.T8(II)	TSM-***PD14.T0(II)	TSM-***PD14.T8(II)	TSM-***PE05A.T0
TSM-***PE05A.T8	TSM-***PE05A.T9	TSM-***PE14A.T0	TSM-***PE14A.T8	TSM-***PE14A.T9
TSM-***PE14B.T0	TSM-***PE14B.T8	TSM-***PE14B.T9	TSM-***PE14B.T0(II)	TSM-***PE14B.T8(II)
TSM-***PE14B.T9(II)	TSM-***PE14HB.T0	TSM-***PE14HB.T8	TSM-***PE14HB.T9	TSM-***PE14HB.T0(II)
TSM-***PE14HB.T8(II)	TSM-***PE14HB.T9(II)	TSM-***PE05A.T0(II)	TSM-***PE05A.T8(II)	TSM-***PE05A.T9(II)
TSM-***PE14A.T0(II)	TSM-***PE14A.T8(II)	TSM-***PE14A.T9(II)	TSM-***PE05H.T0	TSM-***PE05H.T8
TSM-***PE05H.T9	TSM-***PE05H.T0(II)	TSM-***PE05H.T8(II)	TSM-***PE05H.T9(II)	TSM-***PE14H.T0
TSM-***PE14H.T8	TSM-***PD05H.T0	TSM-***PD05H.T8	TSM-***PD14H.T0	TSM-***PD14H.T8
TSM-***PD05HB.T9	TSM-***PE15H.T0	TSM-***PE15H.T8	TSM-***PE15H.T9	TSM-***PE06H.T0
TSM-***PE06H.T8	TSM-***PE06H.T9	TSM-***PE06H.T0(II)	TSM-***PE06H.T8(II)	TSM-***PE06H.T9(II)
TSM-***PE15A.T0	TSM-***PE15A.T8	TSM-***PE15A.T9	TSM-***PE06A.T0	TSM-***PE06A.T0
TSM-***PE06A.T8	TSM-***PE06A.T9	TSM-***PD06H.T0	TSM-***PD06H.T8	TSM-***PD06H.T9
TSM-***PD15H.T0	TSM-***PD15H.T8	TSM-***PD15H.T9		

b) P-type Mono PERC of Back Sheet Products

(i)

TSM-***DA01	TSM-***DA01.05	TSM-***DA01A	TSM-***DA01A.05	TSM-***DA01A.08
TSM-***DA03	TSM-***DA05	TSM-***DA01A.002	TSM-***DA01A.052	TSM-***DA01A.082
TSM-***DC01	TSM-***DC01.01	TSM-***DC01.05	TSM-***DC01A	TSM-***DC01A.05
TSM-***DC01A.08	TSM-***DC03	TSM-***DC05	TSM-***DC80	TSM-***DC80.08
TSM-***DC01A.002	TSM-***DC01A.052	TSM-***DC01A.082	TSM-***DC05A	TSM-***DC05A.05
TSM-***DC05A.08	TSM-***DC05A.002	TSM-***DC05A.052	TSM-***DC05A.082	TSM-***DC06
TSM-***DC06.08	TSM-***DC03A(II)	TSM-***DC03A.05(II)	TSM-***DC03A.08(II)	TSM-***DC05A(II)
TSM-***DC05A.05(II)	TSM-***DC05A.08(II)	TSM-***DC05A.002(II)	TSM-***DC05A.052(II)	TSM-***DC05A.082(II)
TSM-***DC06.08(II)	TSM-***DD05A(II)	TSM-***DD05A.05(II)	TSM-***DD05A.08(II)	TSM-***DD14A(II)
TSM-***DD14A.08(II)	TSM-***DD05A.052(II)	TSM-***DD05A.082(II)	TSM-***DD05A.05S(II)	TSM-***DD05A.08S(II)
TSM-***DD05A.05U(II)	TSM-***DD05A.08U(II)	TSM-***DE05A(II)	TSM-***DE05A.08(II)	TSM-***DE14A(II)
TSM-***DE14A.08(II)	TSM-***DE05H(II)	TSM-***DE05H.08(II)	TSM-***DE14H(II)	TSM-***DE14H.08(II)
TSM-***DD05H(II)	TSM-***DD14H(II)	TSM-***DE06H(II)	TSM-***DE06H.08(II)	TSM-***DE06H.09(II)
TSM-***DE06M(II)	TSM-***DE06M.09(II)	TSM-***DE15H(II)	TSM-***DE15H.08(II)	TSM-***DE15H.09(II)
TSM-***DE15M(II)	TSM-***DE15M.08(II)	TSM-***DE15M.09(II)	TSM-***DE06A(II)	TSM-***DE06A.08(II)
TSM-***DE06A.09(II)	TSM-***DE15A(II)	TSM-***DE15A.08(II)	TSM-***DE15A.09(II)	TSM-***DD15M (II)
TSM-***DD15M.08 (II)	TSM-***DD15M.09 (II)	TSM-***DD06M (II)	TSM-***DD06H (II)	TSM-***DD06H.05 (II)
TSM-***DD06H.08(II)	TSM-***DD15H(II)	TSM-***DD15H.05(II)	TSM-***DD15H.08(II)	TSM-***DE15X(II)
TSM-***PE15H(II)	TSM-***PE06H(II)	TSM-***PE15M(II)	TSM-***PE06M(II)	TSM-***PE17H(II)
TSM-***PE08H(II)	TSM-***PE17M(II)	TSM-***PE08M(II)		

(ii)

TSM-***DA01A.10	TM-***DA01A.15	TSM-***DA01A.18	TSM-***DC01A.10	TSM-***DC01A.15
TSM-***DC01A.18	TSM-***DD05A.T0(II)	TSM-***DD05A.T8(II)	TSM-***DD14A.T0(II)	TSM-***DD14A.T8(II)
TSM-***DE05A.T0(II)	TSM-***DE05A.T8(II)	TSM-***DE05A.T9(II)	TSM-***DE14A.T0(II)	TSM-***DE14A.T8(II)
TSM-***DE14A.T9(II)	TSM-***DE14B.T0(II)	TSM-***DE14B.T8(II)	TSM-***DE14B.T9(II)	TSM-***DE05H.T0(II)
TSM-***DE05H.T8(II)	TSM-***DE14H.T0(II)	TSM-***DE14H.T8(II)	TSM-***DE14H.T9(II)	TSM-***DD05H.T0(II)
TSM-***DD05H.T8(II)	TSM-***DD14H.T0(II)	TSM-***DD14H.T8(II)	TSM-***DE06H.T0(II)	TSM-***DE06H.T8(II)
TSM-***DE06H.T9(II)	TSM-***DE06H.18(II)	TSM-***DE06M.T0(II)	TSM-***DE06M.T8(II)	TSM-***DE06M.T9(II)
TSM-***DD06M.T8(II)	TSM-***DE15H.T0(II)	TSM-***DE15H.T8(II)	TSM-***DE15H.T9(II)	TSM-***DE15M.T0(II)
TSM-***DE15M.T8(II)	TSM-***DE15M.T9(II)	TSM-***DE06A.T0(II)	TSM-***DE06A.T8(II)	TSM-***DE06A.T9(II)
TSM-***DE15A.T0(II)	TSM-***DE15B.T8(II)	TSM-***DE15A.T9(II)	TSM-***DE15B.T0(II)	TSM-***DE15B.T8(II)
TSM-***DE15B.T9(II)	TSM-***DD15M.T0(II)	TSM-***DD15M.T8(II)	TSM-***DD15M.T9(II)	TSM-***DD06M.18(II)
TSM-***DD06M.T0(II)	TSM-***DD06M.T8(II)	TSM-***DD06M.T9(II)	TSM-***DD06H.T0(II)	TSM-***DD06H.T9(II)
TSM-***DD06H.T8(II)	TSM-***DD06H.18(II)	TSM-***DD06A.T0(II)	TSM-***DD06A.T8(II)	TSM-***DD06A.T9(II)
TSM-***DD15A.T0(II)	TSM-***DD15A.T8(II)	TSM-***DD15A.T9(II)	TSM-***PE15H.T0(II)	TSM-***PE06H.T0(II)
TSM-***PE15M.T0(II)	TSM-***PE06M.T0(II)	TSM-***PE17H.T0(II)	TSM-***PE08H.T0(II)	TSM-***PE17M.T0(II)
TSM-***PE08M.T0(II)				

