

Fecha 12 DE ENERO DEL 2026

Número de Solicitud

I. Datos del Solicitante

Nombre, Denominación o Razon Social

GOPAR ACEVEDO CATALINO JOEL

Domicilio

Calle

REFORMA

Número exterior

77

Número Interior

S/N

Código Postal

68247

Colonia/Poblacion

SAN JOSE ETLA

Delegación/Municipio

SAN AGUSTIN ETLA

Estado

OAXACA

Teléfono

951 129 2095

Correo Electrónico

Joel.gopar.martinez@gmail.com

Fax

II. Datos de Contacto

Nombre

EUNICE MIJANGOS ORTIZ

Puesto

GESTOR

Domicilio

Calle

TEPOSCOLULA

Número exterior

#300

Número Interior

S/N

Código Postal

68144

Colonia/Poblacion

ESTADO DE OAXACA

Delegación/Municipio

OAXACA DE JUAREZ

Estado

OAXACA

Teléfono

(951) 111 33 73

Correo Electrónico

agenciadeenergiadp@gmail.com

Fax

III. Datos de la Solicitud

Modalidad de la Solicitud

Baja Tensión

☒

Media Tensión

☐

IV. Utilización de la Energía Eléctrica Producida

Consumo de Centros de Carga

☒

Consumo de Centros de Carga y Venta de Excedentes

☐

Venta Total

☐

V. Datos del Servicio Suministro Actual

Registro Público de Usuario (RPU)

686110304101

Nivel de Tensión de Suministro

220 V

VI. Central Eléctrica

Fecha estimada de Operación Normal (DD/MM/AAAA)

27/01/2026

Capacidad Bruta Instalada (Kw)

2.56 Kw

Capacidad a Incrementar (kw) (Opcional)

Generación Promedio Mensual Estimada (kwh/Mes)

294.525 kWh/mes

VII. Manifestación de Cumplimiento de las Especificaciones Técnicas Generales

Manifiesto bajo protesta de decir la verdad que la Central Eléctrica cumple con las Especificaciones técnicas requeridas de acuerdo las disposiciones aplicables.

☒

Tecnología para generación de energía eléctrica

Solar

☒

Biomasa

☐

Otro

☐

Eólico

☐

Cogeneración

☐

Especificar

No de unidades de generación

4 MODULOS

Combustible principal

SOL

Combustible secundario

N/A

Coordenadas UTM

1

X

17.1868974

Y

-96.7606873

Coordenadas UTM

2

Coordenadas UTM

3

Coordenadas UTM

4

Coordenadas UTM

5

Coordenadas UTM

6

GOPAR ACEVEDO CATALINO JOEL

(Representante Legal o El Solicitante) (El Solicitante) certifica que la

Información proporcionada en la presente solicitud es apropiada, precisa y verídica. El solicitante acepta que los datos proporcionados sean utilizados para llevar a cabo los Estudios de Interconexión para garantizar la confiabilidad del Sistema Eléctrico Nacional con la Interconexión de la Central Eléctrica del solicitante al amparo de la Ley de la Industria Eléctrica y su Reglamento, en caso de ser requeridos.

El solicitante entiende que los datos proporcionados, se añadirán a las bases de datos del suministrador cuando se firme un contrato de interconexión respectivo.

El solicitante deberá anexa a la presente solicitud, la información técnica requerida en el documento "Información Técnica Requerida para Centrales Eléctricas"

Firma de Conformidad

Solicitante

Nombre
Cargo
Fecha

GOPAR ACEVEDO CATALINO JOEL

PROPIETARIO

12/ENERO/2026

CFE
Patricia Hernández Cruz
ZONA OAXACA 9MNPU
OFICINISTA COMERCIALsello y firma
Centro de Atención

CARTA PODER

OAXACA DE JUÁREZ, OAXACA A 12 DE ENERO DE 2026

A COMISIÓN FEDERAL DE ELECTRICIDAD.

Suministro de Servicios Básicos

P R E S E N T E

Por medio de la presente me permito informarle que no está en mis posibilidades realizar los trámites correspondientes y otros de mi servicio, por tal motivo otorgo a la C. MIJANGOS ORTIZ EUNICE poder amplio y cumplido, para que en mi nombre y representación pueda realizar todas las gestiones que se necesiten para cambios de titular, tarifas, incremento de demanda contratada, solicitudes, modificaciones y trámites que se requieran en lo subsecuente y hasta iniciar y finalizar el proceso de interconexión, relacionado con mi servicio ante la COMISIÓN FEDERAL DE ELÉCTRICIDAD, en el inmueble con dirección en REFORMA 77 SAN JOSE ETLA C.P. 68247 SAN AGUSTIN ETLA, OAX. y número de servicio: 686110304101.

Acepto el poder



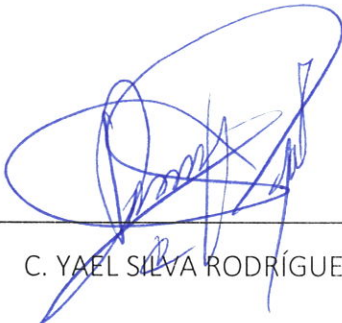
C. MIJANGOS ORTIZ EUNICE

Otorgante



C. GOPAR ACEVEDO CATALINO JOEL

TESTIGOS



C. Yael Silva Rodríguez

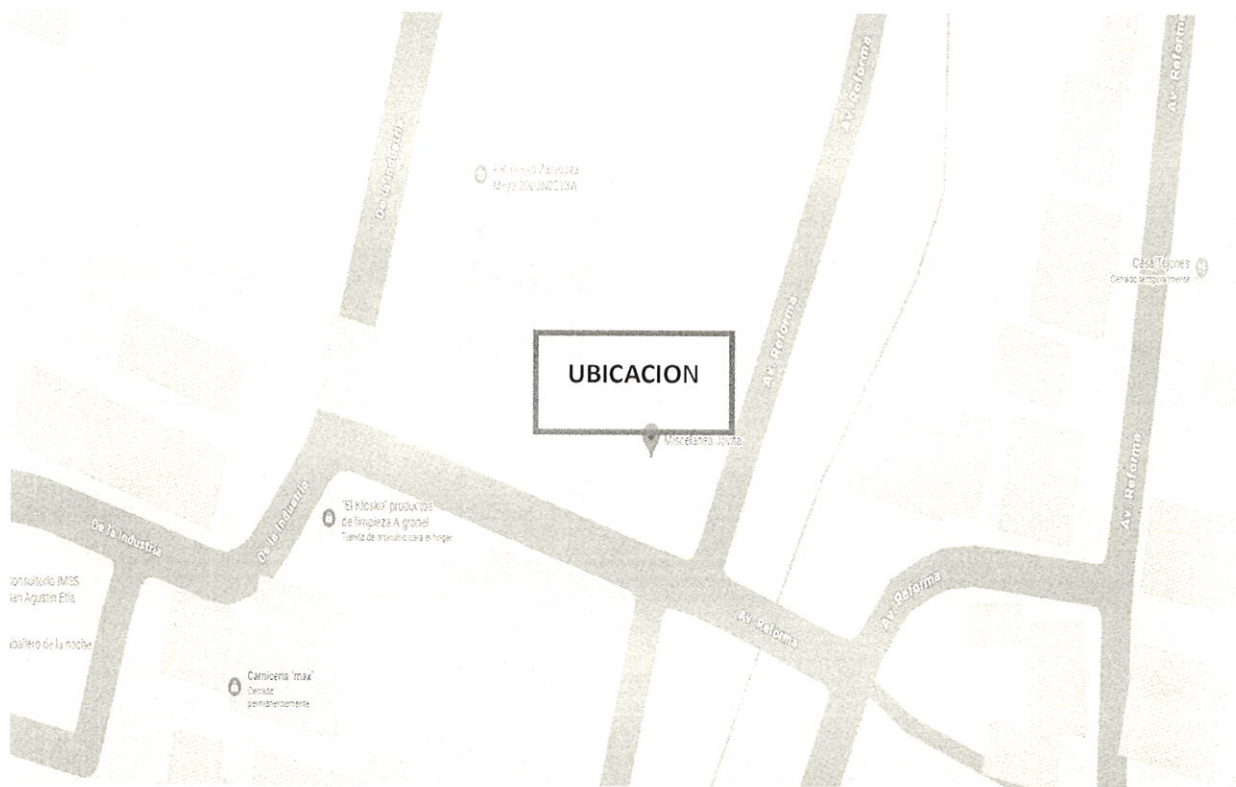


C. RAUL REYES HERNÁNDEZ



AGENCIA DE ENERGÍA
DEL PACÍFICO

CROQUIS



Dirección: REFORMA 77 SAN JOSE ETLA C.P. 68247 SAN AGUSTIN ETLA, OAX.

Coordenadas: 17.1868974,-96.7606873



agenciadeenergiadp@gmail.com



951 768 2446



agenciadeenergiadp@gmail.com

 MÉXICO INSTITUTO NACIONAL ELECTORAL
CREDENCIAL PARA VOTAR



NOMBRE
GOPAR
ACEVEDO
CATALINO JOEL
DOMICILIO
C REFORMA 77
BARR SAN JOSE 68247
SAN AGUSTIN ETLA, OAX.
CLAVE DE ELECTOR GPACCT48112520H900
CURP GOAC481125HOCPT08 AÑO DE REGISTRO 1991 02

FECHA DE NACIMIENTO
25/11/1948
SEXO H

ESTADO 20 MUNICIPIO 081 SECCIÓN 0720
LOCALIDAD 0001 EMISIÓN 2018 VIGENCIA 2028



EDMUNDO JACOBO MOLINA
SECRETARIO EJECUTIVO DEL
INSTITUTO NACIONAL ELECTORAL

IDMEX1713321330<<0720048456642
4811251H2812313MEX<02<<01121<9
GOPAR<ACEVEDO<<CATALINO<JOEL<<



MÉXICO

INSTITUTO NACIONAL ELECTORAL
CREDENCIAL PARA VOTAR



NOMBRE
MIJANGOS
ORTIZ
EUNICE
DOMICILIO
PROL SALVADOR 204
COL SANTA MARIA IXCOTEL 71228
SANTA LUCIA DEL CAMINO, OAX.
CLAVE DE ELECTOR MJOEN00012720M900
CURP MIOE000127MOCJRNA5

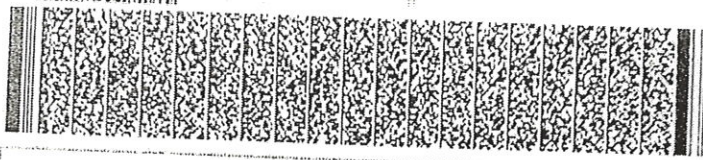
FECHA DE NACIMIENTO
27/01/2000
SEXO - M



AÑO DE REGISTRO 2017 00
ESTADO 20 MUNICIPIO 392 SECCIÓN 1756
LOCALIDAD 0001 EMISIÓN 2017 VIGENCIA 2027















IDMEX1689359346<<1756120232248
0001270M2712310MEX<00<<25798<4
MIJANGOS<ORTIZ<<EUNICE<<<<<<<<



MÉXICO

INSTITUTO NACIONAL ELECTORAL
CREDENCIAL PARA VOTAR



NOMBRE
SILVA
RODRIGUEZ
Yael

SEXO M



DOMICILIO
C LAGO ASSALE 3 A
FRACC VALLE REAL 74367
ATLIXCO, PUE.

CLAVE DE ELECTOR SLRDYL95110320M900

CURP
SIRY951103MOCLDL05

AÑO DE REGISTRO
2014 03

FECHA DE NACIMIENTO
03/11/1995

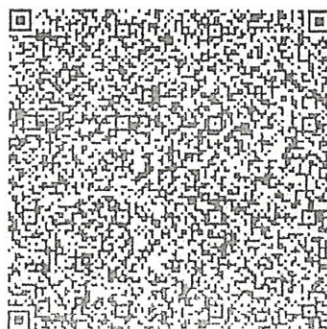
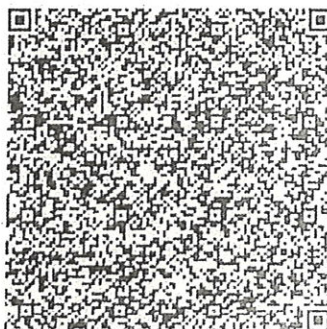
SECCIÓN
0208

VIGENCIA
2023 - 2033



ELECCIONES FEDERALES

LOCALES Y EXTRAORDINARIAS



E007162

EDMUNDO JACOBO MOLINA
SECRETARIO EJECUTIVO DEL
INSTITUTO NACIONAL ELECTORAL

IDMEX2439269166<<0208096999230
9511039M3312315MEX<03<<03683<8
SILVA<RODRIGUEZ<<Yael<<<<<<<<<



MÉXICO

INSTITUTO NACIONAL ELECTORAL
CREDENCIAL PARA VOTAR



NOMBRE
REYES
HERNANDEZ
RAUL

SEXO H

DOMICILIO
C NIÑOS HEROES 107
COL EMILIANO ZAPATA 64390
MONTERREY, N.L.



