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base de donnée "Photovoltaïque et Bâtiment"

MSK Solar Design Line™

See Thru™

Building Integrated Glazing System

 **SUNTECH**



transparent finish similar to tinted glass. See Thru is glazed surfaces.
in two sheets of glass, and uses an ultra fine laser

etching process to create an unparalleled semi-transparent finish. A unique edge-mounted electrical connection system ensures that all wiring is concealed within framing.

Key reasons to choose See Thru

Aesthetic Appearance:

See Thru features the industry's finest laser scribing process to deliver a unique homogeneous finish, similar to tinted glass

Significant Energy Savings:

Due to the properties of amorphous silicon almost 90% of heat is cut, significantly reducing air conditioning running costs

Enhanced Diffusion of Light:

See Thru transforms sunlight into delicately diffused light, transmitting just enough to maintain exterior views and brighten interiors

Substantially Lower UV Levels:

See Thru drastically reduces levels of UV radiation, cutting 98.9%

Reduced Costs and Emissions:

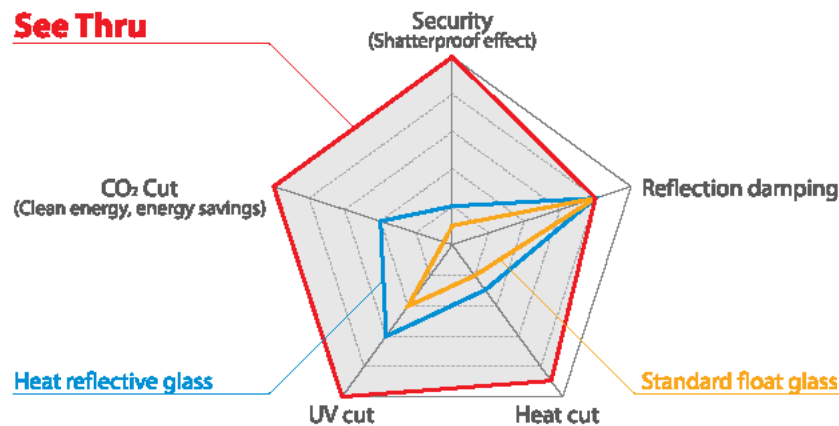
By both generating and saving electricity, See Thru can dramatically curb CO₂ emissions, enhancing the building's value

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01 SOLAR DESIGN

	SEE THRU	HEAT REFLECTIVE GLASS
Heat Cut	89.8%	33.7%
Visible light (brightness) transmittance	10.6%	65.9%
UV Cut	98.9%	59.5%

See Thru

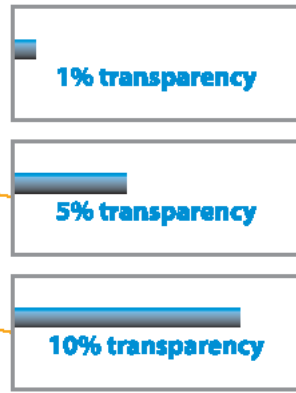




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Suntech See Thru: generate electricity with glass





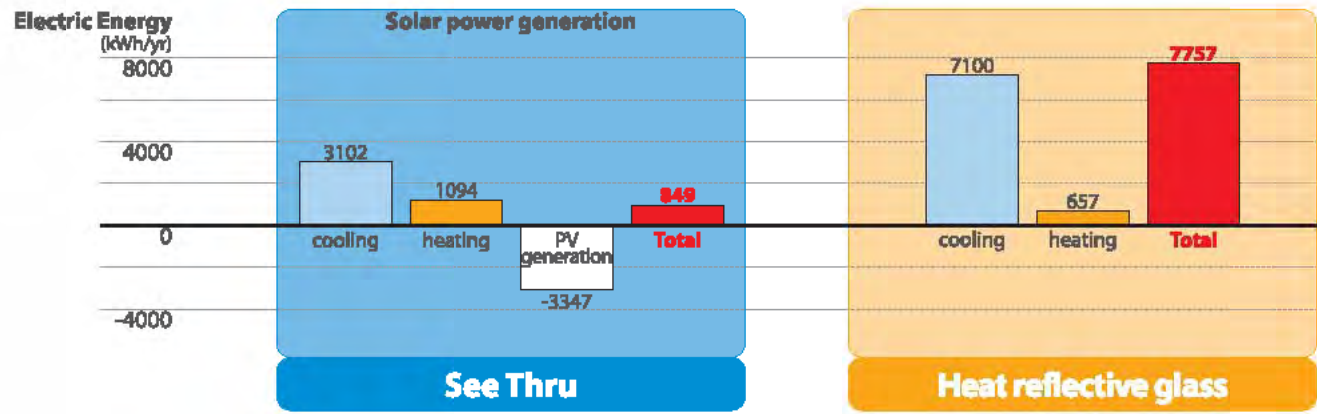
The standard glass laminate, measuring 980mm x 950mm comes in 1%, 5% or 10% transparency and 10.5mm or 13.5mm thickness. A variety of custom sizing options are also available and the unit can be fabricated into insulating glass units when a lower U-value is desired.