(iii)

TSM-***DD06M.05(II)	TSM-***DE06M.05(II)	TSM-***DE06X.05(II)	TSM-***DD06X.05(II)	TSM-***DE09.05
TSM-***DD09.05	TSM-***DE09.B5	TSM-***DE09R.05	TSM-***DE09R.B5	TSM-***DE09.05W
TSM-***DE09R.05W	TSM-***DE09R.B5W			

(iv)

TSM-***DE08M(II)	TSM-***DD08M(II)	TSM-***DE17M(II)	TSM-***DD17M(II)	TSM-***DE17M.08(II)
TSM-***DD17M.08(II)	TSM-***DE18M(II)	TSM-***DD18M(II)	TSM-***DE21	TSM-***DE21.08
TSM-***DD21	TSM-***DD21.08	TSM-***DE19	TSM-***DE19.08	TSM-***DD19
TSM-***DD19.08	TSM-***DE20	TSM-***DE20.08	TSM-***DD20	TSM-***DD20.08
TSM-***DE18	TSM-***DE18.08	TSM-***DD18	TSM-***DD18.08	TSM-***DD09
TSM-***DE15V(II)	TSM-***DE09	TSM-***DE15MB(II)	TSM-***DE171H(II)	TSM-***DC082H.08(II)
TSM-***DE20.B0	TSM-***DE09.B0	TSM-***DE09R	TSM-***DE09R.B0	TSM-***DE19R
TSM-***DE18M.W(II)	TSM-***DE21.W	TSM-***DE19.W	TSM-***DE20.W	TSM-***DE09R.W
TSM-***DE09R.B0W	TSM-***DE19R.W	TSM-***DE21.70	TSM-***DE19R.70	

(v)

TSM-***DE08M.T0(II),	TSM-***DE17M.T0(II)	TSM-***DD08M.T0(II)	TSM-***DD17M.T0(II)	TSM-***DE08M.T8(II)
TSM-***DE17M.T8(II)	TSM-***DD08M.T8(II)	TSM-***DD17M.T8(II)	TSM-***DE18M.T0(II)	TSM-***DD18M.T0(II)
TSM-***DE18M.T8(II)	TSM-***DD18M.T8(II)			

(vi)

TSM-***DE06XC.08(II)	TSM-***DD06XC.08(II)	TSM-***DE09.08	TSM-***DD09.08	TSM-***DD08M.08(II)
TSM-***DE08M.08(II)	TSM-***DD06M.08(II)	TSM-***DE06M.08(II)	TSM-***DE18M.08(II)	TSM-***DD18M.08(II)
TSM-***DE09.B8	TSM-***DE09R.08	TSM-***DE09R.B8	TSM-***DE09.08W	TSM-***DE18M.08W(II)
TSM-***DE09R.08W	TSM-***DE09R.B8W			

(vii)

TSM-***DE19C

(viii)

TSM-***DE06XC.07(II)	TSM-***DE06XC.05(II)	TSM-***DE09C.07	TSM-***DE09C.05
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c) N-type i-TOPCon of Back Sheet Products

(i)

TSM-***NE09RC.05	TSM-***NE09R.05	TSM-***NE09RH.05
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(ii)

TSM-***NE19R	TSM-***NE20	TSM-***NE21	TSM-***NEL18R
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(iii)

TSM-***NE19R.70	TSM-***NE21.70
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(iv)

TSM-***NE19RC

d) P-type Polycrystalline of Mono-facial Dual Glass Products

(i)

TSM-***PDG5	TSM-***PDG5.07	TSM-***PDG5.50	TSM-***PEG5	TSM-***PEG5.07
TSM-***PEG5.50	TSM-***PEG14	TSM-***PEG14(II)	TSM-***PEG40.40	TSM-***PEG40.47
TSM-***PEG40.07	TSM-***PEG5.40	TSM-***PEG5.47	TSM-***PEG14.40	TSM-***PEG14.47
TSM-***PEG5H	TSM-***PEG14H	TSM-***PEG5H.40	TSM-***PEG5H.07	TSM-***PEG5H.47
TSM-***PEG14H.40	TSM-***PEG14H.07	TSM-***PEG14H.47	TSM-***PEG5H(II)	TSM-***PEG5H.40(II)
TSM-***PEG5H.07(II)	TSM-***PEG5H.47(II)	TSM-***PEG14H(II)	TSM-***PEG14H.40(II)	TSM-***PEG14H.07(II)
TSM-***PEG14H.47(II)	TSM-***PEG15H	TSM-***PEG15	TSM-***PEG15H(II)	TSM-***PEG15(II)
TSM-***PEG6H	TSM-***PEG6	TSM-***PEG6(II)	TSM-***PEG15M(II)	TSM-***PEG6M (II)
TSM-***PEG14.40(II)				

(ii)

TSM-***PEG5.20	TSM-***PEG5.27	TSM-***PEG14.20	TSM-***PEG5H.20	TSM-***PEG5H.27
TSM-***PEG14H.20	TSM-***PEG14H.27	TSM-***PEG5H.20(II)	TSM-***PEG5H.27(II)	TSM-***PEG14H.20(II)
TSM-***PEG14H.27(II)	TSM-***PEG15H.20	TSM-***PEG15.20	TSM-***PEG15H.20(II)	TSM-***PEG15.20(II)
TSM-***PEG6H.20	TSM-***PEG6.20	TSM-***PEG6.20(II)		

e) P-type Mono PERC of Mono-facial Dual Glass Products

(i)

TSM-***DEG40.07(II)	TSM-***DEG5(II)	TSM-***DEG5.07(II)	TSM-***DEG14(II)	TSM-***DEG14.07(II)
TSM-***DEG40.47(II)	TSM-***DEG5.40(II)	TSM-***DEG5.47(II)	TSM-***DEG14.40(II)	TSM-***DEG14.47(II)
TSM-***DEG5H(II)	TSM-***DEG14H(II)	TSM-***DEG5H(II)	TSM-***DEG5H.40(II)	TSM-***DEG5H.07(II)
TSM-***DEG5H.47(II)	TSM-***DEG14H(II)	TSM-***DEG14H.40(II)	TSM-***DEG14H.07(II)	TSM-***DEG14H.47(II)

TSM-***DEG6H(II)	TSM-***DEG6M(II)	TSM-***DDG6M(II)	TSM-***DEG15H(II)	TSM-***DEG15M(II)
TSM-***DDG6H(II)	TSM-***DEG6(II)	TSM-***DEG15(II)		
(ii)				
TSM-***DEG14.20(II)	TSM-***DEG5.20(II)	TSM-***DEG5.27(II)	TSM-***DEG5H.20(II)	TSM-***DEG5H.27(II)
TSM-***DEG14H.20(II)	TSM-***DEG14H.27(II)	TSM-***DEG6H.20(II)	TSM-***DEG6M.20(II)	TSM-***DEG15H.20(II)
TSM-***DEG15M.20(II)	TSM-***DDG6M.20(II)	TSM-***DDG6H.20(II)	TSM-***DEG6.20(II)	TSM-***DEG15.20(II)
(iii)				
TSM-***DEG8M.20(II)	TSM-***DEG17M.20(II)	TSM-***DEG18M.20(II)	TSM-***DEG9.20	TSM-***DEG9R.B0
TSM-***DEG9R.20	TSM-***DEG9R.B0W	TSM-***DEG9R.20W		
(iv)				
TSM-***DEG9.28	TSM-***DEG18M.28(II)	TSM-***DEG9R.B8	TSM-***DEG9R.28	TSM-***DEG9R.28W