CLAVE DE ELECTOR RYHRRL96072720H400

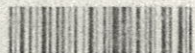
CURP
REHR960727HOCYRL09

AÑO DE REGISTRO
2014 02

FECHA DE NACIMIENTO
27/07/1996

SECCIÓN
1037

VIGENCIA
2019 - 2029



SECCIONES FEDERALES

LOCALS Y EXTRAJEROS



C000343

EMILIO JACINTO MOLINA
SECRETARIO EJECUTIVO DEL
INSTITUTO NACIONAL ELECTORAL

IDMEX2001075520<<1037098603201
9607273H2912316MEX<02<<38143<9
REYES<HERNANDEZ<<RAUL<<<<<<<<<

CÉDULA DE IDENTIFICACIÓN FISCAL



Hacienda
Secretaría de Hacienda y Crédito Público



SAT
SERVICIO DE ADMINISTRACIÓN TRIBUTARIA



GOAC481125M26
Registro Federal de Contribuyentes

CATALINO JOEL GOPAR
ACEVEDO
Nombre, denominación o razón
social

idCIF: 15080057818
VALIDA TU INFORMACIÓN
FISCAL

CONSTANCIA DE SITUACIÓN FISCAL

Lugar y Fecha de Emisión
**SAN AGUSTIN ETLA , OAXACA A 06 DE ENERO DE
2026**



GOAC481125M26

Datos de Identificación del Contribuyente:

RFC:	GOAC481125M26
CURP:	GOAC481125HOCPT08
Nombre (s):	CATALINO JOEL
Primer Apellido:	GOPAR
Segundo Apellido:	ACEVEDO
Fecha inicio de operaciones:	11 DE MAYO DE 1976
Estatus en el padrón:	ACTIVO
Fecha de último cambio de estado:	11 DE MAYO DE 1976
Nombre Comercial:	

Datos del domicilio registrado

Código Postal:68247	Tipo de Vialidad: CALLE
Nombre de Vialidad: REFORMA	Número Exterior: 77
Número Interior:SIN NUMERO	Nombre de la Colonia:
Nombre de la Localidad: SAN JOSE ETLA	Nombre del Municipio o Demarcación Territorial: SAN AGUSTIN ETLA
Nombre de la Entidad Federativa: OAXACA	Entre Calle: CALLE INDUSTRIA



Hacienda
Secretaría de Hacienda y Crédito Público



SAT
SERVICIO DE ADMINISTRACIÓN TRIBUTARIA

Contacto

Av. Hidalgo 77, col. Guerrero, C.P. 06300, Ciudad de México.
Atención telefónica desde cualquier parte del país:
MarcaSAT 55 627 22 728 y para el exterior del país
(+52) 55 627 22 728

Y Calle: RIO

Actividades Económicas:

Orden	Actividad Económica	Porcentaje	Fecha Inicio	Fecha Fin
1	Jubilado o pensionado	70	11/11/2016	
2	Transporte de pasajeros en taxis de sitio	30	11/11/2016	

Regímenes:

Régimen	Fecha Inicio	Fecha Fin
Régimen de Sueldos y Salarios e Ingresos Asimilados a Salarios	03/03/1997	
Régimen de las Personas Físicas con Actividades Empresariales y Profesionales	01/01/2022	

Obligaciones:

Descripción de la Obligación	Descripción Vencimiento	Fecha Inicio	Fecha Fin
Pago provisional mensual de ISR por actividades empresariales. Régimen de Actividades Empresariales y Profesionales	A más tardar el día 17 del mes inmediato posterior al periodo que corresponda.	01/01/2022	
Declaración anual de ISR. Personas Físicas.	A más tardar el 30 de abril del ejercicio siguiente.	01/01/2022	

Sus datos personales son incorporados y protegidos en los sistemas del SAT, de conformidad con los Lineamientos de Protección de Datos Personales y con diversas disposiciones fiscales y legales sobre confidencialidad y protección de datos, a fin de ejercer las facultades conferidas a la autoridad fiscal.

Si desea modificar o corregir sus datos personales, puede acudir a cualquier Módulo de Servicios Tributarios y/o a través de la dirección <http://sat.gob.mx>

"La corrupción tiene consecuencias ¡denúnciala! Si conoces algún posible acto de corrupción o delito presenta una queja o denuncia a través de: www.sat.gob.mx, denuncias@sat.gob.mx, desde México: (55) 8852 2222, desde el extranjero: + 55 8852 2222, SAT móvil o www.gob.mx/sfp".

Cadena Original Sello:

||2026/01/06 21:39:45|GOAC481125M26|CONSTANCIA DE SITUACIÓN
FISCAL|200001088888800000041|U2FsdGVkX1+M+VKPZmgSB1OMr+vB5IAu6kCAmJzI9drE4YA3hjs5/TDlxt
nFTg||

Sello Digital:

dkvQFFxKTDaU3SjhVBmoDnjFWIX7Wr8V+6lYGqfSEBRAP6mIgeXK/i8ybgAlFIYLuBp9Rg5fLwAQpi34NpY5pi
MuH7Ld9aqqc5LhHrYW14r6xhMOT1czCUSJ4sQlkdQlqoQVJW5pg0vUFxUX0QSCsD+02oqBJ4W1y1s9HD1s
M=



Contacto



Contacto

Av. Hidalgo 77, col. Guerrero, C.P. 06300, Ciudad de México.

Atención telefónica desde cualquier parte del país:

MarcaSAT 55 627 22 728 y para el exterior del país:

(+52) 55 627 22 728



Comisión Federal de Electricidad®

Comisión Federal de Electricidad
Av. Paseo de la Reforma 164, Col. Juárez,
Alcaldía: Cuauhtémoc, Código Postal: 06600,
Ciudad de México. RFC: CFE370814Q10

ACEVEDO CHAVEZ FAUSTINA JACOBA

REFORMA 77.
SAN JOSE
SAN JOSE ETLA RC.P.68247
SAN AGUSTIN ETLA,OAX

TOTAL A PAGAR:

\$2,760

(DOS MIL SETECIENTOS SESENTA PESOS M.N.)

NO. DE SERVICIO:686110304101

RMU:68257 11-03-25 XAXX-010101 003 CFE

CUENTA:32DK09J103233520

LÍMITE DE PAGO:09 ENE 26

CORTE A PARTIR:10 ENE 26

TARIFA:PDBTNO. **MEDIDOR:**0VB908

MULTIPLICADOR:1
NO HILOS:1

PERIODO FACTURADO:21 OCT 25-23 DIC 25



Concepto	Lectura actual Medida ☒ Estimada ☐	Lectura anterior Medida ☒ Estimada ☐	Total periodo	Precio (MXN)	Subtotal (MXN)
Energía (kWh)	70,808	70,277	531		



Este gráfico refleja tu nivel de consumo. A menor uso, mayor apoyo.

Subtotal

Costos de la energía en el Mercado Eléctrico Mayorista					Desglose del importe a pagar	
Concepto	\$	\$/kW	\$/kWh	Importe (MXN)	Concepto	Importe (MXN)
Suministro	80.22	0.00	0.00	80.22	Cargo Fijo((3))	80.22
Distribución	0.00	0.00	615.06	615.06	Energía	2,145.25
Transmisión	0.00	0.00	96.06	96.06	Subtotal	2,225.47
CENACE	0.00	0.00	5.63	5.63	IVA 16%	356.08
Energía	0.00	0.00	880.40	880.40	Fac. del Periodo	2,581.55
Capacidad	0.00	0.00	544.81	544.81	DAP((2))	178.04
SCnMEM(1)	0.00	0.00	3.29	3.29	Adeudo Anterior	2,967.95
					Su Pago	-2,967.00
					Total	2,760.54

Fecha, hora y lugar de impresión:06/01/2026 09:50:52hrsCalle CentenarioNo.21Col CentroVilla de EtlaEtlaOaxacaMexicoCP 68200

(1) SCnMEM: Costos relacionados con los servicios del Mercado. (2) DAP: Derecho al Alumbrado Público. (3) Cargos o créditos: Diversos conceptos que se pueden incluir en el aviso recibo relacionados con el suministro.



68257 11-03-25 XAXX-010101 003 CFE
01 686110304101 260109 000002760 2



32DK09J103233520Repartir

-1-

CFE-contigo

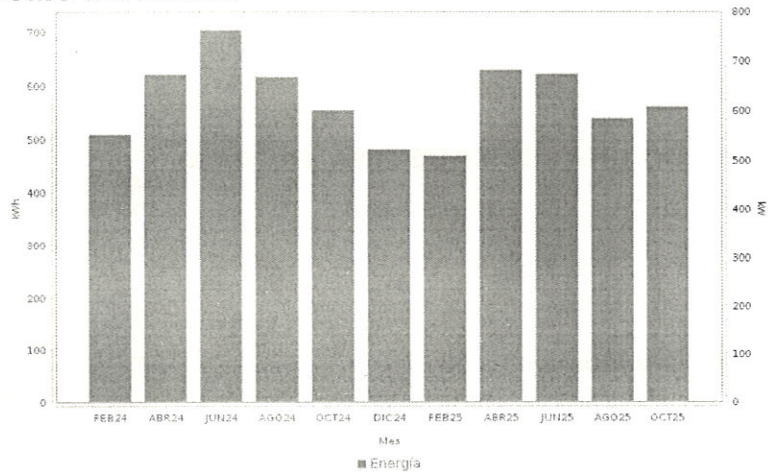


\$2,760

(DOS MIL SETECIENTOS SESENTA PESOS M.N.)

CONSUMO HISTÓRICO

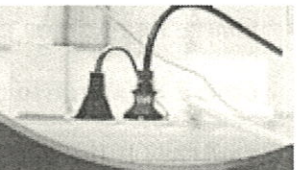
Período	kWh	Importe	Pagos	Pendientes de Pago
del 20 AGO 25 al 21 OCT 25	561	\$2,967.00	\$2,967.00	
del 20 JUN 25 al 20 AGO 25	539	\$2,867.00	\$2,867.00	
del 23 ABR 25 al 20 JUN 25	621	\$3,207.00	\$3,207.00	
del 20 FEB 25 al 23 ABR 25	629	\$3,247.00	\$3,247.00	
del 23 DIC 24 al 20 FEB 25	468	\$2,438.00	\$2,438.00	
del 23 OCT 24 al 23 DIC 24	480	\$2,493.00	\$2,493.00	
del 22 AGO 24 al 23 OCT 24	554	\$2,863.00	\$2,863.00	
del 20 JUN 24 al 22 AGO 24	616	\$3,156.00	\$3,156.00	
del 22 ABR 24 al 20 JUN 24	703	\$3,524.00	\$3,524.00	
del 22 FEB 24 al 22 ABR 24	620	\$3,119.00	\$3,119.00	
del 21 DIC 23 al 22 FEB 24	509	\$2,547.00	\$2,547.00	



AHORRO DE ENERGÍA INSTALACIÓN ELÉCTRICA



Si los interruptores de seguridad están desgastados, reemplázalos; si los cables de la caja de fusibles se calientan, es necesario cambiarlos por otros del calibre adecuado.



Datos Fiscales del Receptor Cadena Original Este documento es una representación impresa de un CFDI PPD

RFC: RFC Razón Social: Régimen Fiscal: 000 Uso CFDI: CP: 00000 AC Folio: 000076704361 Folio Fiscal: N. Certificado del SAT: No. certificado del CSD: Fecha y hora de certificación: Unidad de medida: kWh



Instancias y recursos a disposición de los usuarios para atender quejas:



¡AVISO IMPORTANTE!

Tu comprobante fiscal es emitido por Comisión Federal de Electricidad con el RFC CFE 370814Q10.
No desperdices energía eléctrica, cuida el medio ambiente. Nuestro compromiso es seguir conectados contigo.
Corte a partir del 10 ENE 26.
Su consumo de energía eléctrica está dentro del rango excedente.
Le invitamos a que se registre en nuestro portal y disfrute de la comodidad de nuestros servicios en línea.

