HYSOLAR

NJšTř šTP őЏБіЁЏ řĻĚķѲƱĚâĻƱP šŻ èƱǏš <řšŻĚ ÊřĻ ıБŹŅĚŻǐ NJĚP ЏšPTĻķ БŻ TřĻ ŹĚšŻ іБĚƱķ БÔ TřĻ ÃřĚŻőřĚš ÃTБıů FǏıřĚŻőĻ šŻ PTБıů ıБķĻ

P Ě őЏБіЁЏ őƱĻĻŻ ĻŻĻƱőǐ šŻŻŻБljĚTšБŻ šŻķƱPTƱšĚЏ őƱБƱŅ šTP ıБƱĻ іƱPšŻĻPPĻP PŅĚŻ TřƱĻĻ ŹĚüБƱ PĻıTБƱP řšőř ĻŻķ ĻѲƱšJŅŻĻŻT TřĻ ÔƱЏ Ņřƀ TБljƀЏ/TĚš ¼ç šŻķƱPTÊ ıřĚšŻ ĚŻķ ĻŻĻƱőǐ PTБƱĚőĻ ÊřƱ0БƱőř ıБŹŅ0ĻřĻŻPšljĻ ljĻâšıЁЏ šŻTĻőƱĚTšБŻ ĚŻķ TĻıřŻБЏЏőšıЁЏ šŻŻŻБljĚTšБŻ TřĻ ıБŹŅĚŻǐ řĚP іƱšЏT Ě ıБƱĻ ıБŹŅĻTšTšljĻ ĻķőĻ šŻ TřĻ őЏБіЁЏ őƱĻĻŻ ĻŻĻƱőǐ šŻķƱPTÊ

İšЏšБŻ šŻ TБTĚЏ ĚPPĻTP TřĻ ıБŹŅĚŻǐ БŅĻƱĚTĻP PšǏ ŹБķĻƱŻ

ЏĚƱőĻ PıĚЏĻ ŅƱБķƱıTšБŻ ıĚŅĚıšTǏ šŻıЏƱķĻP

ŹĻTƱšı TБŻP БÔ ŅБЏǐPšЏšıБŻ Y è БÔ ¼ç

Y è БÔ ¼ç ŹБķƱЏĻP ĚŻķ

ljĻâšıЁЏǐ šŻTĻőƱĚTĻķ ¼ç ŅƱБķƱıTšБŻ ĚŻķ ıББƱķšŻĚTĻķ ķĻljĻЏБŅŹĻŻT ĚıƱBPP ÔƱЏ PıĻŻĚƱšБ ĻŻĻƱőǐ PTБƱĚőĻ ĚŅŅЏšıĚTšБŻP аŻ TřĻ ıБŹŅĚŻǐ ЏБšŻĻķ ÔБƱıĻP

šŻŻŻБljĚTšБŻ Ěıı ıĻЏĻƱĚTšŻő šTP šŻTĻƱŻĚTšБŻĚЏ PTƱĚTĻőšı ĻǏŅĚŻPšБŻ ¿Ļőš БŻĚЏ ŕĻĚķѲƱĚâĻƱP řĚljĻ ŻБNJ іĻĻŻ ĻPTĚіЏšPřĻķ šŻ ÃšŻőĚŅБƱĻ YĻƱŹĚŻǐ TřĻ Ï F ƱPTƱĚЏšĚ ;ƱĚÚšЏ ĚŻķ БTřĻƱ ıБƱŻTƱšĻP NJšTř іƱPšŻĻPP БŅĻƱĚTšБŻP ıБljĻƱšŻő ŻĻĚƱЏǐ ıБƱŻTƱšĻP ĚŻķ ƱĻőšБŻP NJБƱЏķNJšķĻ ıƱĻĚTšŻő ĚŻ šŻTĻƱŻĚTšБŻĚЏ БŅĻƱĚTšŻő