f) P-type Mono PERC of Bifacial Dual Glass Products

(i)				
TSM-***DEG5C.07(II)	TSM-***DEG14C.07(II),	TSM-***DEG5C(II)	TSM-***DEG14C(II)	TSM-***DEG5HC(II)
TSM-***DEG5HC.07(II)	TSM-***DEG14HC(II)	TSM-***DEG14HC.07(II)	TSM-***DEG15HC(II)	TSM-***DEG15MC(II)
TSM-***DEG6HC(II)	TSM-***DEG6MC(II)	TSM-***DEG15C(II)	TSM-***DEG15C.07(II)	
(ii)				
TSM-***DEG5C.27(II)	TSM-***DEG14C.27(II)	TSM-***DEG5C.20(II)	TSM-***DEG14C.20(II)	TSM-***DEG5HC.20(II)
TSM-***DEG5HC.27(II)	TSM-***DEG14HC.20(II)	TSM-***DEG14HC.27(II)	TSM-***DEG15HC.20(II)	TSM-***DEG15MC.20(II)
TSM-***DEG6HC.20(II)	TSM-***DEG6MC.20(II)	TSM-***DEG6C.20(II)	TSM-***DEG6C.20(II)	TSM-***DEG15C(II)
TSM-***DEG15C.20(II)	TSM-***DEG15MC.27(II)			
(iii)				
TSM-***DEG8MC.20 (II)	TSM-***DEG17MC.20(II)	TSM-***DEG18MC.20(II)	TSM-***DEG21C.20	TSM-***DEG21C.28
TSM-***DDG21C.20	TSM-***DDG21C.28	TSM-***DEG19C.20	TSM-***DEG19C.28	TSM-***DDG19C.20
TSM-***DDG19C.28	TSM-***DEG20C.20	TSM-***DEG20C.28	TSM-***DDG20C.20	TSM-***DDG20C.28
TSM-***DEG15VC.20(II)	TSM-***DEG18C.20	TSM-***DDG18C.20	TSM-***DEG18C.28	TSM-***DDG18C.28
TSM-***DEG19RC.20	TSM-***DEG18MC.20W(II)	TSM-***DEG21C.20W	TSM-***DEG19C.20W	TSM-***DEG20C.20W
TSM-***DEG18C.20W	TSM-***DEG19RC.20W			
(iv)				
TSM-***DEG9C.27	TSM-***DEG9RC.B7	TSM-***DEG9RC.27	TSM-***DEG9RC.27W	

g) N-type i-TOPCon of Bifacial Dual Glass Products

(i)				
TSM-***NEG16MC(II)	TSM-***NEG7MC(II)			
(ii)				
TSM-***NEG15MC.20(II)	TSM-***NEG16MC.20(II)	TSM-***NEG7MC.20(II)	TSM-***NEG15XC.20(II)	
(iii)				
TSM-***NEG19C.20	TSM-***NEG20C.20	TSM-***NEG21C.20	TSM-***NEG19RC.20	TSM-***NEG18C.20
TSM-***NEG9RC.20	TSM-***NEG20C.C0	TSM-***NEG20MC.20	TSM-***NEG21C.B0	
(iv)				
TSM-***NEG9C.27	TSM-***NEG9RC.B7	TSM-***NEG9RC.27		

(v)

TSM-***NEG21C.70 TSM-***NEG19RC.70

(vi)

TSM-***NFG19RC.20 TSM-***NED19RC.20 TSM-***NEG19RC.20U TSM-***NEG19RC.88 TSM-***NEG21C.20U
TSM-***NEG21C.22

(vii)

TSM-***NEG19RC.20K TSM-***NEG20C.20K TSM-***NEG21C.20K TSM-***NEG19RC.20B

(viii)

TSM-***NEG18RC.27

h) N-type i-TOPCon of Mono-facial Dual Glass Products

(i)

TSM-***NEG9.20 TSM-***NEG9R.B0 TSM-***NEG9R.20 TSM-***NEG19R.20

(ii)

TSM-***NEG9.28 TSM-***NEG9R.B8 TSM-***NEG9R.28 TSM-***NEG18R.20 TSM-***NEG18R.28
TSM-***NEG9R.25 TSM-***NEG18R.25 TSM-***NDG05R.78 TSM-***NDG05R.78A TSM-***NED9R.28
TSM-***NEG9R.28U TSM-***NEG9RH.28 TSM-***NEG9RH.25

i) Heterojunction Bifacial Dual Glass Products

(i)

TSM-***HEG21C.20

j) Clamp

(i) Trina Clamp II

Applicable for following Products: TSM-***DE09.B0, TSM-***DE09.B8, TSM-***DE09.B5, TSM-***DE20.B0, TSM-***DE09R.B0, TSM-***DE09R.B5, TSM-***DE09R.B8, TSM-***DEG9R.B0, TSM-***DEG9R.B8, TSM-***DEG9RC.B7, TSM-***NEG9R.B0, TSM-***NEG9R.B8, TSM-***NEG9RC.B7, TSM-***DE09R.B0W, TSM-***DE09R.B5W, TSM-***DE09R.B8W

(ii) Trina Clamp III

Applicable for following Products: TSM-***DE20, TSM-***DE21, TSM-***DE20.W, TSM-***DE21.W, TSM-***DE21.70, TSM-***NEG21C.70, TSM-***NE21.70, TSM-***NE21

Note: The “***” placeholder stands in each case for the power indication set out in the relevant Product Data Sheet (for example “TSM-600NEG19RC.20”).

2) Rules of use and application for Products listed under Sec. 1)

Trina Solar has set out certain rules of use and application for the Products (please see Appendix: *Rules of application for climatic modules*) to ensure the functionality, durability and performance under different climatic circumstances.

For Products not used in accordance with the rules determined in this Appendix, Trina Solar will not undertake this limited Warranty.

No.	Environment	Temperature	Relative Humidity	Irradiance kwh/m ²
1)	High temperature and high humidity area	Annual average temperature > 23°C Monthly minimum temperature > 18°C	Annual average RH > 70% Monthly minimum average RH > 60%	/
2)	High temperature difference and high irradiation area	Desert and gobi region	/	>1800
3)	Gelid area (Low irradiation)	< -10°C (Monthly minimum temperature)	/	<1400
4)	Normal	Not listed in Nr. 1 to 3 before		

Only for Products listed under Sec. 1) d), e), f), g), h), and i) can be installed in the following scenarios: all land-based areas within 50 to 500 meters from the coastline (as measured from the Mean High Water Springs [MHWS] recorded in the year of product installation), as well as freshwater environments including inland freshwater lakes and reservoirs.

For offshore, all land-based scenarios within 50 meters from the coastline, and inland saltwater lakes, the warranty will only take effect after evaluation and approval by Trina Solar.

Any consequences, risks, losses or damages caused by any violations of the Buyer to the "Rules of application for climatic modules" shall be borne by the Buyer solely.

3) Warranty

a) 10-Year Limited Product Warranty

For the Products listed under Sec. 1) d) (i), e) (i), f) (i), g) (i), j) (i) Trina Solar warrants that for a period of ten years commencing on the Warranty Start Date (as defined in Sec. 4)) there will be no defects in material workmanship or manufacture that materially impede the power generation functioning of the Products.

If the Buyer is aware or should have been aware of such design, material, workmanship or manufacturing defects prior to installation of the Products and nevertheless installs the Products without giving Trina Solar the opportunity to correct such defects prior to installation, the Buyer shall bear the additional costs incurred by correcting such defects after installation.

This Limited Product Warranty covers glass breakage provided that there was no external cause of breakage (i.e. only breakage caused by the glass itself or the module is covered).

For Trina Clamp II listed under Sec. 1) j) (i), Trina Solar's warranty is limited to the defects caused by mechanical failures (e.g., shattering, deformation of the Trina Clamp); and regardless of whether such defects substantially impede the performance of the solar modules.

Any deterioration in the appearance of the Products (including, without limitation, any scratches, stains, mechanical wear, rust, mold, deformation or discoloration) or any other changes to the Products which occur after delivery (Incoterms 2020) to the Buyer, do not constitute a defect under this Limited Product Warranty.

b) 12-Year Limited Product Warranty

For the Products listed under Sec.1) a), b) (i), (ii), (iv), (v), (vii), c) (ii), (iii), (iv), d) (ii), e) (ii), (iii), f) (ii), (iii), g) (ii), (iii), (v), (vi), (vii), h) (i), i) (i) Trina Solar warrants that for a period of twelve years commencing on the Warranty Start Date (as defined in Sec. 4)) there will be no defects in material, workmanship or manufacture that materially impede the power generation functioning of the Products.