Conoce los servicios de los diferentes suministradores: <http://usuariocalificado.cre.gob.mx/UsuarioCalificado/ListadoSuministrador>

TAMBIÉN PUEDES PAGAR TU RECIBO EN:



Banco del Bienestar, Bancomer, Infancia, Santander, Banamex, Banjército, Scotiabank, HSBC, Citibanco, Afirme, Multiva, Banco del Bajío, Banco Azteca, BanCoppel.
Son más de 100,000 establecimientos autorizados, consulta el portal cfe.mx en la sección medios de pago.

1.SUN-251231-054***

***** Versión 9.0.0. 2020/07/01*

* SICOM COMISION FEDERAL DE
ELECTRICIDAD 9MNPU *

* 07/01/26 Módulo De Atención
En Ventanilla 12:36:30 *

* R.P.U. 686110304101 NúmeroMed : OVB9
08 NúmeroCta.: 32DK09J103233520 *

* Nombre GOPAR ACEVEDO CATALINO JOEL Di
recc REFORMA 77. *

* AP:GOPAR AM:ACEVEDO N1:CATALINO N2:JOEL

*

* RMU 68247260107GOAC481125001CFE TV: NV:

in *

*

*

* FeAlta *-- Deposito Tar Tax TAG H Giro

TFSB %Dap *CargaInst *-DemContr *

* 260107 0.00 02 1 MY80

PDBT 8.0 2.000 2.000 *

*

*

* Informacion General Del S

ervicio (Localizacion) *

* Cve.MEM.: B002 Suministrador: CFE SUM B

ASICO *

* Numero-Telefono RegisFederalCte RelTrans

fPot RelTransCorr CodEqCmpTo EdoMun *

*F95-1-5-21-27-42 GOAC-481125-M26

1.084 *

*C95-1-1-29-30-95

*

* *----- Colonia -----* *----- p

oblacion ---* *----- Municipio ---* *

* SAN JOSE ETLA R SAN A

GUSTIN ETLA SAN AGUSTIN ETLA *

*

*

* *----- Complemento Direccion (Entre Ca

lles) -----* *Entidad-Federativa* *

* SAN JOSE y

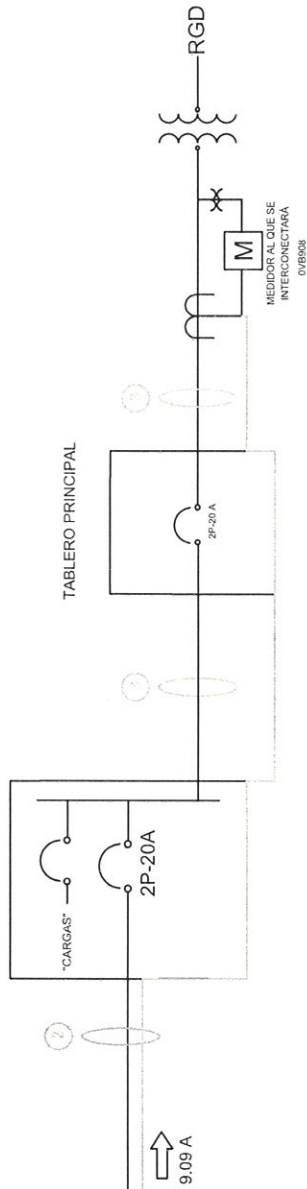
OAXACA *

* Georeferencia X:17.1868836000000000 Y:-

96.7607525000000000 *

*****NQA***** Oficina Navara *

C2Q08S
2F - 100 A



UBICACIÓN
15.771721651632484,
-96.13345133343168

DIRECCIÓN
Cerrada Peños 203,
Sector, J, 70988 Crucecita,
Oax.

NOTAS

CÉDULA DE CABLEADO

	DELATV 1 POS 10 AWG (5.26 mm ²) PV WIRE 90 °C HOJO 1 NEO 10 AWG (5.26 mm ²) PV WIRE 90 °C NEGRO
	ALIMENTADOR DE LOS INDUCTORES 2 Fases = 12 AWG (3.31 mm ²) THHN LS NE CAVO 1 CPTA = 10 AWG (5.26 mm ²) Descuido Central 3/F MC
	ALIMENTADOR INTERIOR (ESTANTES) 2 Fases = 8 AWG (3.37 mm ²) THHN LS NE CAVO 1 CPTA = 10 AWG (5.26 mm ²) Descuido

V. VOLTS IMPAL. CORRIENTE MAXIMA DE SALIDA L. LONGITUD CPT. CONDUCTOR PUESTO A CPTC. CONDUCTOR PUESTO A C TERMINO DE PUESTA A TERMINO DE LOUPOIS HIG. RED GENERAL DE DISTRIBUCION INV. INYECTOR C. CIRCUITO	ABREVIATURAS	AVV. ARREGLO FOTOVOLTAICO 3P. TRES POLOS 4N. CUATRO DE TENSION MPPT. TRACKING T. TUBERIA AVG. AMERICAN WIRE GAUGE INT. INTERRUPTOR TM. TELEMAGNETICO
---	---------------------	--

CARACTERÍSTICAS DEL MICROINVERSOR

MARCA:	HOYMILES
MODELO:	HMS-2000DW-4T
VOLTAJE MÁX. ENTRADA:	65 V
VOLTAJE MIN (ARRANQUE):	22 V
RANGO DE OPERACIÓN:	16-60 V
VOLTAJE DE CA:	220 V

CARACTERÍSTICAS DEL MÓDULO FV MARCA: TRINA SOLAR MODELO: TSM-NEG19RC.70 Pmax: 625Wp Voc: 48,7 V Isc: 16,32 A Vmp: 40,46 V Imp: 15,45 A

SIMBOLOGÍA					
	MÓDULO FOTOVOLTAICO		TRANSFORMADOR DE POTENCIA		PUESTA A TIERRA
	INVERSOR		EQUIPO DE MEDICIÓN		ENVOLVENTE
	INTERRUPTOR TIPO INTERMAGNETICO		DESCONECTOR TIPO CUCHILLA		SUPRESOR DE PICOS
	DESCONECTOR CON CARGA		FUSIBLE		BUS DE CONEXIONES

	AGENCIA DE ENERGÍA DEL PACÍFICO	
	PROPIETARIO: JOEL GOPAR	
DISEÑO: ING. LEONARDO FABIAN BUTRON MORA	DIAGRAMA UNIFILAR A1	
REVISÓ: ING. MIGUEL ÁNGEL ESTRADA CASTELLANOS	ESCALA: 1/10	
PLANO ELÉCTRICO 1	CENTRAL PV TIPO BT	
FECHA: 07/01/2020	TÍTULO: 139 3996	

Vertex N

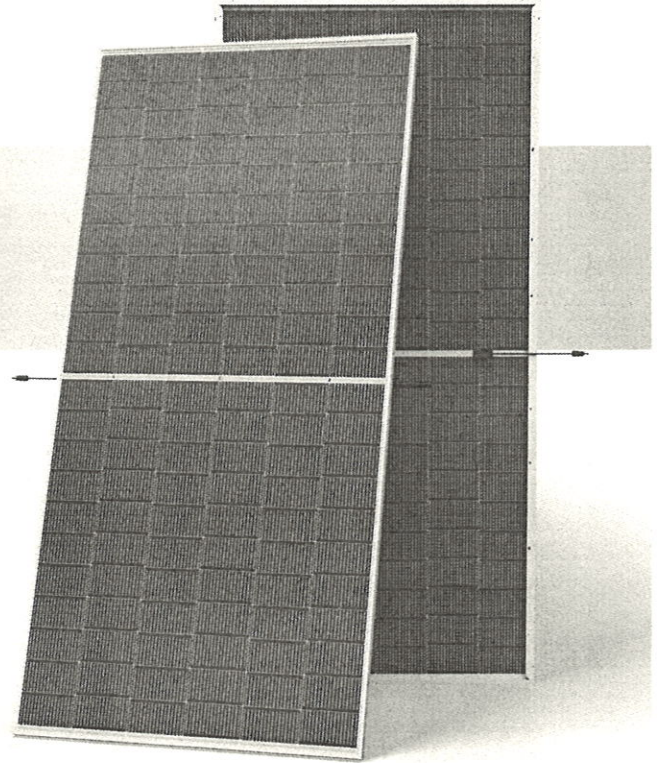
N-type i-TOPCon

BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

TSM-NEG19RC.20 610-635W

635W / MAXIMUM POWER OUTPUT

23.5% / MAXIMUM EFFICIENCY



High customer value

- Best partner of 1P tracker, with highest utilization of tracker length
- Low voltage design with higher string power, effectively reducing BOS (Balance of System) and LCOE (Levelized Cost of Energy) by 1%~5%
- Standardized module size with higher container space utilization effectively reduces the freight cost
- Excellent compatibility with existing mainstream system components
- Certified Low-Carbon Footprint



High power up to 635W

- Up to 23.5% module efficiency, on Z10 innovation platform
- Patented i-TOPCon technology with continuous efficiency upgrade, including contact resistance reduction, rear reflection enhancement and edge quality repairment



High reliability

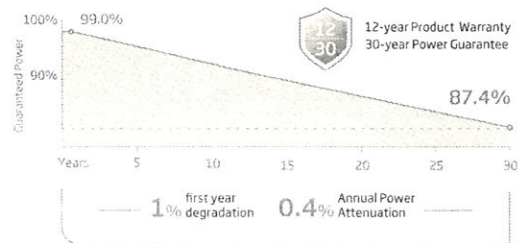
- Minimized micro-cracks with innovative non-destructive cutting technology and high-density packaging
- Reduced risks of hot-spot with half-cut technology
- Certified high resistance against salt, ammonia, sand, PID, LID, LeTID
- Sustainable in harsh environments and extreme weather conditions



High energy yield

- Excellent low irradiation performance, validated by 3rd party
- Lower temperature coefficient (-0.29%/°C)
- Higher bifaciality, with up to 10%~20% additional power gain from back side depending on albedo
- Reliable dual-glass structure with 30-year power guarantee

Performance Warranty



* Please refer to product warranty for details

Comprehensive Products and System Certificates

IEC61215/IEC61730/IEC61701/IEC62716/UL61730

ISO 9001: Quality Management System

ISO 14001: Environmental Management System

ISO14064: Greenhouse Gases Emissions Verification

ISO45001: Occupational Health and Safety Management System

ISO14067: Product Carbon Footprint Limited Assurance



ELECTRICAL DATA (STC & NOCT & BNPI)

Testing Condition	STC	NOCT	BNPI	STC	NOCT	BNPI	STC	NOCT	BNPI	STC	NOCT	BNPI	STC	NOCT	BNPI	STC	NOCT	BNPI
Peak Power Watts-P _{MAX} (Wp)*	610	465	676	615	469	681	620	473	687	625	477	692	630	481	698	635	487	704
Power Selection (W)**	0 ~ +5																	
Maximum Power Voltage-V _{MPP} (V)	39.79	37.60	39.79	39.97	37.80	39.97	40.24	37.90	40.24	40.46	38.10	40.46	40.68	38.30	40.68	40.84	38.60	40.84
Maximum Power Current-I _{MPP} (A)	15.33	12.38	17.00	15.39	12.43	17.05	15.41	12.47	17.07	15.45	12.52	17.12	15.49	12.57	17.16	15.55	12.60	17.23
Open Circuit Voltage-V _{OC} (V)	48.09	45.70	48.09	48.29	45.90	48.29	48.50	46.10	48.50	48.70	46.30	48.70	48.90	46.50	48.90	49.10	46.60	49.10
Short Circuit Current-I _{SC} (A)	16.14	13.00	17.88	16.20	13.05	17.95	16.26	13.10	18.02	16.32	13.15	18.08	16.38	13.20	18.15	16.44	13.25	18.22
Module Efficiency η_m (%)	22.6			22.8			23.0			23.1			23.3			23.5		

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5. NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s. BNPI: Irradiance: front 1000W/m², rear 135W/m², Temperature 25°C, Air Mass AM1.5
 *Measuring tolerance: ±3%. **Power selection up to: +3%.

Electrical characteristics with different power bin (reference to 5% & 10% backside power gain)

Backside Power Gain	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%
Peak Power Watts-P _{MAX} (Wp)	641	671	646	677	651	682	656	688	662	693	667	699
Maximum Power Voltage-V _{MPP} (V)	39.79	39.79	39.97	39.97	40.24	40.24	40.46	40.46	40.68	40.68	40.84	40.84
Maximum Power Current-I _{MPP} (A)	16.10	16.86	16.16	16.93	16.18	16.95	16.22	17.00	16.26	17.04	17.26	18.08
Open Circuit Voltage-V _{OC} (V)	48.09	48.09	48.29	48.29	48.50	48.50	48.70	48.70	48.90	48.90	49.10	49.10
Short Circuit Current-I _{SC} (A)	16.95	17.75	17.01	17.82	17.07	17.89	17.14	17.95	17.20	18.02	16.33	17.11

Power Bifaciality: 80±5%.

