

Hecker EnergyVision – more sunlight!

Product description

///Hecker EnergyVision is a highly transparent flat glass for solar heating and photovoltaics.

A special treatment of the glass surfaces insures a high transparency and low reflexion respectively. A maximum utilisation of the sun energy together with a low-cost fabrication is possible.

The treatment is applied on both faces of flat and structured solar glasses. The anti-reflexion is on both sides of the glass.

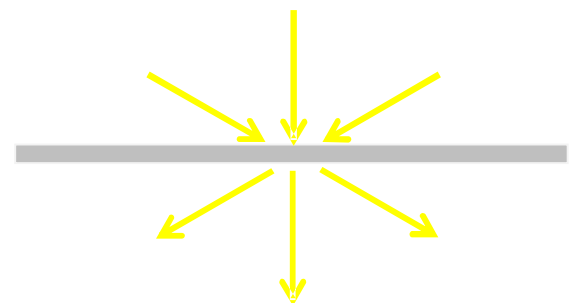
Contrary to untreated glass or glass with classic multilayer antireflex coatings the light transparency has an important lower dependency of the angle of incidence and the antireflexion is working for a much wider range of the whole sun energy spectrum.



Properties and advantages

By using ///Hecker EnergyVision the degree of utilisation of the sunlight can be increased **up to 10%** depending on the type of collector or module type and climatic conditions!

- Sunlight transmission 96% - 97% (5 % higher than untreated glass)
- antireflexion operates for all angles of incident and improves the efficiency by several percentages
- Utilization of direct and diffuse solar radiation
- self-cleaning effect (in practice a kind of lotus effect is visible) and hydrophilic surfaces (no dewdrops and raindrops) increase again the efficiency of the solar cells compared to standard glass covers
- because of the special treatment no „peeling off“ a coating or “blast off” by freezing water is possible
- More than 10 years of experience with antireflexion glass treatment.



Fields of Applications

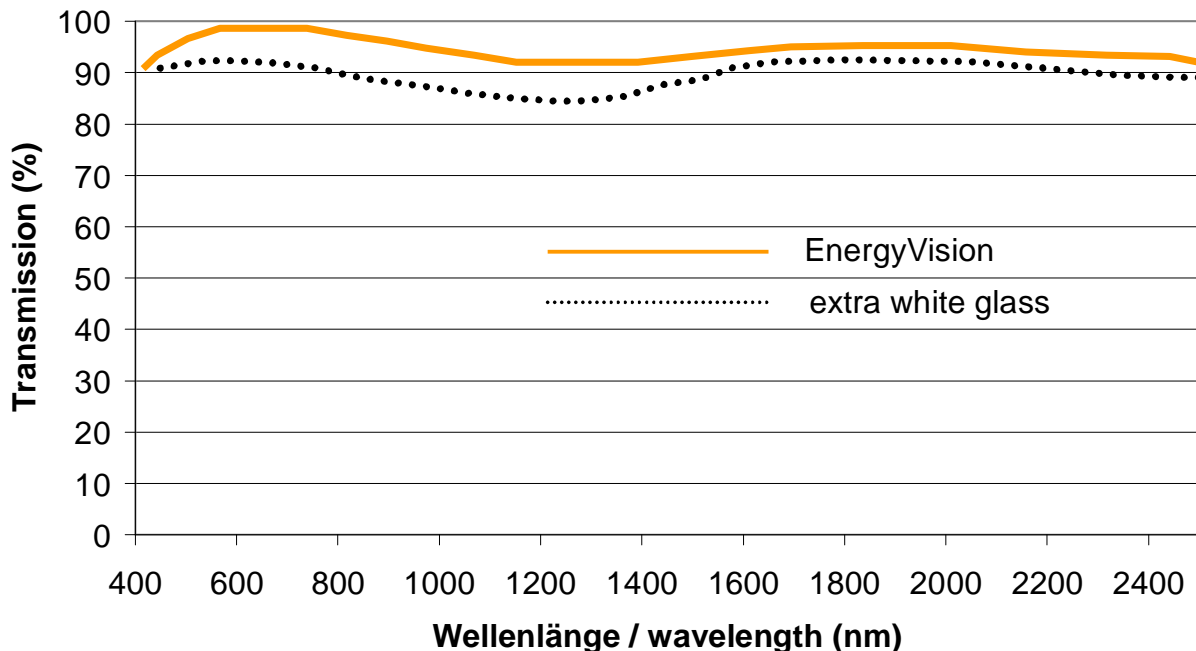
- Solar heating
- Photovoltaics

Eigenschaften von ///Hecker EnergyVision

Properties	EnergyVision
Position of transmission maximum	Adjustable between 500 and 710 nm
Increase of transmission	> 5% increase according to the untreated glass
T_{vis} Measured by "Institut für Solare Energie (ISE)"	96% (Reference white glass 4mm: 91%)
T_{sol} Measured by "Institut für Solare Energie (ISE)"	95% (Reference white glass 4mm: 90%)
Condensation water test EN 1096-2	40°C passed
Temperature cycling test IEC 61215/IEC 61646	50 Temperature cycles from -40°C to +85°C passed
Humidity/ heat test IEC 61215/IEC 61646	1000 h at 85°C and 85% relative humidity passed
Mechanical stability and abrasion resistance	Passed acc. to internal standards

Comparison of the transmission values

Transmission 4 mm EnergyVision



The stated characteristics and specifications are in accordance with our today's state of knowledge and are based on experiences, measurements or manufacturers' data. Not all technical specifications have been verified resp. are subject to continually checks on our part.

Handling instructions






The active surfaces are very thin like the layers on coated glasses. Grease, finger prints and abrasive treatments can harm the surfaces. Silicone materials on the surface can not be removed any more and have to be avoided.

The surfaces can be cleaned with warm water and a sponge or an alcohol-water mixture easily.

Please note:

The active surfaces of **///Hecker EnergyVision** which lead to an increase of light transmission are extremely thin! In Reflexion coloured spots, strips or finest scratches can be visible. They are process related and do not replay a defect.

Handling:

<p>Please avoid impurities and do NOT use abrasive cleaning agents.</p>		<p>Please avoid fingerprints, grease and wax on the surface. For Handling always please use gloves.</p>	
<p>It is not recommend to use common paper or tissue cloth for wiping and drying</p>		<p>Impurities made of Silicon can NOT be removed from the surface.</p>	
<p>If you use suction cups or similar for handling that the suction cup is designed for coated glasses. (Suction cups with special covers).</p>			

Cleaning:

The surface can be cleaned with a mix of ethanol (spirit) and water in a ratio of 1:1.
 For cleaning we advise the use of nonwoven cloth cleaning wiper, free of fluff and unmolded. (e.g.: Specialist Cloth Cleaning, Tork Premium Article-No.:197168).

Storage:

Please store the glass dry and – if possible – without interlayer. “Distance” is the best method to protect the surface of glass.
 If this is not possible, please use high quality interlayer paper, which is acid free and free from chlorine e.g. Soft tissue paper.

In case of any questions not hesitate to contact us.

Quality management of company Hecker Glastechnik