If the Buyer is aware or should have been aware of such design, material, workmanship or manufacturing defects prior to installation of the Products and nevertheless installs the Products without giving Trina Solar the opportunity to correct such defects prior to installation, the Buyer shall bear the additional costs incurred by correcting such defects after installation.

This Limited Product Warranty covers glass breakage provided that there was no external cause of breakage (i.e. only breakage caused by the glass itself or the module is covered).

Any deterioration in the appearance of the Products (including, without limitation, any scratches, stains, mechanical wear, rust, mold, deformation or discoloration) or any other changes to the Products which occur after delivery (Incoterms 2020) to the Buyer, do not constitute a defect under this Limited Product Warranty.

c) 15-Year Limited Product Warranty

For the Products listed under Sec.1) b) (iii), (vi), (viii), (c) (i), (e) (iv), (f) (iv), (g) (iv), (viii), h) (ii) Trina Solar warrants that for a period of fifteen years commencing on the Warranty Start Date (as defined in Sec. 4)) there will be no defects in material, workmanship or manufacture that materially impede the power generation functioning of the Products.

If the Buyer is aware or should have been aware of such design, material, workmanship or manufacturing defects prior to installation of the Products and nevertheless installs the Products without giving Trina Solar the opportunity to correct such defects prior to installation, the Buyer shall bear the additional costs incurred by correcting such defects after installation.

This Limited Product Warranty covers glass breakage provided that there was no external cause of breakage (i.e. only breakage caused by the glass itself or the module is covered).

Any deterioration in the appearance of the Products (including, without limitation, any scratches, stains, mechanical wear, rust, mold, deformation or discoloration) or any other changes to the Products which occur after delivery (Incoterms 2020) to the Buyer, do not constitute a defect under this Limited Product Warranty.

d) 25-Year Limited Power Output Warranty for Back Sheet Products

In addition, Trina Solar provides power warranty of 25 years, which is commencing on the warranty start date, the remaining power output ratio of our back sheet Products listed under Sec.1) a), b), c) namely $1 - 100\% * (P_0 - P_1) / P_0$, will not be lower than the following guaranteed level.

P0: Lower limit value of the module nominal power output indicated in the contract or product nameplate.
P1: Actual power output measured at the Standard Test Conditions (STC: Irradiance 1000w/m², Temperature 25°C, AM 1.5), and measurement shall be carried out either by Trina Solar or by a third-party testing institute recognized by Trina Solar and the Buyer.

(Remarks: According to STC, measurement system uncertainty should be included in all actual power output measurements.)

- for P-type Poly Products (as defined in Sec. 1) a)): 2.5% in the first year; from the 2nd year to the 25th year, the average annual power decline will be no more than 0.65%; by the end of the 25th year, the actual power output will be no less than 81.9%;
- for P-type Mono PERC Products (as defined in Sec. 1) b) (i), (ii)): 2.5% in the first year; from the 2nd year to the 25th year, the average annual power decline will be no more than 0.6%; by the end of the 25th year, the actual power output will be no less than 83.1%.
- for P-type Mono PERC Products (as defined in Sec. 1) b) (iii), (iv), (v), (vi), (vii), (viii)): 2.0 % in the first year; from the 2nd year to the 25th year, the average annual power decline will be no more than 0.55 %; by the end of the 25th year, the actual power output will be no less than 84.8 %;

- for N-type i-TOPCon Products (as defined in Sec. 1) c) (i), (ii), (iii) (iv)): 1.0 % in the first year; from the 2nd year to the 25th year, the average annual power decline will be no more than 0.4 %; by the end of the 25th year, the actual power output will be no less than 89.4 %;

(Remark: According to STC, measurement system uncertainty should be included in all actual power output measurements.)

e) 30-Year Limited Power Output Warranty for Dual Glass Products

(i) Frontside:

In addition, Trina Solar provides power warranty of 30 years, which is commencing on the warranty start date, the remaining power output ratio of our dual glass Products listed under Sec.1) d), e) and the front side (without J-Box) of the Products listed under Sec. 1) f), g), h), i), namely $1-100\% * (P_0 - P_1) / P_0$, will not be lower than the following guaranteed level.

P0: Lower limit value of the module nominal power output indicated in the contract or product nameplate.

P1: Actual power output measured at the Standard Test Conditions (STC: Irradiance 1000w/m², Temperature 25°C, AM 1.5), and measurement shall be carried out either by Trina Solar or by a third-party testing institute recognized by Trina Solar and the Buyer.

(Remarks: According to STC, measurement system uncertainty should be included in all actual power output measurements.)

For Bifacial Dual Glass products listed in 1) f) and 1) g), the power output warranty only applies to the front side of the product (without junction box).

- for P-type Poly Mono-facial Dual Glass Products (as defined in Sec. 1) d), for P-type Mono PERC Mono-facial Dual Glass Products (as defined in Sec. 1) e) (i), (ii), for the front side (without J-Box) of P-type Mono PERC Bifacial Dual Glass Products (as defined in Sec.1) f) (i), (ii)): 2.5 % in the first year; from the 2nd year to the 30th year, the average annual power decline will be no more than 0.5%; by the end of the 30th year, the actual power output will be no less than 83.0%;
- for P-type Mono PERC Mono-facial Dual Glass Products (as defined in Sec. 1) e) (iii), (iv) for the front side (without J-Box) of P-type Mono PERC Bifacial Dual Glass Products (as defined in Sec.1) f) (iii), (iv)): 2.0 % in the first year; from the 2nd year to the 30th year, the average annual power decline will be no more than 0.45 %; by the end of the 30th year, the actual power output will be no less than 84.95%;
- for N-type i-TOPCon Bifacial Dual Glass Products (as defined in Sec.1) g) (i), (ii)): 1.5% in the first year; from the 2nd year to the 30th year, the average annual power decline will be no more than 0.5%; by the end of the 30th year, the actual power output will be no less than 84.0%.
- for N-type i-TOPCon Dual Glass Products (as defined in Sec.1) g) (iii), (iv), (v), (vi), (vii), (viii), h) (i), (ii)): 1.0% in the first year; from the 2nd year to the 30th year, the average annual power decline will be no more than 0.4%; by the end of the 30th year, the actual power output will be no less than 87.4%.
- for Heterojunction Bifacial Dual Glass Products (as defined in Sec.1) i) (i)): 1.0% in the first year; from the 2nd year to the 30th year, the average annual power decline will be no more than 0.375%; by the end of the 30th year, the actual power output will be no less than 88.125%.

(ii) Backside

For P-type Mono PERC Bifacial Products (as defined in Sec.1) b) (vii), (viii), f) (iii), (iv)) and N-type i-TOPCon Bifacial Dual Glass Products (as defined in Sec.1) g) (iii), (iv), (vii)), Trina Solar warrants that for a period of thirty years commencing on the Warranty Start Date (as defined in Sec. 4)) the loss of the power on the backside of the product (with junction box) as follows

- From the 1st year to the 10th year, the power degradation will be no more than Initial backside power P multiplied by 15%
- From 11th to 30th year, the power degradation will be no more than Initial backside power P multiplied 30%.

For definition purposes only: Initial backside power P = nameplate power (module front side power) * specified bifaciality (as specified lower limit of the bifaciality in the relevant Product Data Sheet).

(Remark: According to STC, measurement system uncertainty should be included in all actual power output measurements.)

f) 5-Year Limited Product Warranty

For the Products listed under Sec. 1) j) (ii) Trina Solar warrants that for a period of five years commencing on the Warranty Start Date (as defined in Sec. 4)) there will be no defects in material workmanship or manufacture that materially impede the power generation functioning of the Products.

If the Buyer is aware or should have been aware of such design, material, workmanship or manufacturing defects prior to installation of the Products and nevertheless installs the Products without giving Trina Solar the opportunity to correct such defects prior to installation, the Buyer shall bear the additional costs incurred by correcting such defects after installation.