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43°C (±2°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

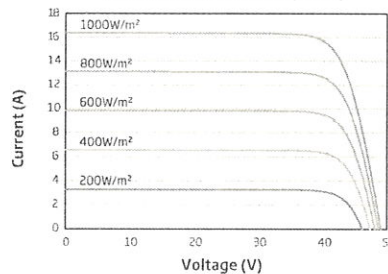
Due to different testing methods, the actual performances might differ from the declared specifications.

APPLICATION CONDITIONS

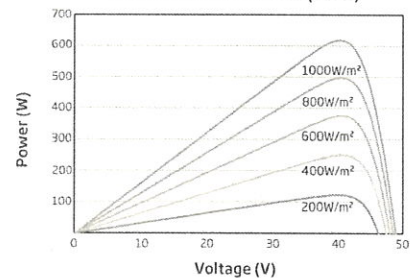
Operating Temperature	-40~+70°C
Maximum System Voltage	1500V DC (IEC) 1500V DC (UL)
Max Series Fuse Rating	35A

CURVES OF PV MODULE

I-V CURVES OF PV MODULE (620W)



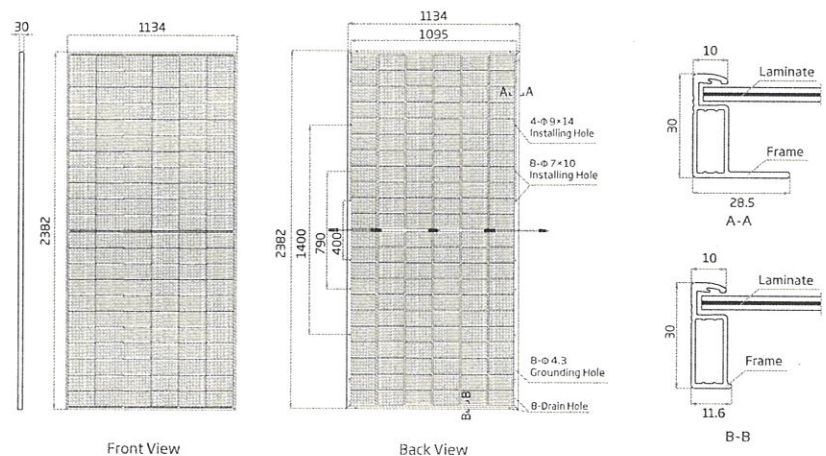
P-V CURVES OF PV MODULE (620W)



MECHANICAL DATA

Solar Cells	N-type i-TOPCon Monocrystalline
No. of cells	132 cells
Module Dimensions	2382×1134×30 mm (93.78×44.65×1.18 inches)
Weight	33.0 kg (72.8 lb)
Front Glass	2.0 mm (0.08 inches), AR Coating Heat Strengthened Glass
Back Glass	2.0 mm (0.08 inches), Heat Strengthened Glass (White Coating)
Frame	30mm (1.18 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm ² (0.036 inches ²) Portrait: 350/280 mm (13.78/11.02 inches) Length can be customized
Connector	MC4 EV02 / TS4 Plus / TS4*
Packaging	Modules per box: 36 pieces Modules per 40' container: 720 pieces

*Please refer to regional datasheet for specified connector.



CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.
 © 2025 Trina Solar Co., Ltd. All rights reserved. Specifications included in this datasheet are subject to change without notice.
 The right of final interpretation belongs to Trina Solar Co., Ltd.
 Version number: TSM_EN_2025_B



Microinverter Datasheet

HMS-1600DW-4T
HMS-1800DW-4T
HMS-2000DW-4T

Description

Hoymiles new generation microinverter HMS-2000DW-4T series is designed to accommodate high-powered PV modules, with maximum output power up to 2000 VA and maximum DC input current up to 16 A.

The innovative 4-input design enables faster installation and lower cost, and makes the HMS-2000DW-4T series a very cost-effective choice.

The integrated Wi-Fi module enables more convenient communications and simpler configurations between the microinverter and smart platform S-Miles Cloud.

Features

- | | |
|--|---|
| <div>01</div> <p>Built-in Wi-Fi module enables quicker and easier installation and commissioning</p> | <div>04</div> <p>4-in-1 design enables faster installation and lower cost</p> |
| <div>02</div> <p>The industrial-grade Wi-Fi module brings higher microinverter reliability</p> | <div>05</div> <p>Safer for rooftop solar stations with rapid shutdown compliance and isolated transformer</p> |
| <div>03</div> <p>With output power up to 2000 VA, compatible with 182 mm/210 mm PV modules</p> | <div>06</div> <p>NEMA 6 (IP67) protection degree, adapt to outdoor use</p> |

Technical Specifications

Model	HMS-1600DW-4T				HMS-1800DW-4T				HMS-2000DW-4T			
Input Data (DC)												
Commonly used module power (W)	320 to 540+				360 to 600+				400 to 670+			
Maximum input voltage (V)					65							
MPPT voltage range (V)					16-60							
Minimum/Maximum start-up voltage (V)					22/60							
Maximum input current (A)	4 × 14				4 × 15				4 × 16			
Maximum input short circuit current (A)					4 × 20							
Number of MPPTs					2							
Number of inputs per MPPT					2							
Output Data (AC)												
Maximum continuous output power (VA)	1600				1800				2000			
Maximum continuous output current (A)	7.69	7.27	6.96	6.67	8.65	8.18	7.83	7.50	9.62	9.09	8.70	8.33
Nominal output voltage/range (V)*	208/ 180-275	220/ 180-275	230/ 180-275	240 180-275	208/ 180-275	220/ 180-275	230/ 180-275	240 180-275	208/ 180-275	220/ 180-275	230/ 180-275	240 180-275
Nominal frequency/range (Hz)*	50/45-55 or 60/55-65											
Adjustable power factor (@nominal power)	> 0.99 default 0.8 leading ... 0.8 lagging											
Total harmonic distortion (@nominal power)	< 3%											
Maximum units per 10 AWG branch**	4	4	4	4	3	3	4	4	3	3	3	3
Efficiency												
CEC peak efficiency	96.70%				96.50%				96.50%			
Nominal MPPT efficiency					99.80%							
Night power consumption (mW)					< 50							
Mechanical Data												
Ambient temperature range (°F)	-40 to +149 (-40 to +65°C)											
Dimensions (W × H × D [inch])	12.20 × 7.28 × 1.60 (310 × 185 × 40.6 mm)											
Weight (lbs)	9.92 (4.5 kg)											
Enclosure rating	Outdoor-NEMA 6 (IP67)											
Cooling	Natural convection – No fans											
Features												
Communication	Wi-Fi											
Topology	Galvanically Isolated HF Transformer											
Monitoring	S-Miles Cloud (Hoymiles Monitoring Platform)											
Compliance	UL 1741, ABNT NBR 16150:2013, ABNT NBR 16149:2013											

* : Nominal voltage/frequency range can vary depending on local requirements.

** : Refer to local requirements for exact number of microinverters per branch.



Certificate of Compliance

Certificate: 80112409

Master Contract: 261002

Project: 80155384

Date Issued: 2023-09-27

Issued To: Hoymiles Power Electronics Inc.
No.18 Kangjing Road,
Hangzhou, Zhejiang, 310015
China

Attention: Steven Zhang

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

Issued by: *Henry Huan*
Henry Huan



PRODUCTS

CLASS - C531109 - POWER SUPPLIES - Distributed Generation Power Systems Equipment
CLASS - C531189 - POWER SUPPLIES - Distributed Generation Power Systems Equipment - Certified to U.S. Standards

Utility Interactive Inverter Model: HMS-1600D-4T, HMS-1800D-4T, HMS-2000D-4T, HMS-2000DW-4T, HMS-1800DW-4T, HMS-1600DW-4T rack mounted.

For details related to rating, size, configuration, etc., reference should be made to the CSA Certification Record, Certificate of Compliance Annex A or the Descriptive Report.

APPLICABLE REQUIREMENTS



Certificate: 80112409
Project: 80155384

Master Contract: 261002
Date Issued: 2023-09-27

-
- CSA-C22.2 No. 107.1-16 - Power conversion equipment
*UL Std No. 1741-3rd - Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources (Third Edition, Dated September 28, 2021)

*Note: Conformity to UL 1741-Third Edition (Dated September 28, 2021) includes compliance with applicable requirements of IEEE 1547-2003(R2008), IEEE 1547.1-2005 (R2011).

*Note: This product conforms with Photovoltaic Rapid Shutdown Requirements of NEC-2017 and NEC-2020 Article 690.12 and CEC-2021 Sec 64-218, for AC and DC conductors, when installed according to manufacturer's instructions.

Notes:

Products certified under Class C531109 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). www.scc.ca





Supplement to Certificate of Compliance

Certificate: 80112409

Master Contract: 261002

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

Product Certification History

Project	Date	Description
80155384	2023-09-27	Update report 80155384 to add new model, change model name and Model HMS-2000D-4T& HMS-2000DW-4T input current certified form 15A to 16A.
80112409	2022-06-14	Original certification to Utility Interactive Inverter, HM-1600T-S, HM-1800T-S, HM-2000T-S. (C/US)



Product Service

CERTIFICATE

No. Z2 070321 0097 Rev. 54

Holder of Certificate: Trina Solar Co., Ltd.

No. 2 TianHe Road, Trina PV Industrial Park
New District
213031 Changzhou City, Jiangsu Province
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:**Product:**

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
Mono & Poly Crystalline Silicon Photovoltaic (PV) Module(s)

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the Testing, Certification, Validation and Verification Regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 64290170581769**Valid until:** 2029-05-06**Date,** 2024-05-13

(Zhulin Zhang)



CERTIFICATE

No. Z2 070321 0097 Rev. 54

Model(s):

mono series with 157 x 157 (mm) and 156.75 x 156.75 (mm) solar cells:

72 cells:

TSM-xxxDEG14(II), TSM-xxxDEG14.05(II), TSM-xxxDEG14.25(II),
TSM-xxxDEG14.07(II), TSM-xxxDEG14.20(II),
TSM-xxxDEG14.27(II), TSM-xxxDEG14.28(II),
TSM-xxxDEG14.29(II), TSM-xxxDEG14.40(II),
TSM-xxxDEG14.47(II) (xxx=330-390, in steps of 5).

60 cells:

TSM-xxxDEG5(II), TSM-xxxDEG5.05(II), TSM-xxxDEG5.25(II), TSM-
xxxDEG5.07(II), TSM-xxxDEG5.20(II), TSM-xxxDEG5.27(II), TSM-
xxxDEG5.28(II), TSM-xxxDEG5.29(II), TSM-xxxDEG5.40(II), TSM-
xxxDEG5.47(II) (xxx=275-325, in steps of 5).

mono series with 158.75 x 158.75 (mm) solar cells:

72 cells:

TSM-xxxDEG15(II), TSM-xxxDEG15.05(II), TSM-xxxDEG15.25(II), TSM-
xxxDEG15.07(II), TSM-xxxDEG15.20(II),
TSM-xxxDEG15.27(II), TSM-xxxDEG15.28(II),
TSM-xxxDEG15.29(II), TSM-xxxDEG15.40(II),
TSM-xxxDEG15.47(II) (xxx=330-380, in steps of 5).

60 cells:

TSM-xxxDEG6(II), TSM-xxxDEG6.05(II), TSM-xxxDEG6.25(II), TSM-
xxxDEG6.07(II), TSM-xxxDEG6.20(II), TSM-xxxDEG6.27(II), TSM-
xxxDEG6.28(II), TSM-xxxDEG6.29(II), TSM-xxxDEG6.40(II), TSM-
xxxDEG6.47(II) (xxx=275-315, in steps of 5).

mono series with 157 x 157 (mm) bifacial cell:

72 cells:

TSM-xxxDEG14C(II), TSM-xxxDEG14C.05(II),
TSM-xxxDEG14C.25(II), TSM-xxxDEG14C.07(II),
TSM-xxxDEG14C.20(II), TSM-xxxDEG14C.27(II),
TSM-xxxDEG14C.28(II), TSM-xxxDEG14C.29(II)
(xxx=335-370, in steps of 5).