sĻljĻƱĚőšŻő šTP ЏĻĚķšŻő šŻķƱPTƱšĚЏ ƱБƀTJNƱšŻT ƱБіƱPT TĻıřŻБЏБőšıЁЏ ıĚJNĚіšЏšTšĻP ĚŻķ PƱPTĚšŻĚіЏĻ ķĻljĻЏБŅŹĻŻT PTƱĻŻőTř TřĻ ıБŹŅĚŻǐ řĚP іĻĻŻ ƱĻŅĻĚTĻķЏǐ ƱĻıБőŻšÚĻķ БŻ ĚƱTřБƱšTĚTšljĻ ЏšPTP PƱıř ĚP TřĻ <řšŻĚ ÊБJN yĚŻƱÔĚıTƱƱšŻő FŻTĻƱJNƱšPĻP YЏБіЁЏ ÊБJN {ĻNJ FŻĻƱőǐ FŻTĻƱJNƱšPĻP ĚŻķ ^ƱƱƱŻ <řšŻĚ ÊБJN ¼ƱšljĚTĻ FŻĻƱőǐ <БŹŅĚŻšĻP аT řĚP ĚЏPБ ƱĻıĻšljĻķ řБŻБƱP šŻıЏƱķšŻő TřĻ XБƱіĻP <řšŻĚ ÃƱPTĚšŻĚіЏĻ аŻŻБljĚTšБŻ FŻTĻƱJNƱšPĻ NJĚƱķ NJšTř šTP іƱĚŻķ šŻàƱĻŻıĻ ĚŻķ šŻķƱPTÊ PTĚŻķšŻő PБЏšķЏǐ ŅБPšTšБŻĻķ ĚT TřĻ ÔБƱĻÔƱБŻT БÔ TřĻ őЏБіЁЏ őƱĻĻŻ ĻŻĻƱőǐ

sƀБůšŻő ĚřĻĚķ ^î Ã¢s ¿ NJšЏ ķĻĻŅЏǐ šŹŅЏĻŹĻŻT šTP ÊĻıřŻБЏБőǐ ķƱšljĻŻ ^î ÃŹĚâ ÃĻÈšıĻ ķĻljĻЏБŅŹĻŻT PTƱĚTĻőǐ ƱŅřБЏķ TřĻ ıБƱŅБƱĚTĻ ljšPšБŻ БÔ ĚŻķ ķƱšljĻ šŻķƱPTƱšĚЏ ƱŅőƱĚķšŻő TřƱБƱƱőř TĻıřŻБЏБőšıЁЏ šŻŻБljĚTšБŻ èšTř Ě őЏБіЁЏ ƱБƀTJNƱšŻT ŅБNJĻƱšŻő Ě őƱĻĻŻ ƱƱTƱƱĻ TřĻ ıБŹŅĚŻǐ šP ıБŹŹšTTĻķ TБ іĻıБŹšŻő Ě NJБƱЏķ ıЏĚPP ŻĻNJ ĻŻĻƱőǐ šŻŻБljĚTšБŻ őƱБƱŅ ķĻźŻĻķ іǐ TĻıřŻБЏБőšıЁЏ Ļ ŹŅБNJĻƱŹĻŻT őƱĻĻŻ ЏĻĚķĻƱPřšŅ ĚŻķ PŹĚâ PǏŻĻƱőǐ ıБŻTƱšіƱTšŻő ^î Ã¢s ¿P PTƱĻŻőTř TБ TřĻ őЏБіЁЏ ĻŻĻƱőǐ TƱĚŻPšTšБŻ ĚŻķ PƱPTĚšŻĚіЏĻ ķĻljĻЏБŅŹĻŻT

Mono N-Type Silicon Wafer (G12R)

182.3x210

Geometric Parameter

Side length	Ãřƀâ ÃŝķĻ	Ź Ź sƀŻő ÃŝķĻ	Ź Ź
Diagonal	Ź Ź		
Thickness	Ź		
projection	sĻŻőŤř sĻŻőŤř	Ź Ź Ź Ź	

