

# HS GLASS-GLASS POLY 60P

# **Glass-glass module**Solid quality with high performance

Thanks to their modern design HERSHEY-POWER glass-glass modules deli- ver the highest long-term yields. They are robust and resilient, yet just as light as their glass-foil predecessors.

The high-performance PERC solar cells are embedded almost indestructibly in the glass-glass composite and thus optimally protected against all weather effects and mechanical stress. HERSHEY-POWER can therefore offer a 30-year warranty on performance and product quality.

The HERSHEY-POWER Full Coverage insurance is included for 5 years and free of charge. It insures almost all risks and takes effect even if the modules do not produce electricity or deliver less than expected in the event of damage.

# **Product Quality**

- ammonia resistant
- intensive hailstorm resistant
- salt mist resistant

- 100 % plus-sorting
- 100%PIDprotected
- snow-load warranty





## **Service**

FullCoverage insurance included (up to 1,000 kWp\*)

**Simple returns policy** as per "Delivery terms for HERSHEY-POWER solar

\* country-specific deviations apply

#### **30 Year Product Warranty**

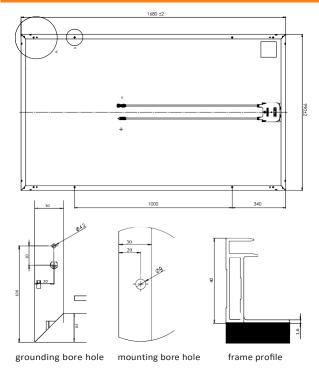
as per "Warranty conditions for HERSHEY-POWER solar modules"

### **30 Year Performance Warranty**

on 87 % of nominal power as per "Warranty conditions for HERSHEY-POWER solar



# Dimensions General data



Module technology	Glass-glass laminate; aluminum frame
Covering material Encapsulation Backing material	Tempered solar glass with anti-reflective finish, 2mm EVA-solar cells-EVA, white Tempered glass, 2 mm
Solar cells	60 polycrystalline high power solar cells
Cell dimensions	156.75 x 156.75 mm
L x W x H / Weight	1,640 <sup>± 2</sup> x 992 <sup>± 2</sup> x 35 <sup>± 0,3</sup> mm / appr. 22,8 kg
Connection technology	Cables 2 x 1,0 m/4 mm <sup>2</sup> TE Connectivity PV4-S connectors
Bypass diodes	3
Max. system voltage	1,000 V
IP rating	IP67
Protection class	п
Fire class	С
Certified mechanical ratings as per IEC 61215	Suction load up to 2,400 Pa (test load 3,600 Pa) Pressure load up to 5,400 Pa (test load 8,100 Pa)
Recommended stress load as per Installa- tion Instructions	Please refer to the specifications in the Installation Instructions and Warranty Conditions.
Qualifications	

#### Electrical data (STC)

STC (Standard Test Conditions): Irradiation intensity 1,000 W/m², spectral distribution AM 1,5 | Temperature 25±2 °C, in accordance to EN 60904-3

Nominal power P <sub>max</sub>	275 Wp	280 Wp
Nominal voltage $V_{_{MP}}$	31,2 V	31,3 V
Nominal current I <sub>MP</sub>	8,89 A	9,02 A
Open circuit voltage V <sub>oc</sub>	38,7 V	38,9 V
Short circuit current I <sub>sc</sub>	9,56 A	9,68 A
Module efficiency	16,7 %	17,0 %

Measurement tolerances: Pmax  $\pm 5$  %; Voc  $\pm 10$  %; Isc  $\pm 10$  %

Reverse-current power rating Ir: 20 A, operating modules with an external power source is only permissible if using a phase fuse with a tripping current of ≤ 20 A.

# Electrical data (NMOT and weaklight)

NMOT (Nominal Module Operation Temperature): Irradiation intensity 800 W/ $m^2$ , spectral distribution AM 1,5, Temperature 20 °C Weak light conditions: Irradiation intensity 200 W/ $m^2$ , Temperature 25 °C, Wind speed 1m/s, load operation

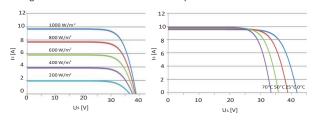
Nominal power P <sub>max @NMOT</sub>	203 W	207 W
Nominal power P <sub>max @200 W/m²</sub>	55,1 W	56,0 W

Measurement tolerances: Pmax ±5 %; Voc ±10 %; Isc ±10 %

Reduction of module efficiency when irradiance is reduced from 1000 W/m² to 200 W/m² (at 25 °C):  $4 \pm 2$  % (relative)  $/-0.6 \pm 0.3$  % (absolute).

#### **Characteristic lines** (Performance Class 280 Wp)

Voltage characteristic line at different temperatures and irradiations



#### **Thermal Features**

Operating temperature range	-40 +85 °C
Ambient temperature range	-40 +45 °C
Temperature coefficient P <sub>max</sub>	-0,41 %/K
Temperature coefficient V <sub>oc</sub>	-0,31 %/K
Temperature coefficient I <sub>sc</sub>	0,05 %/K
NMOT	44 °C