60 cells:

TSM-xxxDEG5C(II), TSM-xxxDEG5C.05(II),
TSM-xxxDEG5C.25(II), TSM-xxxDEG5C.07(II),
TSM-xxxDEG5C.20(II), TSM-xxxDEG5C.27(II),
TSM-xxxDEG5C.28(II), TSM-xxxDEG5C.29(II)
(xxx=285-305, in steps of 5).

mono series with 158.75 x 158.75 (mm) bifacial cell:

72 cells:

TSM-xxxDEG15C(II), TSM-xxxDEG15C.05(II),
TSM-xxxDEG15C.25(II), TSM-xxxDEG15C.07(II),
TSM-xxxDEG15C.20(II), TSM-xxxDEG15C.27(II),
TSM-xxxDEG15C.28(II), TSM-xxxDEG15C.29(II)
(xxx=335-350, in steps of 5).

60 cells:

TSM-xxxDEG6C(II), TSM-xxxDEG6C.05(II),
TSM-xxxDEG6C.25(II), TSM-xxxDEG6C.07(II),
TSM-xxxDEG6C.20(II), TSM-xxxDEG6C.27(II),
TSM-xxxDEG6C.28(II), TSM-xxxDEG6C.29(II)
(xxx=285-295, in steps of 5).

mono series with 157 x 78.5 (mm) half cutting cell:

144 cells:

TSM-xxxDEG14H(II), TSM-xxxDEG14H.05(II),
TSM-xxxDEG14H.25(II), TSM-xxxDEG14H.07(II),
TSM-xxxDEG14H.20(II), TSM-xxxDEG14H.27(II),
TSM-xxxDEG14H.28(II), TSM-xxxDEG14H.29(II),
TSM-xxxDEG14H.40(II), TSM-xxxDEG14H.47(II)



Product Service

CERTIFICATE

No. Z2 070321 0097 Rev. 54

(xxx=345-395, in steps of 5).

120 cells:

TSM-xxxDEG5H(II), TSM-xxxDEG5H.05(II),
TSM-xxxDEG5H.25(II), TSM-xxxDEG5H.07(II),
TSM-xxxDEG5H.20(II), TSM-xxxDEG5H.27(II),
TSM-xxxDEG5H.28(II), TSM-xxxDEG5H.29(II),
TSM-xxxDEG5H.40(II), TSM-xxxDEG5H.47(II)

(xxx=290-330, in steps of 5).

mono series with 158.75 x 79.375 (mm) half cutting cell:

144 cells:

TSM-xxxDEG15H(II), TSM-xxxDEG15H.05(II),
TSM-xxxDEG15H.25(II), TSM-xxxDEG15H.07(II),
TSM-xxxDEG15H.20(II), TSM-xxxDEG15H.27(II),
TSM-xxxDEG15H.28(II), TSM-xxxDEG15H.29(II),
TSM-xxxDEG15H.40(II), TSM-xxxDEG15H.47(II)

(xxx=380-410, in steps of 5).

120 cells:

TSM-xxxDEG6H(II), TSM-xxxDEG6H.05(II),
TSM-xxxDEG6H.25(II), TSM-xxxDEG6H.07(II),
TSM-xxxDEG6H.20(II), TSM-xxxDEG6H.27(II),
TSM-xxxDEG6H.28(II), TSM-xxxDEG6H.29(II),
TSM-xxxDEG6H.40(II), TSM-xxxDEG6H.47(II)

(xxx=310-340, in steps of 5).

mono series with 157 x 78.5 (mm) half cutting MBB cell:

144 cells:

TSM-xxxDEG14M(II), TSM-xxxDEG14M.05(II),
TSM-xxxDEG14M.25(II), TSM-xxxDEG14M.07(II),
TSM-xxxDEG14M.20(II), TSM-xxxDEG14M.27(II),
TSM-xxxDEG14M.28(II), TSM-xxxDEG14M.29(II),
TSM-xxxDEG14M.40(II), TSM-xxxDEG14M.47(II)

(xxx=345-385, in steps of 5).

120 cells:

TSM-xxxDEG5M(II), TSM-xxxDEG5M.05(II),
TSM-xxxDEG5M.25(II), TSM-xxxDEG5M.07(II),
TSM-xxxDEG5M.20(II), TSM-xxxDEG5M.27(II),
TSM-xxxDEG5M.28(II), TSM-xxxDEG5M.29(II),
TSM-xxxDEG5M.40(II), TSM-xxxDEG5M.47(II)

(xxx=290-320, in steps of 5).

mono series with 158.75 x 79.375 (mm) half cutting MBB cells:

144 cells:

TSM-xxxDEG15M(II), TSM-xxxDEG15M.07(II),
TSM-xxxDEG15M.20(II), TSM-xxxDEG15M.07(II),
TSM-xxxDEG15M.20(II), TSM-xxxDEG15M.27(II),
TSM-xxxDEG15M.28(II), TSM-xxxDEG15M.29(II),
TSM-xxxDEG15M.40(II), TSM-xxxDEG15M.47(II)

(xxx=350-420, in steps of 5).

120 cells:

TSM-xxxDEG6M(II), TSM-xxxDEG6M.05(II),
TSM-xxxDEG6M.25(II), TSM-xxxDEG6M.07(II),
TSM-xxxDEG6M.20(II), TSM-xxxDEG6M.27(II),
TSM-xxxDEG6M.28(II), TSM-xxxDEG6M.29(II),
TSM-xxxDEG6M.40(II), TSM-xxxDEG6M.47(II)

(xxx=295-350, in steps of 5).

mono series with 166.0 x 83.0 (mm) half cutting MBB cells:

144 cells:

TSM-xxxDEG17M(II), TSM-xxxDEG17M.07(II),
TSM-xxxDEG17M.25(II), TSM-xxxDEG17M.07(II),
TSM-xxxDEG17M.20(II), TSM-xxxDEG17M.27(II),



Product Service

CERTIFICATE

No. Z2 070321 0097 Rev. 54

TSM-xxxDEG17M.28(II), TSM-xxxDEG17M.29(II),
TSM-xxxDEG17M.40(II), TSM-xxxDEG17M.47(II)
(xxx=425-460, in steps of 5).

120 cells:

TSM-xxxDEG8M(II), TSM-xxxDEG8M.05(II),
TSM-xxxDEG8M.25(II), TSM-xxxDEG8M.07(II),
TSM-xxxDEG8M.20(II), TSM-xxxDEG8M.27(II),
TSM-xxxDEG8M.28(II), TSM-xxxDEG8M.29(II),
TSM-xxxDEG8M.40(II), TSM-xxxDEG8M.47(II)
(xxx=355-380, in steps of 5).

mono series with 157 x 78.5 (mm) half cutting bifacial cell:

144 cells:

TSM-xxxDEG14HC(II), TSM-xxxDEG14HC.05(II),
TSM-xxxDEG14HC.25(II), TSM-xxxDEG14HC.07(II),
TSM-xxxDEG14HC.20(II), TSM-xxxDEG14HC.27(II),
TSM-xxxDEG14HC.28(II), TSM-xxxDEG14HC.29(II)
(xxx=350-395, in steps of 5).

120 cells:

TSM-xxxDEG5HC(II), TSM-xxxDEG5HC.05(II),
TSM-xxxDEG5HC.25(II), TSM-xxxDEG5HC.07(II),
TSM-xxxDEG5HC.20(II), TSM-xxxDEG5HC.27(II),
TSM-xxxDEG5HC.28(II), TSM-xxxDEG5HC.29(II)
(xxx=295-330, in steps of 5).

mono series with 158.75 x 79.375 (mm) half cutting bifacial cell:

144 cells:

TSM-xxxDEG15HC(II), TSM-xxxDEG15HC.05(II),
TSM-xxxDEG15HC.25(II), TSM-xxxDEG15HC.07(II),
TSM-xxxDEG15HC.20(II), TSM-xxxDEG15HC.27(II),
TSM-xxxDEG15HC.28(II), TSM-xxxDEG15HC.29(II)
(xxx=350-410, in steps of 5).

120 cells:

TSM-xxxDEG6HC(II), TSM-xxxDEG6HC.05(II),
TSM-xxxDEG6HC.25(II), TSM-xxxDEG6HC.07(II),
TSM-xxxDEG6HC.20(II), TSM-xxxDEG6HC.27(II),
TSM-xxxDEG6HC.28(II), TSM-xxxDEG6HC.29(II)
(xxx=295-340, in steps of 5).

mono series with 157 x 78.5 (mm) half cutting MBB bifacial cell:

144 cells:

TSM-xxxDEG14MC(II), TSM-xxxDEG14MC.05(II),
TSM-xxxDEG14MC.25(II), TSM-xxxDEG14MC.07(II),
TSM-xxxDEG14MC.20(II), TSM-xxxDEG14MC.27(II),
TSM-xxxDEG14MC.28(II), TSM-xxxDEG14MC.29(II)
(xxx=350-395, in steps of 5).

120 cells:

TSM-xxxDEG5MC(II), TSM-xxxDEG5MC.05(II), TSM-
xxxDEG5MC.25(II), TSM-xxxDEG5MC.07(II), TSM-xxxDEG5MC.20(II),
TSM-xxxDEG5MC.27(II), TSM-xxxDEG5MC.28(II), TSM-
xxxDEG5MC.29(II)
(xxx=295-330, in steps of 5).

mono series with 158.75 x 79.375 (mm) half cutting bifacial cell:

144 cells:

TSM-xxxDEG15MC(II), TSM-xxxDEG15MC.05(II), TSM-
xxxDEG15MC.25(II), TSM-xxxDEG15MC.07(II), TSM-
xxxDEG15MC.20(II), TSM-xxxDEG15MC.27(II), TSM-
xxxDEG15MC.28(II), TSM-xxxDEG15MC.29(II)
(xxx=350-425, in steps of 5).

120 cells:

TSM-xxxDEG6MC(II), TSM-xxxDEG6MC.05(II), TSM-



Product Service

CERTIFICATE

No. Z2 070321 0097 Rev. 54

xxxDEG6MC.25(II), TSM-xxxDEG6MC.07(II), TSM-xxxDEG6MC.20(II),
TSM-xxxDEG6MC.27(II), TSM-xxxDEG6MC.28(II), TSM-
xxxDEG6MC.29(II)
(xxx=295-350, in steps of 5).

mono series with 166.0 x 83.0 (mm) half cutting bifacial cell:
144 cells:

TSM-xxxDEG17MC(II), TSM-xxxDEG17MC.05(II), TSM-
xxxDEG17MC.25(II), TSM-xxxDEG17MC.07(II), TSM-
xxxDEG17MC.20(II), TSM-xxxDEG17MC.27(II), TSM-
xxxDEG17MC.28(II), TSM-xxxDEG17MC.29(II)
(xxx=425-460, in steps of 5).

120 cells:

TSM-xxxDEG8MC(II), TSM-xxxDEG8MC.05(II), TSM-
xxxDEG8MC.25(II), TSM-xxxDEG8MC.07(II), TSM-xxxDEG8MC.20(II),
TSM-xxxDEG8MC.27(II), TSM-xxxDEG8MC.28(II), TSM-
xxxDEG8MC.29(II)
(xxx=355-380, in steps of 5).

mono series with 210.0 x 70.0 (mm) 1/3 cutting MBB bifacial cell:
150 cells:

TSM-xxxDEG18MC(II), TSM-xxxDEG18MC.05(II),
TSM-xxxDEG18MC.25(II), TSM-xxxDEG18MC.07(II),
TSM-xxxDEG18MC.20(II), TSM-xxxDEG18MC.27(II),
TSM-xxxDEG18MC.28(II), TSM-xxxDEG18MC.29(II),
TSM-xxxDEG18MC.20W(II) (xxx=460-510, in steps of 5).

120 cells:

TSM-xxxDEG9C.20, TSM-xxxDEG9C.25,
TSM-xxxDEG9C.27, TSM-xxxDEG9C.28,
TSM-xxxDEG9C.29
(xxx=370-405, in steps of 5).

mono series with 210.0 x 70.0 (mm) 1/3 cutting MBB bifacial cell:
(Module Type for rear side with white EVA or Glass white)

150 cells:

TSM-xxxDEG18M(II), TSM-xxxDEG18M.05(II),
TSM-xxxDEG18M.25(II), TSM-xxxDEG18M.07(II),
TSM-xxxDEG18M.20(II), TSM-xxxDEG18M.27(II),
TSM-xxxDEG18M.28(II), TSM-xxxDEG18M.29(II)
(xxx=460-510, in steps of 5).