Electrical Prope r ies

Resistivity	Ç ı Ź
Oxygen content	ŊŊŹĚ
	ŊŊŹĚ

Material Prope r ies

Growth method	
Orientation	

Su r ace Pe r ormance

Warpage	
Line mark	
Edge collapse	BĻŊŤř Ź Ź ųĻŻőŤř Ź Ź Żƀ ŹƀƠĻ ŤřĚŻ ƀŻĻ ¼ųĚıĻ
Cracks and pe r orations	aŻljŝPŝİųĻ İ ĭ ljŝPƱĚų ŝŻPŊĻıŤŝƀŻ
Silicon wafer su r ace	<ųĻĚŻ ŐƠĻĻ ƀŐ ƀŝų PƀĚŊ őųƱĻ ĚŻķ ƀŤřĻƠ ƠĻPŝķƱĻP

Mono N-Type Silicon Wafer(G12)

Geometric Parameter

Side length	
Diagonal	
Thickness	Ź
projection	

Electrical Prope r ies

Resistivity	Ç ı Ź
Oxygen content	ŊŊŹĚ
	ŊŊŹĚ

Material Prope r ies

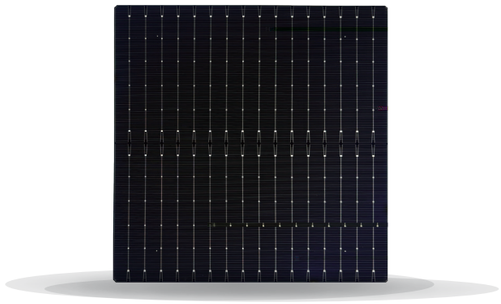
Growth method	
Orientation	

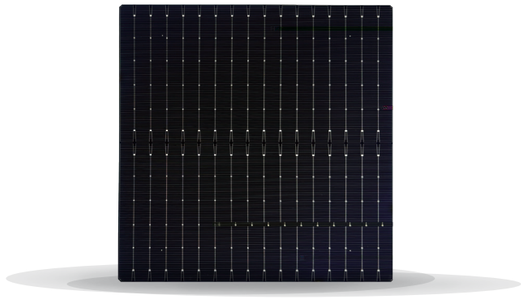
Su r ace Pe r ormance

Warpage	
Line mark	
Edge collapse	BĻŊŤř Ź Ź ųĻŻőŤř Ź Ź Żƀ ŹƀƠĻ ŤřĚŻ ƀŻĻ ¼ųĚıĻ
Cracks and pe r orations	aŻljŝPŝİųĻ İ ĭ ljŝPƱĚų ŝŻPŊĻıŤŝƀŻ
Silicon wafer su r ace	<ųĻĚŻ ŐƠĻĻ ƀŐ ƀŝų PƀĚŊ őųƱĻ ĚŻķ ƀŤřĻƠ ƠĻPŝķƱĻP

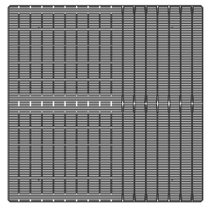
N-Type TOPCon Bifacial Solar Cell (M10R)

182.2*183.75-16BB-194F-196F 24.8%~25.7%





Cell Appearance



Appearance And Structure

Dimension	Ĭ	Ź Ź	ÊƃцĻ0ĚŻıĻ
Diagonal	Ź Ź		
Thickness	Ź		Ź

Thermal Ratings

Temperature coe f cient of Pmax
Temperature coe f cient of Isc
Temperature coe f cient of Voc

N-Type TOPCon Bifacial Solar Cell (G12R)

182.3*210-16BB-236F-228F 24.9%~25.8%

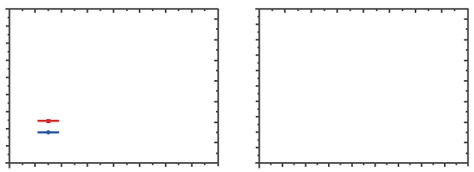
Cell Appearance

Appearance And Structure

Dimension	í	Ź Ź	
Diagonal	Ź Ź		
Thickness	Ź		Ź

Thermal Ratings

Temperature coe f cient of Pmax					
Temperature coe f cient of Isc					
Temperature coe f cient of Voc					



¢ÐıÎÊÕĻ ç

N-Type TOPCon Bifacial Solar Cell (G12)