For Trina Clamp III listed under Sec. 1) j) (ii), Trina Solar's warranty is limited to the defects caused by mechanical failures (e.g., shattering, deformation of the Trina Clamp); and regardless of whether such defects substantially impede the performance of the solar modules.

Any deterioration in the appearance of the Products (including, without limitation, any scratches, stains, mechanical wear, rust, mold, deformation or discoloration) or any other changes to the Products which occur after delivery (Incoterms 2020) to the Buyer, do not constitute a defect under this Limited Product Warranty.

4) Warranty Start Date

The Warranty Start Date is the date of initial installation of the Products or three months after the delivery (Incoterms 2020) of the Products to the Buyer, whichever date is earlier.

5) Exclusions and Limitations

This Global Limited Warranty **does not apply** to any Products which have been subject to:

- a) Failure to pay the purchase price towards Trina Solar or its subsidiaries which have put the module on the market even though (i) the payment was due and (ii) the direct customer who has obtained the module from Trina Solar or its subsidiary ("Direct Customer") is not entitled to withhold the purchase price or parts of the purchase price. Trina Solar must inform the Buyer about the non-payment and provide the name and the full address of the Direct Customer which has failed to pay the module. In case that Trina Solar can reject the claims under this Global Limited Warranty based on this provision, the Buyer can deposit the amount not paid in order to trigger the Global Limited Warranty claims;
- b) Failure to provide proof of purchase or product information;
- c) During the handling (including but not limited to packing/unpacking, loading/unloading, transportation, storage, installation, use, operation or maintenance, etc.) of the Products, failure to comply with the requirements of Trina Solar's **user manual** (as applicable during the validity period of this Global Limited Warranty pursuant to Sec. 11), or **rules of use and application for the Products** (as defined in Sec. 2, unless otherwise agreed in writing) and its Appendix **rules of application for Trina modules**;

- d) Failing to comply with Trina Solar's user manual in terms of the standards of any supporting parts to the Products, or the Buyer has installed any substandard, mismatched, inferior or unqualified supporting (including but not limited to the clamps, etc.), which directly led to the quality problems with Trina Solar Products;
- e) Installation near open flame or flammable or explosive materials as specified in Trina's User Manual;
- f) Failure to carry out proper operation and maintenance (including but not limited to operation and maintenance requirements requested by Trina Solar's applicable user manual or other applicable local laws and regulations of the place of installation);
- g) Service by service technicians who are not qualified under the relevant law and/or applicable regulations at the place of installation;
- h) Change, erasure or illegible-made of the Product's type, nameplate or serial number (other than by any act or omission of Trina Solar);
- i) Installation on mobile units (except photovoltaic tracking system), such as vehicles, ships or offshore-structures (except water surface floating systems pursuant to Sec 2);
- j) Exposure to voltage in excess to the maximum system voltage or power surges;
- k) defective components in the construction on which the module is mounted;
- l) Exposure to mold discoloration or similar external effects;
- m) unauthorized modifications:
 - (i) Operation/maintenance by use of unauthorized spare parts;
 - (ii) Application under extreme environmental conditions or rapid changes in such environments resulting in corrosion, oxidation, or affected by chemical products;
 - (iii) Other acts beyond Trina Solar's reasonable control (including direct or indirect damage by war, fire, flood, hurricane, volcanic eruption, surface collapse, debris flow, lightning, earthquake, heavy snowfall, hailstone, strong breeze etc.);
- n) Use of the Products in such a manner as to infringe Trina Solar's or any third party's intellectual property rights (including but not limited to patents, trademarks, etc.);
- o) Any subsequent sale of the Products from a country where Trina Solar was first marketed to another country without the consent of Trina Solar ("Prohibition of Parallel Import"). But the Prohibition of Parallel Import does not apply to the sales within the European Union ("EU"), where the sale of Products from one EU country to another does not require the consent of Trina Solar. However, the consent of Trina Solar must be obtained for the sale of Products from outside the EU to an EU country or from an EU country to outside the EU.
- p) only for Buyers located in Australia applies: This Global Limited Warranty is only valid for Products from authorized Australian resellers. Buyers may contact the Customer Support office in their region (as detailed in Sec. 8)) for details of authorized Australian resellers.
- q) only for Buyers located in the US applies: This Global Limited Warranty is only valid for Products from authorized US resellers. Buyers may contact the Customer Support office in their region (as detailed in Sec. 8)) for details of authorized US resellers.
- r) only for Buyers located in Japan applies: This Global Limited Warranty is only valid for Products from authorized Japanese resellers. Buyers may contact the Customer Support office in their region (as detailed in Sec. 8)) for details of authorized Japanese resellers.

6) Repair, Replacement or Refund Remedy

- a) As Buyer's sole and exclusive remedy under this Global Limited Warranty (though the Buyer should note Sec. 6) d) regarding the potential existence of other statutory rights and Sec. 6 e) for Australian Buyers) Trina Solar will, at its sole discretion, either, with regard to the applicable Products:
 - (i) determine a maintenance plan and repair the defective Products; or
 - (ii) refund the difference value between the actual STC power and the warranty power of the products. Front side power compensation = The market price at time of payout (per watt) * (sum of the remaining theoretical warranty power according to Sec. 3) d), e) - sum of STC power actually measured according to Sec. 3) d), e)); The backside power compensation is processed based on the market price at the time of payout and 10% of the difference between the warranty power and the actual STC power measured for backside; or

- (iii) refund the salvage value of the defective Products. The salvage value = The market price at the time of payout (unit price per watt) * the original guaranteed nameplate power * remaining warranty period (year) / original total warranty period by Trina Solar; For the salvage value compensation caused by the backside power attenuation, it is treated as 10% of the product salvage value; or
- (iv) provide additional Products to make up for the difference between the actual STC power of Products and the warranty power (Difference power = sum of the remaining theoretical warranty power according to Sec. 3) d), e) - sum of STC power actually measured according to Sec. 3) d), e)); For the backside power replenishment of the Mono-facial Dual Glass products, it is treated at 10% of the difference between the actual STC power and the warranty power; or
- (v) replace the defective Products or part thereof by new or remanufactured Products. The total nominal power of the replaced Products shall not be less than the total remaining theoretical warranty power of the defective Products. (The power on the backside of the Dual Glass products is treated at 10% of the backside warranty power) Trina Solar reserves the right to provide other models of Products in replacement or addition of the defective Products if the defective Products are discontinued or otherwise unavailable.

During the warranty period of Sec. 3), Trina Solar shall bear the direct costs of repairing the products and transportation charges incurred in the delivery of the repair, replacement or additional products to the buyer, excluding insurance, air freight, customs clearance, customs duties and other non-seller's costs (e.g. port delays, storage charges due to negligence on the part of the buyer or end-user). During repair and replacement, the costs and other related expenses for the removal, handling, repack, installation or reinstallation shall remain with the Buyer. Beyond the warranty period of Sec. 3), Buyer shall bear all reasonable costs of materials, labor, freight, clearance, removal, repack, installation or reinstallation whatsoever related to repairing or replacement.

Defect Products or end of lifetime Products shall be disposed if legally permissible by the Buyer in accordance with local applicable laws or regulations, unless Trina Solar agrees or where legally mandatory takes them back. If Trina Solar decides or where legally mandatory takes the defective products back, the goods property of these products shall belong to Trina Solar without any limitation.

- b)** The Global Limited Warranty periods as defined in Sec. 3) a), b), c), d), e), f) shall not extend or renew upon the repair, replacement or offering additional products of defective Products by Trina Solar. The Global Limited Warranty period for replaced, repaired or additionally provided Products is the remainder of the Global Limited Warranty period on the original new Products.
- c)** All other claims under this Global Limited Warranty against Trina Solar shall be excluded. Under this limited Warranty, Trina Solar is not responsible for any special, incidental or consequential damages (including loss of profits, business interruption, loss of power generation, harm to goodwill or business reputation, or delay damages) whether such claims are based in contract, warranty, negligence or strict tort. This exclusion applies to the extent permissible by law, and even if the remedies set forth below herein are deemed to have failed of their essential purpose.
- d)** YOU MAY HAVE SPECIFIC LEGAL RIGHTS OUTSIDE THIS LIMITED WARRANTY, AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE. THIS GLOBAL LIMITED WARRANTY DOES NOT AFFECT ANY ADDITIONAL RIGHTS YOU HAVE UNDER LAWS IN YOUR JURISDICTION GOVERNING THE SALE OF CONSUMER GOODS, INCLUDING WITHOUT LIMITATION, NATIONAL LAWS IMPLEMENTING EC DIRECTIVE 99/44 OR PURSUANT TO THE MAGNUSON MOSS WARRANTY ACT. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE LIMITATIONS OR EXCLUSIONS IN THIS GLOBAL LIMITED WARRANTY STATEMENT MAY NOT APPLY.
- e)** The following statement applies to Buyers that are "Consumers" within the meaning of the Australian Consumer Law:

"Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other

reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.”