120 cells:

TSM-xxxDEG9.20, TSM-xxxDEG9.25,
TSM-xxxDEG9.27, TSM-xxxDEG9.28,
TSM-xxxDEG9.29
(xxx=370-405, in steps of 5).

mono series with 166 x 83 (mm) half cutting MBB bifacial cell
(for cells splicing technology):

156 cells:

TSM-xxxDEG17XC.25(II), TSM-xxxDEG17XC.20(II),
TSM-xxxDEG17XC.27(II), TSM-xxxDEG17XC.28(II),
TSM-xxxDEG17XC.29(II) (xxx=445-490, in steps of 5).

mono series with 166 x 83 (mm) half cutting MBB bifacial cell
(for cells splicing technology)

(Module Type for rear side with white EVA or Glass white):

156 cells:

TSM-xxxDEG17X.25(II), TSM-xxxDEG17X.20(II),
TSM-xxxDEG17X.27(II), TSM-xxxDEG17X.28(II),
TSM-xxxDEG17X.29(II) (xxx=445-490, in steps of 5).

mono series with 210.0 x 105.0 (mm) half cutting MBB bifacial cell:



Product Service

CERTIFICATE

No. Z2 070321 0097 Rev. 54

120 cells:

TSM-xxxDEG20C.20, TSM-xxxDEG20C.25,
TSM-xxxDEG20C.27, TSM-xxxDEG20C.28,
TSM-xxxDEG20C.29, TSM-xxxDEG20C.20W
TSM-xxxDEG20C.28W, TSM-xxxDEG20C.70,
(xxx=570-610, in steps of 5).

110 cells:

TSM-xxxDEG19C.20, TSM-xxxDEG19C.25,
TSM-xxxDEG19C.27, TSM-xxxDEG19C.28,
TSM-xxxDEG19C.29, TSM-xxxDEG19C.20W
(xxx=525-555, in steps of 5).

132 cells:

TSM-xxxDEG21C.20, TSM-xxxDEG21C.25,
TSM-xxxDEG21C.27, TSM-xxxDEG21C.28,
TSM-xxxDEG21C.29, TSM-xxxDEG21C.20W,
TSM-xxxDEG21C.70, TSM-xxxDEG21C.80
(xxx=625-675, in steps of 5).

mono series with 210.0 x 105.0 (mm) half cutting MBB bifacial cell:
(Module Type for rear side with white EVA or Glass white)

120 cells:

TSM-xxxDEG20.20, TSM-xxxDEG20.25,
TSM-xxxDEG20.27, TSM-xxxDEG20.28,
TSM-xxxDEG20.29 (xxx=575-605, in steps of 5).

110 cells:

TSM-xxxDEG19.20, TSM-xxxDEG19.25,
TSM-xxxDEG19.27, TSM-xxxDEG19.28,
TSM-xxxDEG19.29 (xxx=525-555, in steps of 5).

mono series with 182.0 x 91.0/91.875 (mm) half cutting MBB bifacial cell:

144 cells:

TSM-xxxDEG18C.20, TSM-xxxDEG18C.25,
TSM-xxxDEG18C.27, TSM-xxxDEG18C.28,
TSM-xxxDEG18C.29, TSM-xxxDEG18C.20W
(xxx=520-555, in steps of 5).

120 cells:

TSM-xxxDEG10C.20, TSM-xxxDEG10C.25,
TSM-xxxDEG10C.27, TSM-xxxDEG10C.28,
TSM-xxxDEG10C.29 (xxx=425-450, in steps of 5).

mono series with 182.0 x 91.0/91.875 (mm) half cutting MBB bifacial cell:

(Module Type for rear side with white EVA or Glass white)

144 cells:

TSM-xxxDEG18.20, TSM-xxxDEG18.25,
TSM-xxxDEG18.27, TSM-xxxDEG18.28,
TSM-xxxDEG18.29 (xxx=520-555, in steps of 5).

120 cells:

TSM-xxxDEG10.20, TSM-xxxDEG10.25,
TSM-xxxDEG10.27, TSM-xxxDEG10.28,
TSM-xxxDEG10.29 (xxx=425-450, in steps of 5).

mono series with 182 x 105 (mm) half cutting MBB bifacial cell:

132 cells:

TSM-xxxDEG19RC.20, TSM-xxxDEG19RC.25,
TSM-xxxDEG19RC.27, TSM-xxxDEG19RC.28,
TSM-xxxDEG19RC.29, TSM-xxxDEG19RC.B0,
TSM-xxxDEG19RC.B5, TSM-xxxDEG19RC.B7,
TSM-xxxDEG19RC.B8, TSM-xxxDEG19RC.B9,
TSM-xxxDEG19RC.20W, TSM-xxxDEG19RC.70,
TSM-xxxDEG19RC.80 (xxx=540-590, in steps of 5)



Product Service

CERTIFICATE

No. Z2 070321 0097 Rev. 54

mono series with 182 x 105 (mm) half cutting MBB bifacial cell:
(Module Type for rear side with white EVA or Glass white)

132 cells:

TSM-xxxDEG19R.20, TSM-xxxDEG19R.25, TSM-xxxDEG19R.27,
TSM-xxxDEG19R.28, TSM-xxxDEG19R.29, TSM-xxxDEG19R.B0,
TSM-xxxDEG19R.B5, TSM-xxxDEG19R.B7, TSM-xxxDEG19R.B8,
TSM-xxxDEG19R.B9, (xxx=540-590, in steps of 5)

mono series with 182 x 70 (mm) 1/3 cutting MBB bifacial cell:

144 cells:

TSM-xxxDEG9RC.B0, TSM-xxxDEG9RC.B5,
TSM-xxxDEG9RC.B7, TSM-xxxDEG9RC.B8,
TSM-xxxDEG9RC.B9, TSM-xxxDEG9RC.20,
TSM-xxxDEG9RC.25, TSM-xxxDEG9RC.28,
TSM-xxxDEG9RC.27, TSM-xxxDEG9RC.29,
TSM-xxxDEG9RC.27W (xxx=395-435, in steps of 5)

mono series with 182 x 70 (mm) 1/3 cutting MBB bifacial cell:
(Module Type for rear side with white EVA or Glass white)

144 cells:

TSM-xxxDEG9R.B0, TSM-xxxDEG9R.B5, TSM-xxxDEG9R.B7,
TSM-xxxDEG9R.B8, TSM-xxxDEG9R.B9, TSM-xxxDEG9R.20,
TSM-xxxDEG9R.25, TSM-xxxDEG9R.27, TSM-xxxDEG9R.28,
TSM-xxxDEG9R.29, TSM-xxxDEG9R.20W, TSM-xxxDEG9R.28W
(xxx=395-435, in steps of 5)

mono series with 158.75 x 52.9 (mm) 1/3 cutting MBB bifacial cell:

252 cells:

TSM-xxxDEG15VC.20(II), TSM-xxxDEG15VC.25(II),
TSM-xxxDEG15VC.27(II), TSM-xxxDEG15VC.28(II),
TSM-xxxDEG15VC.29(II) (xxx=465-490, in steps of 5).

mono series with 157 x 157 (mm) N type MBB bifacial cell:

72 cells:

TSM-xxxNEG14C(II), TSM-xxxNEG14C.05(II),
TSM-xxxNEG14C.25(II), TSM-xxxNEG14C.07(II),
TSM-xxxNEG14C.20(II), TSM-xxxNEG14C.27(II),
TSM-xxxNEG14C.28(II), TSM-xxxNEG14C.29(II)
(xxx=350-370, in steps of 5).

60 cells:

TSM-xxxNEG5C(II), TSM-xxxNEG5C.05(II), TSM-xxxNEG5C.25(II),
TSM-xxxNEG5C.07(II), TSM-xxxNEG5C.20(II), TSM-xxxNEG5C.27(II),
TSM-xxxNEG5C.28(II), TSM-xxxNEG5C.29(II) (xxx=295-305, in steps
of 5).

mono series with 158.75 x 158.75 (mm) N type MBB bifacial cell:

72 cells:

TSM-xxxNEG15C(II), TSM-xxxNEG15C.05(II),
TSM-xxxNEG15C.25(II), TSM-xxxNEG15C.07(II),
TSM-xxxNEG15C.20(II), TSM-xxxNEG15C.27(II),
TSM-xxxNEG15C.28(II), TSM-xxxNEG15C.29(II)
(xxx=350-370, in steps of 5).

60 cells:

TSM-xxxNEG6C(II), TSM-xxxNEG6C.05(II), TSM-xxxNEG6C.25(II),
TSM-xxxNEG6C.07(II), TSM-xxxNEG6C.20(II), TSM-xxxNEG6C.27(II),
TSM-xxxNEG6C.28(II), TSM-xxxNEG6C.29(II) (xxx=295-305, in steps
of 5).

mono series with 161.7 x 161.7 (mm) N type MBB bifacial cell:

72 cells:

TSM-xxxNEG16C(II), TSM-xxxNEG16C.05(II),



Product Service

CERTIFICATE

No. Z2 070321 0097 Rev. 54

TSM-xxxNEG16C.25(II), TSM-xxxNEG16C.07(II),
TSM-xxxNEG16C.20(II), TSM-xxxNEG16C.27(II),
TSM-xxxNEG16C.28(II), TSM-xxxNEG16C.29(II)
(xxx=350-370, in steps of 5).

60 cells:

TSM-xxxNEG7C(II), TSM-xxxNEG7C.05(II), TSM-xxxNEG7C.25(II),
TSM-xxxNEG7C.07(II), TSM-xxxNEG7C.20(II), TSM-xxxNEG7C.27(II),
TSM-xxxNEG7C.28(II), TSM-xxxNEG7C.29(II) (xxx=295-305, in steps
of 5).

mono series with 157 x 78.5 (mm) half cutting N type MBB bifacial
cell:

144 cells:

TSM-xxxNEG14MC(II), TSM-xxxNEG14MC.05(II),
TSM-xxxNEG14MC.25(II), TSM-xxxNEG14MC.07(II),
TSM-xxxNEG14MC.20(II), TSM-xxxNEG14MC.27(II),
TSM-xxxNEG14MC.28(II), TSM-xxxNEG14MC.29(II)
(xxx=350-380, in steps of 5).

120 cells:

TSM-xxxNEG5MC(II), TSM-xxxNEG5MC.05(II),
TSM-xxxNEG5MC.25(II), TSM-xxxNEG5MC.07(II),
TSM-xxxNEG5MC.20(II), TSM-xxxNEG5MC.27(II),
TSM-xxxNEG5MC.28(II), TSM-xxxNEG5MC.29(II)
(xxx=295-315, in steps of 5).

mono series with 158.75 x 79.375 (mm) half cutting N type MBB
bifacial cell:

144 cells:

TSM-xxxNEG15MC(II), TSM-xxxNEG15MC.05(II),
TSM-xxxNEG15MC.25(II), TSM-xxxNEG15MC.07(II),
TSM-xxxNEG15MC.20(II), TSM-xxxNEG15MC.27(II),
TSM-xxxNEG15MC.28(II), TSM-xxxNEG15MC.29(II)
(xxx=350-420, in steps of 5).

120 cells:

TSM-xxxNEG6MC(II), TSM-xxxNEG6MC.05(II),
TSM-xxxNEG6MC.25(II), TSM-xxxNEG6MC.07(II),
TSM-xxxNEG6MC.20(II), TSM-xxxNEG6MC.27(II),
TSM-xxxNEG6MC.28(II), TSM-xxxNEG6MC.29(II)
(xxx=295-330, in steps of 5).

mono series with 158.75 x 79.375 (mm) half cutting N type MBB
bifacial cell (Module Type for rear side with white EVA or Glass
white):

144 cells:

TSM-xxxNEG15M(II), TSM-xxxNEG15M.05(II),
TSM-xxxNEG15M.25(II), TSM-xxxNEG15M.07(II),
TSM-xxxNEG15M.20(II), TSM-xxxNEG15M.27(II),
TSM-xxxNEG15M.28(II), TSM-xxxNEG15M.29(II)
(xxx=350-420, in steps of 5).

120 cells:

TSM-xxxNEG6M(II), TSM-xxxNEG6M.05(II), TSM-xxxNEG6M.25(II),
TSM-xxxNEG6M.07(II), TSM-xxxNEG6M.20(II), TSM-xxxNEG6M.27(II),
TSM-xxxNEG6M.28(II), TSM-xxxNEG6M.29(II) (xxx=295-345, in steps
of 5).

mono series with 161.7 x 80.85 (mm) half cutting N type MBB bifacial
cell (Module Type for rear side with white EVA or white Glass):

144 cells:

TSM-xxxNEG16M(II), TSM-xxxNEG16M.05(II),
TSM-xxxNEG16M.25(II), TSM-xxxNEG16M.07(II),
TSM-xxxNEG16M.20(II), TSM-xxxNEG16M.27(II),
TSM-xxxNEG16M.28(II), TSM-xxxNEG16M.29(II)



Product Service

CERTIFICATE

No. Z2 070321 0097 Rev. 54

(xxx=390-435, in steps of 5).