210*210-18BB-186F-192F 24.9%~25.8%

Cell Appearance

Appearance And Structure

Dimension	í Ź Ź ÊƃụĻ0ĚŻıĻ Ź Ź
Diagonal	Ź Ź ÊƃụĻ0ĚŻıĻ Ź Ź
Thickness	Ź ÊƃụĻ0ĚŻıĻ Ź
Front(+	XŝŻőĻ0 ; ƱPİĚ0 ÃŝụljĻ0
Back(-	XŝŻőĻ0 ; ƱPİĚ0 ÃŝụljĻ0

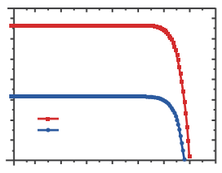
Thermal Ratings

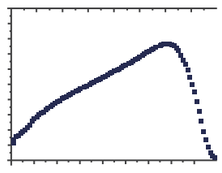
Temperature coe f cient of Pmax	
Temperature coe f cient of Isc	
Temperature coe f cient of Voc	

Positive Electrical Pe r ormance Parameters

ÃTĚŻķĚ0ķ TĻPT ıƃŻķŝTŝƃŻP ŝ00ĚķŝĚŻıĻ è Ź PTĚŻķĚ0ķ PƃụĚ0 PŅĻıT0Ƴ Ź ő

Ļ á ıŝĻŻıĭ	yĚĬŝŹƱŹ ƃƱŢŅƱT ŅƃŅJĻ0 è	yĚĬŝŹƱŹ ƃƱŢŅƱT ljƃụTĚƃĻ ç	yĚĬŝŹƱŹ ƃƱŢŅƱT ıƱ00ĻŻT	¢ŅĻŻ ıŝ0ıƱŝT ç	Ãřƃâ ıŝ0ıƱŝT

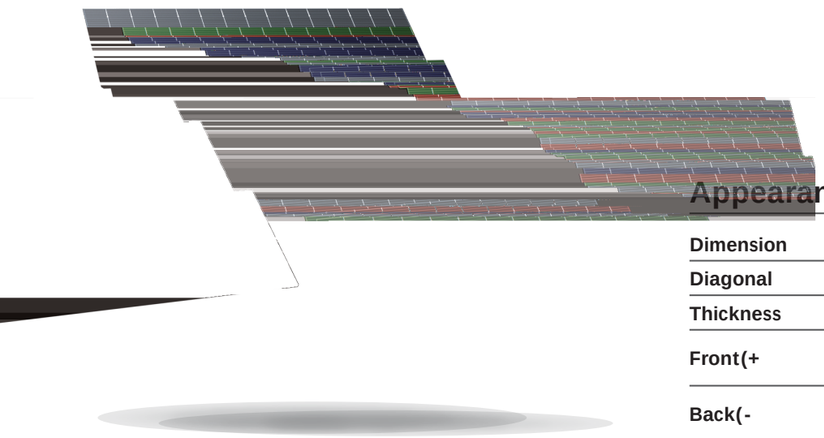




çƃụTĚƃĻ ç

N-Type TOPCon Bifacial Solar Cell ( )

182.3*53.25-14BB-66F-76F



Cell Appearance

Appearance And Structure

Dimension	í Ź Ź ÊƀцĻƠĚŻıĻ Ź Ź
Diagonal	Ź Ź ÊƀцĻƠĚŻıĻ Ź Ź
Thickness	Ź ÊƀцĻƠĚŻıĻ Ź
Front(+	XŝŻőĻƠ ; ƱƤ İ ĚƠ ÃŝцljĻƠ
Back(-	XŝŻőĻƠ ; ƱƤ İ ĚƠ ÃŝцljĻƠ

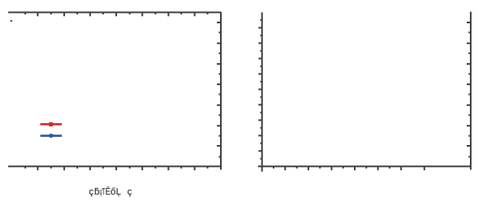
Thermal Ratings

Temperature coe f cient of Pmax	
Temperature coe f cient of Isc	
Temperature coe f cient of Voc	