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03 Reduction of Total Building Electrical Demand

See Thru absorbs more solar heat than low-e glass, drastically reducing the annual electricity demand for your building. The electricity generated through photovoltaics (PV) can be used to further offset electrical loads. The graph below shows the results from a simulation of a 100m² See Thru canopy.

With low-e glass there is a high air conditioning load and some heating load. With See Thru the air conditioning load is drastically decreased, while the heating load increases due to less solar gain entering the building. In addition the solar electricity generated is enough to offset the remaining air-conditioning load.



When See Thru is used in place of heat reflective glass, total power consumption can be reduced by a factor of 10.



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See Thru
is a revolutionary new
architectural material for
a brighter future





CASE STUDY 1: KANAZAWA BUS TERMINAL

The largest installation to date, See Thru (5% transparency) was designed into this massive canopy covering the terminal's various pick up and drop off points. The laminates were customized to meet heavy snow load requirements and other design considerations.

Location: Kanazawa, Japan

Size: 3000m²

Rated Output: 120kW

Design: Todec

Installation: Chisansya, Oka Gumi, Honjin Jutaku joint venture





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CASE STUDY 2: OSKOMERA HQ

Factory building facade in Holland. From the outside See Thru creates an appealing tinted facade. From the inside it cuts heat and UV whilst allowing a clear view, providing a pleasant and healthy working environment.

Location: Deurne, Holland
Size: 80m²
Rated Output: 3.5kW





Output power	42.0W	50.0W	52.0W
Max power voltage	59.6V	66.0V	68.0V
Max power current	0.705A	0.758A	0.765A
Open circuit voltage	91.8V	91.8V	91.8V
Short circuit current	0.972A	1.09A	1.14A

Measured at standard test conditions of 1000W/m² irradiance, AM1.5 spectrum, 25°C cell temperature.
Values stabilize after a few months, initial values may exceed stabilized values shown by up to 18%

Optical data

Visible light	transmitted	10.62%
	reflected	9.74%
Total solar energy	transmitted	10.16%
	reflected	20.00%
	absorbed	70.15%
UV	rejected	98.93%

Thermal data

Solar heat gain coefficient	vertical	0.24
	at 45°	0.25
	horizontal	0.25
Shading coefficient	vertical	0.27
	at 45°	0.28
	horizontal	0.29
U-value (exterior to interior)	vertical	6.0 W/m ² K
	at 45°	6.5 W/m ² K
	horizontal	6.5 W/m ² K
U-value (interior to exterior)	vertical	6.0 W/m ² K
	at 45°	5.6 W/m ² K
	horizontal	4.8 W/m ² K

Mechanical data

Length	980mm	
Width	950mm	
Depth	MST-42T1010U	10.5mm (float glass)
	MST-42T1013UT	13.5mm (tempered glass)
Weight	MST-42T1010U	23kg
	MST-42T1013UT	30kg
Series cells	108	
Parallel cells	1	
Cell area	80.95cm ²	
Cell width	8.78mm	
Cell height	922mm	

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20 year warranty for 80% of power