120 cells:

TSM-xxxNEG7M(II), TSM-xxxNEG7M.05(II),
TSM-xxxNEG7M.25(II), TSM-xxxNEG7M.07(II),
TSM-xxxNEG7M.20(II), TSM-xxxNEG7MC.27(II),
TSM-xxxNEG7M.28(II), TSM-xxxNEG7M.29(II)

(xxx=325-360, in steps of 5).

mono series with 161.7 x 80.85 (mm) half cutting N type MBB bifacial
cell:

144 cells:

TSM-xxxNEG16MC(II), TSM-xxxNEG16MC.05(II),
TSM-xxxNEG16MC.25(II), TSM-xxxNEG16MC.07(II),
TSM-xxxNEG16MC.20(II), TSM-xxxNEG16MC.27(II),
TSM-xxxNEG16MC.28(II), TSM-xxxNEG16MC.29(II)

(xxx=390-415, in steps of 5).

120 cells:

TSM-xxxNEG7MC(II), TSM-xxxNEG7MC.05(II),
TSM-xxxNEG7MC.25(II), TSM-xxxNEG7MC.07(II),
TSM-xxxNEG7MC.20(II), TSM-xxxNEG7MC.27(II),
TSM-xxxNEG7MC.28(II), TSM-xxxNEG7MC.29(II)

(xxx=325-345, in steps of 5).

mono series with 210.0 x 70.0 (mm) N type 1/3 cutting MBB bifacial
cell:

150 cells:

TSM-xxxNEG18MC.20(II), TSM-xxxNEG18MC.25(II),
TSM-xxxNEG18MC.27(II), TSM-xxxNEG18MC.28(II),
TSM-xxxNEG18MC.29(II), TSM-xxxNEG18MC.30(II)

(xxx=500-520, in steps of 5).

120 cells:

TSM-xxxNEG9C.20, TSM-xxxNEG9C.25,
TSM-xxxNEG9C.27, TSM-xxxNEG9C.28,
TSM-xxxNEG9C.29

(xxx=390-430, in steps of 5).

mono series with 210.0 x 70.0 (mm) N type 1/3 cutting MBB bifacial
cell:

(Module Type for rear side with white EVA or Glass white)

120 cells:

TSM-xxxNEG9.20, TSM-xxxNEG9.25,
TSM-xxxNEG9.27, TSM-xxxNEG9.28,
TSM-xxxNEG9.29

(xxx=390-430, in steps of 5).

mono series with 210.0 x 105.0 (mm) half cutting N type MBB bifacial
cell:

120 cells:

TSM-xxxNEG20C.20, TSM-xxxNEG20C.25,
TSM-xxxNEG20C.27, TSM-xxxNEG20C.28,
TSM-xxxNEG20C.29, TSM-xxxNEG20C.70,
TSM-xxxNEG20C.C0 (xxx=580-655, in steps of 5).

110 cells:

TSM-xxxNEG19C.20, TSM-xxxNEG19C.25,
TSM-xxxNEG19C.27, TSM-xxxNEG19C.28,
TSM-xxxNEG19C.29 (xxx=530-570, in steps of 5).

132 cells:

TSM-xxxNEG21C.20, TSM-xxxNEG21C.25,
TSM-xxxNEG21C.27, TSM-xxxNEG21C.28,
TSM-xxxNEG21C.29, TSM-xxxNEG21C.70,
TSM-xxxNEG21C.80 (xxx=635-725, in steps of 5),

64 cells:



Product Service

CERTIFICATE

No. Z2 070321 0097 Rev. 54

TSM-xxxNEG9M5C.26(xxx=305-335, in steps of 5).

56 cells:

TSM-xxxNEG9M4C.26(xxx=265-290, in steps of 5).

mono series with 182.0 x 70.0 (mm) N type 1/3 cutting MBB bifacial cell:

144 cells:

TSM-xxxNEG9RC.20, TSM-xxxNEG9RC.25,
 TSM-xxxNEG9RC.28, TSM-xxxNEG9RC.27,
 TSM-xxxNEG9RC.29, TSM-xxxNEG9RC.B0,
 TSM-xxxNEG9RC.B5, TSM-xxxNEG9RC.B8,
 TSM-xxxNEG9RC.B7, TSM-xxxNEG9RC.B9,
 (xxx=375-460, in steps of 5).

mono series with 182.0 x 70.0 (mm) N type 1/3 cutting MBB bifacial cell:

(Module Type for rear side with white EVA or Glass white)

144 cells:

TSM-xxxNEG9R.20, TSM-xxxNEG9R.25,
 TSM-xxxNEG9R.28, TSM-xxxNEG9R.27,
 TSM-xxxNEG9R.29, TSM-xxxNEG9R.B0,
 TSM-xxxNEG9R.B5, TSM-xxxNEG9R.B8,
 TSM-xxxNEG9R.B7, TSM-xxxNEG9R.B9,
 (xxx=375-460, in steps of 5).

mono series with 182.0 x 105.0 (mm) half cutting N type MBB bifacial cell:

132 cells:

TSM-xxxNEG19RC.20, TSM-xxxNEG19RC.25,
 TSM-xxxNEG19RC.27, TSM-xxxNEG19RC.28,
 TSM-xxxNEG19RC.29, TSM-xxxNEG19RC.70,
 TSM-xxxNEG19RC.80 (xxx=525-625, in steps of 5).

mono series with 182.0 x 105.0 (mm) half cutting N type MBB bifacial cell:

(Module Type for rear side with white EVA or Glass white)

132 cells:

TSM-xxxNEG19R.20, TSM-xxxNEG19R.25,
 TSM-xxxNEG19R.27, TSM-xxxNEG19R.28,
 TSM-xxxNEG19R.29, (xxx=525-625, in steps of 5).

108 cells

TSM-xxxNEG18R.20, TSM-xxxNEG18R.25,
 TSM-xxxNEG18R.27, TSM-xxxNEG18R.28,
 TSM-xxxNEG18R.29, (xxx=470-510, in steps of 5)

mono series with 182.0 x 91.0 (mm) or 182.2 x 91.875 (mm) half cutting N type MBB bifacial cell:

144 cells:

TSM-xxxNEG18C.20, TSM-xxxNEG18C.25,
 TSM-xxxNEG18C.27, TSM-xxxNEG18C.28,
 TSM-xxxNEG18C.29, (xxx=555-595, in steps of 5)

mono series with 182.2 x 91.875(mm) half cutting N type MBB bifacial cell:

156 cells:

TSM-xxxNEG20MC.20, TSM-xxxNEG20MC.25,
 TSM-xxxNEG20MC.27, TSM-xxxNEG20MC.28,
 TSM-xxxNEG20MC.29, (xxx=600-635, in steps of 5)



Product Service

CERTIFICATE

No. Z2 070321 0097 Rev. 54

mono series with 158.75 x 79.375 (mm) half cutting N type MBB bifacial cell (for cells splicing technology):

156 cells:

TSM-xxxNEG15XC(II), TSM-xxxNEG15XC.05(II),
TSM-xxxNEG15XC.25(II), TSM-xxxNEG15XC.07(II),
TSM-xxxNEG15XC.20(II), TSM-xxxNEG15XC.27(II),
TSM-xxxNEG15XC.28(II), TSM-xxxNEG15XC.29(II)
(xxx=425-445, in steps of 5).

mono series with 158.75 x 79.375 (mm) half cutting MBB bifacial HJT cell:

(Horizontal version: the long side of the cell is parallel to the long side of the module)

156 cells:

TSM-xxxHEG15XKC.203, TSM-xxxHEG15XKC.253,
TSM-xxxHEG15XKC.273, TSM-xxxHEG15XKC.283,
TSM-xxxHEG15XKC.293 (xxx=435-455, in steps of 5).

182 cells:

TSM-xxxHEG15YKC.20, TSM-xxxHEG15YKC.25,
TSM-xxxHEG15YKC.27, TSM-xxxHEG15YKC.28,
TSM-xxxHEG15YKC.29 (xxx=515-530, in steps of 5).

168 cells:

TSM-xxxHEG15VKC.20, TSM-xxxHEG15VKC.25,
TSM-xxxHEG15VKC.27, TSM-xxxHEG15VKC.28,
TSM-xxxHEG15VKC.29 (xxx=475-485, in steps of 5).

130 cells:

TSM-xxxHEG6XKC.20, TSM-xxxHEG6XKC.25,
TSM-xxxHEG6XKC.27, TSM-xxxHEG6XKC.28,
TSM-xxxHEG6XKC.29 (xxx=370-375, in steps of 5).

mono series with 158.75 x 79.375 (mm) half cutting MBB bifacial HJT cell:

(Longitudinal version: the long side of the cell is parallel to the short side of the module)

156 cells:

TSM-xxxHEG15XC.20, TSM-xxxHEG15XC.25,
TSM-xxxHEG15XC.27, TSM-xxxHEG15XC.28,
TSM-xxxHEG15XC.29 (xxx=440-460, in steps of 5).

144 cells:

TSM-xxxHEG15C.20, TSM-xxxHEG15C.25,
TSM-xxxHEG15C.27, TSM-xxxHEG15C.28,
TSM-xxxHEG15C.29 (xxx=410-425, in steps of 5).

120 cells:

TSM-xxxHEG6C.20, TSM-xxxHEG6C.25,
TSM-xxxHEG6C.27, TSM-xxxHEG6C.28,
TSM-xxxHEG6C.29 (xxx=340-350, in steps of 5).

mono series with 210.0 x 105.0 (mm) half cutting MBB bifacial HJT cell:

(Longitudinal version: the long side of the cell is parallel to the short side of the module)

132 cells:

TSM-xxxHEG21C.20, TSM-xxxHEG21C.25,
TSM-xxxHEG21C.27, TSM-xxxHEG21C.28,
TSM-xxxHEG21C.29 (xxx=640-685, in steps of 5).

120 cells:

TSM-xxxHEG20C.20, TSM-xxxHEG20C.25,
TSM-xxxHEG20C.27, TSM-xxxHEG20C.28,
TSM-xxxHEG20C.29 (xxx=585-620, in steps of 5).

110 cells:

TSM-xxxHEG19C.20, TSM-xxxHEG19C.25,

CERTIFICATE

No. Z2 070321 0097 Rev. 54

TSM-xxxHEG19C.27, TSM-xxxHEG19C.28,
TSM-xxxHEG19C.29 (xxx=530-565, in steps of 5).

mono series with 157 x 31.4 (mm) 1/5 cutting cells:
336 cells:

TSM-xxxDEG5ZV(II), TSM-xxxDEG5ZV.05(II), TSM-xxxDEG5ZV.07(II),
TSM-xxxDEG5ZV.40(II), TSM-xxxDEG5ZV.47(II) (xxx=305-330, in steps
of 5).

poly series with 157 x 157 (mm) and 156 x 156 (mm) solar cells:
72 cells:

TSM-xxxPEG14, TSM-xxxPEG14.05, TSM-xxxPEG14.25, TSM-
xxxPEG14.07, TSM-xxxPEG14.20, TSM-xxxPEG14.27, TSM-
xxxPEG14.28, TSM-xxxPEG14.29, TSM-xxxPEG14.40, TSM-
xxxPEG14.47 (xxx=315-360, in steps of 5);
TSM-xxxPEG14(II), TSM-xxxPEG14.05(II), TSM-xxxPEG14.25(II),
TSM-xxxPEG14.07(II), TSM-xxxPEG14.20(II), TSM-xxxPEG14.27(II),
TSM-xxxPEG14.28(II), TSM-xxxPEG14.29(II), TSM-xxxPEG14.40(II),
TSM-xxxPEG14.47(II)
(xxx=315-360, in steps of 5).

60 cells:

TSM-xxxPEG5, TSM-xxxPEG5.05, TSM-xxxPEG5.25, TSM-
xxxPEG5.07, TSM-xxxPEG5.20, TSM-xxxPEG5.27, TSM-xxxPEG5.28,
TSM-xxxPEG5.29, TSM-xxxPEG5.40, TSM-xxxPEG5.47 (xxx=265-300,
in steps of 5);
TSM-xxxPEG5(II), TSM-xxxPEG5.05(II), TSM-xxxPEG5.25(II),
TSM-xxxPEG5.07(II), TSM-xxxPEG5.20(II), TSM-xxxPEG5.27(II),
TSM-xxxPEG5.28(II), TSM-xxxPEG5.29(II), TSM-xxxPEG5.40(II),
TSM-xxxPEG5.47(II) (xxx=265-300, in steps of 5).

poly series with 158.75 x 158.75 (mm) solar cells:

72 cells:

TSM-xxxPEG15, TSM-xxxPEG15.05, TSM-xxxPEG15.25, TSM-
xxxPEG15.07, TSM-xxxPEG15.20, TSM-xxxPEG15.27, TSM-
xxxPEG15.28, TSM-xxxPEG15.29, TSM-xxxPEG15.40, TSM-
xxxPEG15.47 (xxx=315-360, in steps of 5);
TSM-xxxPEG15(II), TSM-xxxPEG15.05(II), TSM-xxxPEG15.25(II),
TSM-xxxPEG15.07(II), TSM-xxxPEG15.20(II), TSM-xxxPEG15.27(II),
TSM-xxxPEG15.28(II), TSM-xxxPEG15.29(II), TSM-xxxPEG15.40(II),
TSM-xxxPEG15.47(II) (xxx=315-360, in steps of 5).