7) Rights and Remedies against Third Parties

This Global Limited Warranty shall be construed as a separate warranty and independent from any other contractual arrangement with third parties relating to the Products. It shall not affect any rights, obligations and remedies of the Buyer, if any, with regard to third parties for defects or non-conformity or non-compliance of the Products, notwithstanding its legal basis. The rights and remedies provided hereunder are in addition to any other rights and remedies against third parties to which the Buyer may be entitled by agreements with such third parties or by law.

8) Claims Procedure, Notice Periods, Expiration of Global Limited Warranty Claims and Limitations.

- a) The Buyer shall notify Trina Solar under this Global Limited Warranty using Trina Solar's Customer Service Portal at the web address <http://customerservice.trinasolar.com>. At the time of filing the claim, please ensure that the applicant is the owner of the warranty right for the Products or has a valid authorization document issued by the owner of the warranty right for the Products. It is the responsibility of the owner of the warranty right or its authorized representative to cooperate with Trina Solar for signing the Warranty Solution Agreement. The notice of claim shall specify the claim along with written proof for the purchase and defect of the Products, including (i) purchasing invoice indicating purchase date, (ii) Products' details, (iii) detailed description of the claim, (iv) serial numbers of all affected Products (in editable form, e.g. Excel document), (v) evidence including photographs and data related to all affected Products and (vi) any additional supplementary information and/or evidence reasonably requested by Trina Solar. The contact customer service center for the regions are:

China Customer Service Center

Trina Solar Co. Ltd
No. 2 Trina Road, Trina PV Industrial Park,
New District, Changzhou, Jiangsu,
P.R. China, 213031
Tel: 400 689 0000
Fax: +86 519 8517 6021
Mail: Chinaservice@trinasolar.com

Europe Customer Service Center

Trina Solar (Schweiz) AG
Birkenweg 4
8304 Wallisellen, Switzerland
Tel: +41 43 299 68 68
Fax: +41 43 299 68 10
Mail: Euservice@trinasolar.com

Japan Customer Service Center

Trina Solar (Japan) Limited
Room 2606 Tokiwabashi Tower, 2-6-4 Otemachi,
Chiyoda-ku, Tokyo 100-0004, Japan
Tel: +81 3 6435 9008
Fax: +81 3 6435 9010
Mail: Japanservice@trinasolar.com

Australia and New Zealand Customer Service Center

Trina Solar (Australia) Pty Ltd
2 Banfield Road, Macquarie Park, New South
Wales 2113, Australia
Tel : +61 1300 874 627
Mail: Australiaservice@trinasolar.com

Americas Customer Service Center

Trina Solar (U.S.), Inc.
7100 Stevenson Blvd, Fremont, CA 94538
Tel: +1 800 696 7114
Mail: NAService@trinasolar.com

Middle East and Africa Customer Service Center

Office 2506 Liwa Heights
Cluster W, Jumeirah Lake Towers
Dubai – United Arab Emirates
Tel: +971 4 568 2872
Mail: MEAService@trinasolar.com

India Customer Service Center

Trina Solar (India) Regional Sales Office
Unit No- 824, 8th Floor, DLF Tower-B, Jasola
District Center, New Delhi –110025, India
Tel: +91 11 45852200, +91 11 35852207
Mail: Indiaservice@trinasolar.com

Rest of World (ROW) Customer Service Center

Trina Solar Energy Development Pte Ltd
600 North Bridge Road, #12-01 Parkview
Square,
Singapore 188778
Tel: +65 6808 1111
Mail: apmeaservice@trinasolar.com

- b) Any dispute on technical facts relating to claims brought under this Global Limited Warranty for defects of Products shall be determined by expert determination. Trina Solar and the Buyer will, at the Buyer's or Trina Solar's request, jointly appoint as independent expert and appraiser a reputable researcher from a first-class test-institute such as TÜV Rheinland, TÜV SÜD or ASU Arizona State University, and so on ("Technical Expert"). The determination by such Technical Expert shall be final, conclusive, binding and enforceable in any proceeding brought hereunder. The Technical Expert shall (i) act as an expert recognized by Trina Solar; (ii) allow the parties a reasonable opportunity to make representations and counter-representations; (iii) take those representations and counter-representations into account; and (iv) if required by either party give written reasons for his or her determination.
- c) Any claim for breach of this Global Limited Warranty must be brought within two (2) months after discovery of the breach.
- d) The return of any defective Products will not be accepted unless prior written authorization has been given by Trina Solar.

9) Force Majeure

Trina Solar shall not be responsible or liable in any way to the Buyer for any non-performance or delay in Trina Solar's performance under this Global Limited Warranty due to occurrences of force majeure such as war, riots, strikes, unavailability of suitable and sufficient labor, material, or capacity or technical or yield failures and any unforeseen event beyond its control, including, without limitation, any technological or physical event or condition which is not reasonably known or understood at the time of the sale of the defective Products or the notification of the relevant Global Limited Warranty claim under this limited Warranty.

10) Warranty Assignment

This Global Limited Warranty is transferrable when the Products remain installed in their original installation location without having them moved or disassembled after initial installation.

11) Validity

This Global Limited Warranty shall apply to Products delivered to the Buyer on or after 1st of January 2026 (Incoterms 2020). This Global Limited Warranty shall be valid until a new revision is issued by Trina Solar.

12) Geographical Validity

This Global Limited Warranty does apply to all countries with the exception of Germany and Turkey where country specific limited warranties apply.

13) No Other Express Warranty

Except as otherwise provided by applicable statutory law (cf. Sec. 6 d) and 6 e)) or unless modified in writing and signed by an officer of Trina Solar, the Global Limited Warranty set forth herein is the only express warranty (whether written or oral) by Trina Solar applicable to the Products and no one is authorized to restrict, expand or otherwise modify this limited Warranty.

14) Miscellaneous

If any provision of this Global Limited Warranty is held invalid, unenforceable or contrary to law then the validity of the remaining provisions of this Global Limited Warranty shall remain in full force and effect.

15) Limitation of Liability

To the maximum extent permitted by applicable law, Trina Solar's aggregate liability according to this Global Limited Warranty shall not exceed the purchase price paid by the Buyer for the defective Products in the case of a Global Limited Warranty claim. The Buyer acknowledges that the foregoing limitation of liability is an essential element of this Global Limited Warranty and that in the absence of such limitations the purchase price of the Products would be significantly higher.

16) Applicable Law and Jurisdiction

The validity of this Global Limited Warranty, the construction of its terms and the interpretation and enforcement of the rights and duties of the Buyer and Trina Solar shall be governed by the laws of the country of the original installation location of the Products, to the exclusion of that country's conflicts of law rules as well as of the *United Nations Convention on Contracts for the International Sale of Goods* (CISG) dated 11 April 1980 and of any other uniform law.

All disputes arising out of or in connection with this Global Limited Warranty shall be finally settled before the ordinary courts of the country of the original installation location of the Products.

17) Note

The installation and operation of photovoltaic modules requires professional skills and should only be performed by qualified professionals. Please read the safety and installation instructions before using and operating the Products (<http://www.trinasolar.com/en-glb/resources/downloads>).

Appendix: "Rules of application for Trina modules"

If the place of the installed Products is not listed in the following list of countries, states and provinces, please contact the competent contact customer support center (as stated in Sec. 8 a)) which shall timely feedback to Trina Solar Global Product management department to update the database.