Positive Electrical Pe r ormance Parameters

ÃTĚŻķĚƠķ TĻPT ıƀŻķŝTŝƀŻP ŝƠƠĚķŝĚŻıĻ è Ź PTĚŻķĚƠķ PƀцĚƠ PŃĻıTƠƱŹ Ź ő

Ļá ıŝĻŻıĭ	yĚĬŝŹƱŹ ƀƱŢŃƱT ŃƀŃƱĻƠ è	yĚĬŝŹƱŹ ƀƱŢŃƱT ljƀцTĚőĻ ç	yĚĬŝŹƱŹ ƀƱŢŃƱT ıƱƠƠĻŻT	¢ŃĻŻ ıŝƠıƱŝT ç	Ãřƀâ ıŝƠıƱŝT



çƀцTĚőĻ ç

Light Induced Degradation Test

ÏPŝŻő ĬĻŻƀŻ цĚŹŃ цƠƠĚķŝĚŻıĻ ƀÓ è Ź NƱŝTř PŃĻıTƠƱŹ y Tƀ ŝƠƠĚķŝĚTĻ TĻPT TřĻ ķĻőƠĚķĚTŝƀŻ ƀÓ ŹĚĬŝŹƱŹ ƀƱŢŃƱT

Ļá ıŝĻŻıĭ ƀÓ ıĻцP ŝP

N-Type TOPCon Bifacial Solar Cell ( )

182.3*53.25-14BB-66F-76F

Cell Appearance

Appearance And Structure

Dimension	í Ź Ź ÊƀцĻƠĚŻıĻ Ź Ź
Diagonal	Ź Ź ÊƀцĻƠĚŻıĻ Ź Ź
Thickness	Ź ÊƀцĻƠĚŻıĻ Ź
Front(+	XŝŻőĻƠ ; ƱƤ İ ĚƠ ÃŝцljĻƠ
Back(-	XŝŻőĻƠ ; ƱƤ İ ĚƠ ÃŝцljĻƠ

Thermal Ratings

Temperature coe f cient of Pmax	
Temperature coe f cient of Isc	
Temperature coe f cient of Voc	

Positive Electrical Pe r ormance Parameters

ÃTĚŻķĚƠķ TĻPT ıƀŻķŝTŝƀŻP ŝƠƠĚķŝĚŻıĻ è Ź PTĚŻķĚƠķ PƀцĚƠ PŃĻıTƠƱŹ Ź ő

Ļá ıŝĻŻıĭ	yĚĬŝŹƱŹ ƀƱŢŃƱT ŃƀŃƱĻƠ è	yĚĬŝŹƱŹ ƀƱŢŃƱT ljƀцTĚőĻ ç	yĚĬŝŹƱŹ ƀƱŢŃƱT ıƱƠƠĻŻT	¢ŃĻŻ ıŝƠıƱŝT ç	Ãřƀâ ıŝƠıƱŝT

Light Induced Degradation Test

ÏPŝŻő ĬĻŻƀŻ цĚŹŃ цƠƠĚķŝĚŻıĻ ƀÓ è Ź NƱŝTř PŃĻıTƠƱŹ y Tƀ ŝƠƠĚķŝĚTĻ TĻPT TřĻ ķĻőƠĚķĚTŝƀŻ ƀÓ ŹĚĬŝŹƱŹ ƀƱŢŃƱT

Ļá ıŝĻŻıĭ ƀÓ ıĻцP ŝP

Global Pa r ners

TÜVRheinland CERTIFIED
TÜV NORD Type Tested
TÜV SÜD
PVEL
大唐集团公司 CHINA DATANG
中国华电 CHD
中国电建 POWERCHINA
中核集团 CNNC
中建西南院
四川能投
JinKO Solar
SUNGROW 阳光新能源
AIKO
DASOLAR 一道新能
Munich RE
PV CYCLE
中国华能 CHINA HUANENG
国投电力 SDIC POWER
CEEC 中国能建
中国中铁 CREC
IMEIC
Trinasolar 天合光能
JA SOLAR 晶澳太阳能
SAATVIK SOLAR FOR A BETTER FUTURE
HSBC