60 cells:

TSM-xxxPEG6, TSM-xxxPEG6.05, TSM-xxxPEG6.25, TSM-
xxxPEG6.07, TSM-xxxPEG6.20, TSM-xxxPEG6.27, TSM-xxxPEG6.28,
TSM-xxxPEG6.29, TSM-xxxPEG6.40, TSM-xxxPEG6.47 (xxx=265-300,
in steps of 5);
TSM-xxxPEG6(II), TSM-xxxPEG6.05(II), TSM-xxxPEG6.25(II),
TSM-xxxPEG6.07(II), TSM-xxxPEG6.20(II), TSM-xxxPEG6.27(II),
TSM-xxxPEG6.28(II), TSM-xxxPEG6.29(II), TSM-xxxPEG6.40(II),
TSM-xxxPEG6.47(II) (xxx=265-300, in steps of 5).

poly series with 157 x 78.5 (mm) half cutting cell:

144 cells:

TSM-xxxPEG14H, TSM-xxxPEG14H.05, TSM-xxxPEG14H.25,
TSM-xxxPEG14H.07, TSM-xxxPEG14H.20, TSM-xxxPEG14H.27,
TSM-xxxPEG14H.28, TSM-xxxPEG14H.29, TSM-xxxPEG14H.40,
TSM-xxxPEG14H.47 (xxx=330-360, in steps of 5);
TSM-xxxPEG14H(II), TSM-xxxPEG14H.05(II), TSM-xxxPEG14H.25(II),
TSM-xxxPEG14H.07(II), TSM-xxxPEG14H.20(II), TSM-
xxxPEG14H.27(II),
TSM-xxxPEG14H.28(II), TSM-xxxPEG14H.29(II), TSM-
xxxPEG14H.40(II), TSM-xxxPEG14H.47(II)
(xxx=330-360, in steps of 5).



Product Service

CERTIFICATE

No. Z2 070321 0097 Rev. 54

120 cells:

TSM-xxxPEG5H, TSM-xxxPEG5H.05, TSM-xxxPEG5H.25, TSM-xxxPEG5H.07, TSM-xxxPEG5H.20, TSM-xxxPEG5H.27, TSM-xxxPEG5H.28, TSM-xxxPEG5H.29, TSM-xxxPEG5H.40, TSM-xxxPEG5H.47 (xxx=275-300, in steps of 5);
TSM-xxxPEG5H(II), TSM-xxxPEG5H.05(II), TSM-xxxPEG5H.25(II), TSM-xxxPEG5H.07(II), TSM-xxxPEG5H.20(II), TSM-xxxPEG5H.27(II), TSM-xxxPEG5H.28(II), TSM-xxxPEG5H.29(II), TSM-xxxPEG5H.40(II), TSM-xxxPEG5H.47(II)
(xxx=275-300, in steps of 5).

poly series with 158.75 x 79.375 (mm) half cutting cell:

144 cells:

TSM-xxxPEG15H, TSM-xxxPEG15H.05, TSM-xxxPEG15H.25, TSM-xxxPEG15H.07, TSM-xxxPEG15H.20, TSM-xxxPEG15H.27, TSM-xxxPEG15H.28, TSM-xxxPEG15H.29, TSM-xxxPEG15H.40, TSM-xxxPEG15H.47 (xxx=340-360, in steps of 5);
TSM-xxxPEG15H(II), TSM-xxxPEG15H.05(II), TSM-xxxPEG15H.25(II), TSM-xxxPEG15H.07(II), TSM-xxxPEG15H.20(II), TSM-xxxPEG15H.27(II), TSM-xxxPEG15H.28(II), TSM-xxxPEG15H.29(II), TSM-xxxPEG15H.40(II), TSM-xxxPEG15H.47(II)
(xxx=340-400, in steps of 5).

120 cells:

TSM-xxxPEG6H, TSM-xxxPEG6H.05, TSM-xxxPEG6H.25, TSM-xxxPEG6H.07, TSM-xxxPEG6H.20, TSM-xxxPEG6H.27, TSM-xxxPEG6H.28, TSM-xxxPEG6H.29, TSM-xxxPEG6H.40, TSM-xxxPEG6H.47 (xxx=280-300, in steps of 5);
TSM-xxxPEG6H(II), TSM-xxxPEG6H.05(II), TSM-xxxPEG6H.25(II), TSM-xxxPEG6H.07(II), TSM-xxxPEG6H.20(II), TSM-xxxPEG6H.27(II), TSM-xxxPEG6H.28(II), TSM-xxxPEG6H.29(II), TSM-xxxPEG6H.40(II), TSM-xxxPEG6H.47(II) (xxx=280-330, in steps of 5).

poly series with 157 x 78.5 (mm) half cutting MBB cell:

144 cells:

TSM-xxxPEG14M(II), TSM-xxxPEG14M.05(II), TSM-xxxPEG14M.25(II), TSM-xxxPEG14M.07(II), TSM-xxxPEG14M.20(II), TSM-xxxPEG14M.27(II), TSM-xxxPEG14M.28(II), TSM-xxxPEG14M.29(II), TSM-xxxPEG14M.40(II), TSM-xxxPEG14M.47(II)
(xxx=330-360, in steps of 5).

120 cells:

TSM-xxxPEG5M(II), TSM-xxxPEG5M.05(II), TSM-xxxPEG5M.25(II), TSM-xxxPEG5M.07(II), TSM-xxxPEG5M.20(II), TSM-xxxPEG5M.27(II), TSM-xxxPEG5M.28(II), TSM-xxxPEG5M.29(II), TSM-xxxPEG5M.40(II), TSM-xxxPEG5M.47(II) (xxx=275-300, in steps of 5).

poly series with 158.75 x 79.375 (mm) half cutting MBB cell:

144 cells:

TSM-xxxPEG15M(II), TSM-xxxPEG15M.05(II), TSM-xxxPEG15M.25(II), TSM-xxxPEG15M.07(II), TSM-xxxPEG15M.20(II), TSM-xxxPEG15M.27(II), TSM-xxxPEG15M.28(II), TSM-xxxPEG15M.29(II), TSM-xxxPEG15M.40(II), TSM-xxxPEG15M.47(II)
(xxx=340-405, in steps of 5).

120 cells:

TSM-xxxPEG6M(II), TSM-xxxPEG6M.05(II), TSM-xxxPEG6M.25(II), TSM-xxxPEG6M.07(II), TSM-xxxPEG6M.20(II), TSM-xxxPEG6M.27(II), TSM-xxxPEG6M.28(II), TSM-xxxPEG6M.29(II), TSM-xxxPEG6M.40(II), TSM-xxxPEG6M.47(II) (xxx=280-335, in steps of 5).

poly series with 166 x 83 (mm) half cutting MBB cell:

144 cells:

TSM-xxxPEG17MC(II), TSM-xxxPEG17MC.05(II),



Product Service

CERTIFICATE

No. Z2 070321 0097 Rev. 54

TSM-xxxPEG17MC.25(II), TSM-xxxPEG17MC.07(II),
TSM-xxxPEG17MC.20(II), TSM-xxxPEG17MC.27(II),
TSM-xxxPEG17MC.28(II), TSM-xxxPEG17MC.29(II)
(xxx=410-445, in steps of 5).

120 cells:

TSM-xxxPEG8MC(II), TSM-xxxPEG8MC.05(II), TSM-xxxPEG8MC.25(II),
TSM-xxxPEG8MC.07(II), TSM-xxxPEG8MC.20(II), TSM-
xxxPEG8MC.27(II), TSM-xxxPEG8MC.28(II), TSM-xxxPEG8MC.29(II)
(xxx=350-365, in steps of 5).

poly series with 166 x 83 (mm) half cutting MBB cell:
(Module Type for rear side with white EVA or Glass white)

144 cells:

TSM-xxxPEG17M(II), TSM-xxxPEG17M.05(II), TSM-xxxPEG17M.25(II),
TSM-xxxPEG17M.07(II), TSM-xxxPEG17M.20(II), TSM-
xxxPEG17M.27(II), TSM-xxxPEG17M.28(II), TSM-xxxPEG17M.29(II)
(xxx=410-445, in steps of 5).

120 cells:

TSM-xxxPEG8M(II), TSM-xxxPEG8M.05(II), TSM-xxxPEG8M.25(II),
TSM-xxxPEG8M.07(II), TSM-xxxPEG8M.20(II), TSM-xxxPEG8M.27(II),
TSM-xxxPEG8M.28(II), TSM-xxxPEG8M.29(II) (xxx=350-365, in steps
of 5).

poly series with 157 x 31.4 (mm) 1/5 cutting cells:

336 cells:

TSM-xxxPEG5ZV, TSM-xxxPEG5ZV.05, TSM-xxxPEG5ZV.07,
TSM-xxxPEG5ZV.40, TSM-xxxPEG5ZV.47
(xxx=280-300, in steps of 5).

Smart PV modules:

(Module Type with junction box TSD301xy)

mono series with 210.0 x 105.0 (mm) half cutting MBB bifacial cell:

132 cells:

TSM-xxxDEG21C.20S (xxx=625-675, in steps of 5)

120 cells:

TSM-xxxDEG20C.20S (xxx=570-605, in steps of 5)

110 cells:

TSM-xxxDEG19C.20S (xxx=525-555, in steps of 5)

mono series with 182 x 105 (mm) half cutting MBB bifacial cell:

132 cells:

TSM-xxxDEG19RC.20S (xxx=540-590, in steps of 5)

mono series with 182 x 70 (mm) 1/3 cutting MBB bifacial cell:

144 cells:

TSM-xxxDEG9RC.B7S (xxx=395-435, in steps of 5)

mono series with 182 x 70 (mm) 1/3 cutting MBB bifacial cell:

(Module Type for rear side with white EVA or Glass white)

144 cells:

TSM-xxxDEG9R.B0S, TSM-xxxDEG9R.B8S

(xxx=395-435, in steps of 5)

mono series with 210.0 x 70.0 (mm) 1/3 cutting MBB bifacial cell:

150 cells:

TSM-xxxDEG18MC.20S(II) (xxx=460-510, in steps of 5)

mono series with 210.0 x 70.0 (mm) 1/3 cutting MBB bifacial cell:

(Module Type for rear side with white EVA or Glass white)

150 cells:

TSM-xxxDEG18M.20S(II) (xxx=460-510, in steps of 5)



Product Service

CERTIFICATE

No. Z2 070321 0097 Rev. 54

mono series with 210.0 x 105.0 (mm) half cutting N type MBB bifacial cell:

132 cells:

TSM-xxxNEG21C.20S (xxx=635-690, in steps of 5)

mono series with 182.0 x 105.0 (mm) half cutting N type MBB bifacial cell:

132 cells:

TSM-xxxNEG19RC.20S (xxx=565-595, in steps of 5)

mono series with 182.0 x 70.0 (mm) N type 1/3 cutting MBB bifacial cell:

(Module Type for rear side with white EVA or Glass white)

144 cells:

TSM-xxxNEG9R.20S, TSM-xxxNEG9R.28S (xxx=395-445, in steps of 5)

xxx stands for rated output power at STC

Parameters:

Construction:	Framed and Frameless with Junction box, Cable and Connectors.
Safety Class:	Class II
Maximum System Voltage:	1500 V DC
Fire Safety Class:	Class C according to UL 790
Test Laboratory:	Yangzhou Opto-Electrical Products Testing Institute, No. 10 West Kaifa Road, Yangzhou, 225009 Jiangsu, P. R. China.

Tested according to:

IEC 61215-1:2016
IEC 61215-1-1:2016
IEC 61215-2:2016
IEC 61730-1:2016
IEC 61730-2:2016
EN IEC 61730-1:2018
EN IEC 61730-2:2018
EN IEC 61730-1:2018/AC:2018-06
EN IEC 61730-2:2018/AC:2018-06