Region	CN	Country/state/province	Climate type	Applicable products listed under Sec.1
Africa	01	Ghana	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	02	Mauritius	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	03	Nigeria	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	04	Sierra Leone	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	05	Central African Republic	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	06	Namibia	High temperature difference and high irradiation	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	07	Algeria	High temperature difference and high irradiation	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	08	Tunisia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	09	Egypt	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	10	Djibouti	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	11	Kenya	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	12	Morocco	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	13	South Africa	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	14	Senegal	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	15	Tanzania	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	16	Malawi	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	17	Zimbabwe	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	18	Ethiopia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	19	Zambia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	20	Eritrea	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	21	Burkina Faso	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	22	Rwanda	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	23	Mozambique	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	24	Botswana	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	25	Angola	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	26	Mali	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	27	Uganda	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	28	Chad	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	29	Mauritania	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	30	Cote d'Ivoire	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	31	Guinea	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	32	Niger	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	33	Madagascar	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	34	Burundi	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	35	Liberia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	36	Guinea-Bissau	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	37	Benin	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	38	Togo	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	39	Swaziland	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	40	Libya	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	41	Lesotho	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	42	Cape Verde	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	43	Seychelles	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	44	Gambia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	45	Comoros	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	46	Sudan	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	47	Somalia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	48	Sao Tome and Principe	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	49	Democratic Republic of Congo	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	50	Congo	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)

Africa	51	South Sudan	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	52	Equatorial Guinea	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	53	Gabon	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	54	Douala	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	55	Cameroon	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
MEA	01	United Arab Emirates	High temperature difference and high irradiation	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	02	Oman	High temperature difference and high irradiation	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	03	Bahrain	High temperature difference and high irradiation	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	04	Saudi Arabia	High temperature difference and high irradiation	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	05	Yemen	High temperature difference and high irradiation	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	06	Iraq	High temperature difference and high irradiation	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	07	Israel	High temperature difference and high irradiation	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	08	Lebanon	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	09	Palestine	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	10	Jordan	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	11	Kuwait	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	12	Qatar	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	13	Syrian	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	14	Cameroon	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
EU	01	Norway	Gelid (Low irradiation)	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	02	Sweden	Gelid (Low irradiation)	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	03	Finland	Gelid (Low irradiation)	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	04	Denmark	Gelid (Low irradiation)	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	05	Ukraine	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	06	Germany	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	07	France	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	08	Georgia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	09	Netherlands	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	10	Netherlands Antilles	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	11	Portugal	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	12	Switzerland	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	13	Turkey	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	14	Spain	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	15	Greece	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	16	Slovakia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	17	Hungary	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	18	Luxembourg	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	19	Malta	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	20	Czech Republic	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	21	Poland	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	22	Bosnia and Herzegovina	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	23	Belgium	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	24	Austria	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	25	Estonia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	26	Ireland	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	27	New Caledonia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	28	United Kingdom	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	29	Italy	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	30	Curacao Island	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	31	Bulgaria	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	32	Uzbekistan	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	33	Kazakhstan	Gelid (Low irradiation)	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	34	Cyprus	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	35	Lithuania	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)

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EU	36	Romania	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	37	Moldova	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	38	Latvia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	39	Azerbaijan	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	40	Slovenia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	41	Albania	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	42	Montenegro	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	43	North Macedonia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	44	Serbia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	45	Croatia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	46	Kosovo	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	47	Macedonia Greece	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
India	01	Calcutta	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	02	Telangana	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	03	Andhra pradesh	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	04	Tripura	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	05	Kerala	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	06	Rajasthan	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	07	West Bengal	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	08	maharashtra	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	09	uttar pradesh	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	10	Tamil Nadu	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	11	Gujarat	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	13	karnataka	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	14	Madhya pradesh	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	16	Punjab	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	17	Haryana	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	18	Delhi	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	19	Bihar	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	20	Orissa	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	21	Jharkhand	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	23	Chhattisgarh	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	24	state of Jammu & Kashmir	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	25	Uttarakhand	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	26	Himachal pradesh	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	27	Goa	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	28	Manipur	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	29	Meghalaya	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	30	Nagaland	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	31	Mizoram	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	32	The state of punjab	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
Japan	01	Hokkaido	Gelid (Low irradiation)	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	02	Except Hokkaido	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
ROA	01	Philippines	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	02	Cambodia	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	03	Maldives	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	04	Malaysia	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	05	Myanmar	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	06	Sri Lanka	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	07	Solomon Islands	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	08	Thailand	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	09	Singapore	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	10	Indonesia	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	11	Viet Nam	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)

ROA	12	Bengal	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	13	Pakistan	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	14	Korea, Republic of	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	15	Mongolia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	16	Nepal	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	17	New Zealand	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	18	Hong Kong	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	19	Brunei	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
AUS	01	Northern Territory	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	02	Queensland	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	03	the State of Victoria	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	04	Australian capital territory	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	05	New South Wales	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	06	Western Australia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	07	Tasmania	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	08	South Australia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
LAC	01	Barbados	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	02	Panama	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	03	Tropical rainforest area of northern Brazil	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	04	Dominican Republic	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	05	Colombia	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	06	Costa Rica	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	07	Guyana	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	08	Haiti	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	09	Honduras	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	10	Martinique	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	11	Peru	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	12	Argentina	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	13	Mexico	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	14	Nicaragua	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	15	El Salvador	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	16	Uruguay	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	17	Jamaica	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	18	Chile	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	19	Brazil(Except tropical rainforest area of northern)	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	20	La Joya	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	21	Bolivia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	22	The Republic of Guatemala	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	23	Saint Lucia	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	24	Bahamas	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	25	Puerto Rico	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	26	Paraguay	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	27	Caribbean Islands	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	28	Arequipa	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	29	Moquegua	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	30	Ecuador	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	31	Cockburn Town	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	32	Turks Islands	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	33	Caicos Islands	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	34	Belize	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
CHN	01	Hainan	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	02	Inner Mongolia	Gelid (Low irradiation)	(a),(b),(c),(d),(e),(f),(g),(h),(i)

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CHN	03	Sinkiang	High temperature difference and high irradiation	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	04	Tibet	High temperature difference and high irradiation	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	05	Golmud	High temperature difference and high irradiation	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	06	Gansu	High temperature difference and high irradiation	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	07	Heilongjiang	Gelid (Low irradiation)	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	08	Jilin	Gelid (Low irradiation)	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	09	Anhui	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	10	Hebei	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	11	Jiangsu	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	12	Fujian	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	13	Yunnan	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	14	Szechwan	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	15	Ningxia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	16	Guizhou	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	17	Shanxi	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	18	Henan	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	19	Hubei	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	20	Hunan	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	21	Guangdong	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	22	Guangxi	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	23	Liaoning	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	24	Shanghai	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	25	Tianjin	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	26	Jiangxi	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	27	Shaanxi	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	28	Shandong	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	29	Chongqing	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	30	Beijing	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	31	Zhejiang	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	32	Taiwan	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
USA	01	Florida	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	02	California	High temperature difference and high irradiation	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	03	Arizona	High temperature difference and high irradiation	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	04	Texas	High temperature difference and high irradiation	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	05	Alaska	Gelid (Low irradiation)	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	06	Massachusetts	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	07	New Jersey	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	08	North Carolina	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	09	New Canaan	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	10	New York	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	11	Hawaii	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	12	Montana	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	13	Nebraska	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	14	Nevada	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	15	New Hampshire	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	16	New Mexico	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	17	North Dakota	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	18	Ohio	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	19	Oklahoma	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	20	Oregon	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	21	Pennsylvania	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	22	Rhode Island	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	23	South Dakota	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	24	Tennessee	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)

USA	25	Utah	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	26	Vermont	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	27	Virginia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	28	Washington	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	29	West Virginia	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	30	Wisconsin	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	31	Wyoming	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	32	Alabama	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	33	Arkansas	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	34	Colorado	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	35	Connecticut	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	36	Delaware	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	37	Georgia state	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	38	Idaho	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	39	Illinois	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	40	Indiana	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	41	Iowa	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	42	Kansas	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	43	Kentucky	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	44	Lousiana	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	45	Maine	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	46	Maryland	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	47	Michigan	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	48	Minnesota	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	49	Mississippi	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	50	Missouri	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	51	South Carolina	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)
	52	The Territory of Guam	hot and humid	(a),(b),(c),(d),(e),(f),(g),(h),(i)
Canada	01	Canada	Gelid (Low irradiation)	(a),(b),(c),(d),(e),(f),(g),(h),(i)
Russia	01	Russia	Gelid (Low irradiation)	(a),(b),(c),(d),(e),(f),(g),(h),(i)
Armenia	01	Yerevan	Normally	(a),(b),(c),(d),(e),(f),(g),(h),(i)

TS-M-2137

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The Right Of Final Interpretation Belongs To Trina Solar.



N-type i-TOPCon Ultra

DUAL GLASS MONOCRYSTALLINE MODULE

TSM-XXXNEG9RH.28 440-475W

475W / MAXIMUM
POWER OUTPUT

23.8% / MAXIMUM
EFFICIENCY



High Customer Value

- Suitable for residential and C&I rooftop
- Perfect size and low weight for handling and installation
- Compatible with mainstream inverters and diverse mounting systems
- Mechanical test load up to 5400 Pa front side and 4000 Pa back side
- Certified lifetime carbon footprint assessment



High reliability with light double glass

- Less prone to micro-cracks and scratches on the back side
- Fire Safety Class rating C, Safety Class II
- Up to 25 years product warranty and 30 years power warranty



High power up to 475W

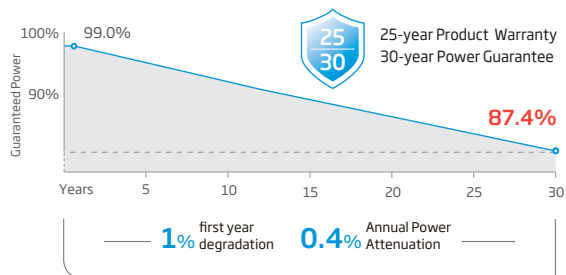
- Up to 23.8% module efficiency, on 210 innovative platform
- Patented i-TOPCon technology with continuous efficiency improvement, including contact resistance reduction, rear reflection enhancement and edge quality repairment



High energy yield

- Excellent low irradiation performance, validated by 3rd party
- Lower temperature efficient (-0.29%/°C) and lower working temperature

Performance Warranty



Comprehensive Products and System Certificates

IEC61215/IEC61730

ISO 9001: Quality Management System

ISO 14001: Environmental Management System

ISO14064: Greenhouse Gases Emissions Verification

ISO45001: Occupational Health and Safety Management System



ELECTRICAL DATA (STC) TSM-XXXNEG9RH.28 (XXX=440-475)

Peak Power Watts- $P_{MAX}(W_p)^*$	440	445	450	455	460	465	470	475
Power Tolerance- $P_{max}(W_p)$	$\pm 3\%$							
Maximum Power Voltage- $V_{MPP}(V)$	30.01	30.25	30.49	30.72	30.96	31.19	31.42	31.65
Maximum Power Current- $I_{MPP}(A)$	14.66	14.71	14.76	14.81	14.86	14.91	14.96	15.01
Open Circuit Voltage- $V_{oc}(V)$	35.81	35.98	36.15	36.32	36.49	36.66	36.83	37.00
Short Circuit Current- $I_{sc}(A)$	15.62	15.67	15.72	15.77	15.82	15.87	15.92	15.97
Module Efficiency $\eta_m(\%)$	22.0	22.3	22.5	22.8	23.0	23.3	23.5	23.8

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5. *Measuring tolerance: $P_{max} \pm 3\%$, $V_{oc} \pm 3\%$ and $I_{sc} \pm 4\%$

ELECTRICAL DATA (NOCT)

Peak Power Watts- $P_{MAX}(W_p)$	336	340	343	347	351	355	359	362
Maximum Power Voltage- $V_{MPP}(V)$	28.20	28.40	28.60	28.80	29.00	29.20	29.40	29.60
Maximum Power Current- $I_{MPP}(A)$	11.91	11.96	12.00	12.04	12.10	12.15	12.20	12.24
Open Circuit Voltage- $V_{oc}(V)$	34.00	34.10	34.30	34.40	34.60	34.70	34.90	35.10
Short Circuit Current- $I_{sc}(A)$	12.59	12.63	12.67	12.71	12.75	12.79	12.83	12.87

NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s.

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature) 43°C ($\pm 2^\circ\text{C}$)

Temperature Coefficient of P_{MAX} -0.29% /°C

Temperature Coefficient of V_{oc} -0.24% /°C

Temperature Coefficient of I_{sc} 0.04% /°C

Due to different testing methods, the actual performances might differ from the declared specifications.

APPLICATION CONDITIONS

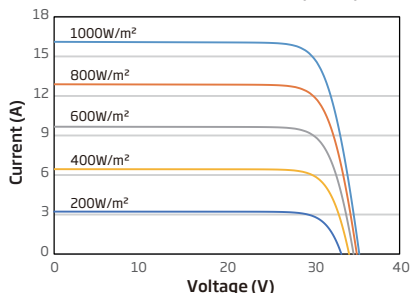
Operating Temperature -40~+70°C

Maximum System Voltage 1500V DC (IEC)

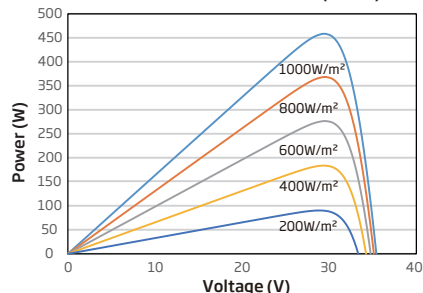
Max Series Fuse Rating 30A

CURVES OF PV MODULE

I-V CURVES OF PV MODULE (460W)

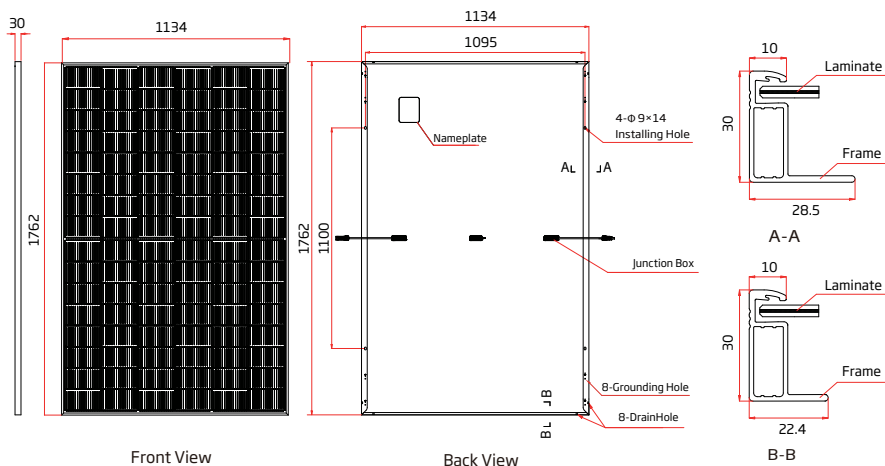


P-V CURVES OF PV MODULE (460W)



MECHANICAL DATA

Solar Cells	N-type i-TOPCon Monocrystalline
No. of cells	96 cells
Module Dimensions	1762×1134×30 mm (69.37×44.65×1.18 inches)
Weight	21.0 kg (46.30lb)
Front Glass	1.6 mm (0.06 inches) AR Coating Heat Strengthened Glass
Back Glass	1.6 mm (0.06 inches), Heat Strengthened Glass
Frame	30mm (1.18 inches) Anodized Aluminium Alloy, Black
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm ² (0.006 inches ²) Length: 1100/1100 mm (43.3/43.3 inches)
Connector	Stäubli Electrical Connectors AG PV-KST4-EV02/xy_UR; PV-KBT4-EV02/xy_UR PV-KST4-EV02A/xy; PV-KBT4-EV02A/xy
Packaging	Modules per box: 36 pieces Modules per 40' container: 936pieces



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CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.
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Version number: TSM_AUS_EN_2025_PA5
Country of Origin: China