MSK Solar Design Line™

See Thru™

Building Integrated Glazing System

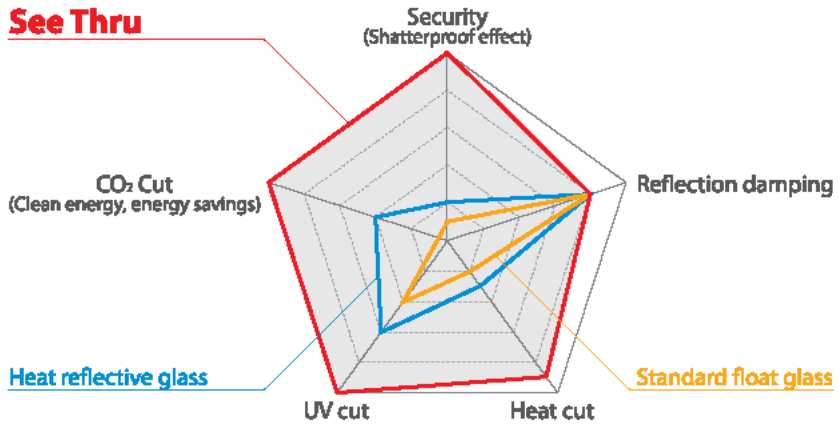
SUNTECH

See Thru is a revolutionary new type of photovoltaic glazing, offering a unique semitransparent finish similar to tinted glass. See Thru is ideal for use in curtain walls, skylights, canopies, atria and all other vertical or sloped glazed surfaces.
See Thru is comprised of a layer of amorphous silicon (thin film) sandwiched between 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

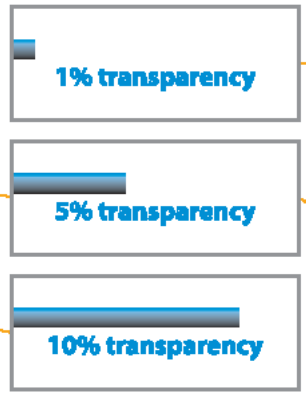
Aesthetic Appearance:
See Thru features the industry's finest laser scribing process to deliver a unique homogeneous finish, similar to tinted glass
Significant Energy Savings:
Due to the properties of amorphous silicon almost 90% of heat is cut, significantly reducing air conditioning running costs
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 CO_2 emissions, enhancing the building's value

	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%



Suntech See Thru: generate electricity with glass

Varied Options to Fit Your Design Needs

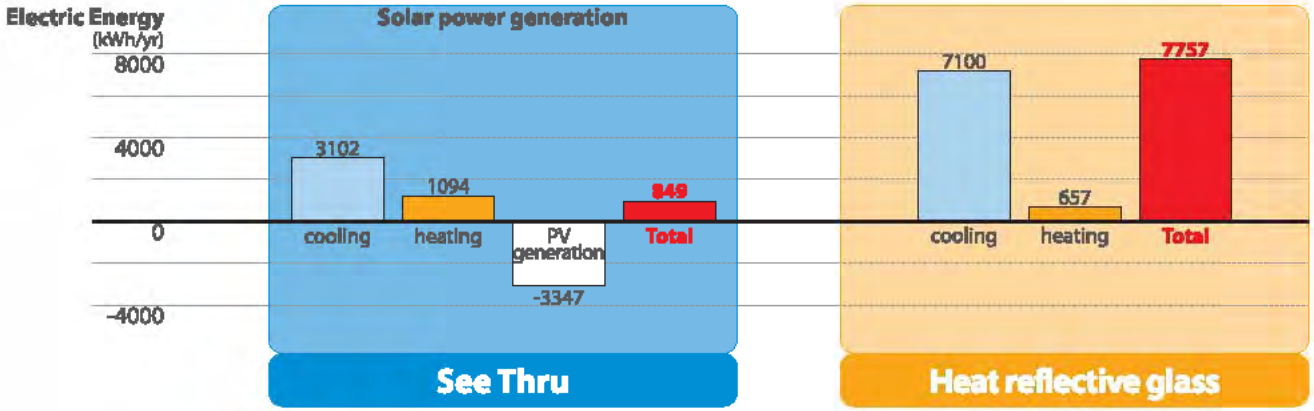


The standard glass laminate, measuring 980mm x 950mm comes in 1%, 5% or 10% transparency and 10.5mm or 13.5mm thickness. A variety of custom sizing options are also available and the unit can be fabricated into insulating glass units when a lower U-value is desired.

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.

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

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

Technical specifications

Electrical data

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%

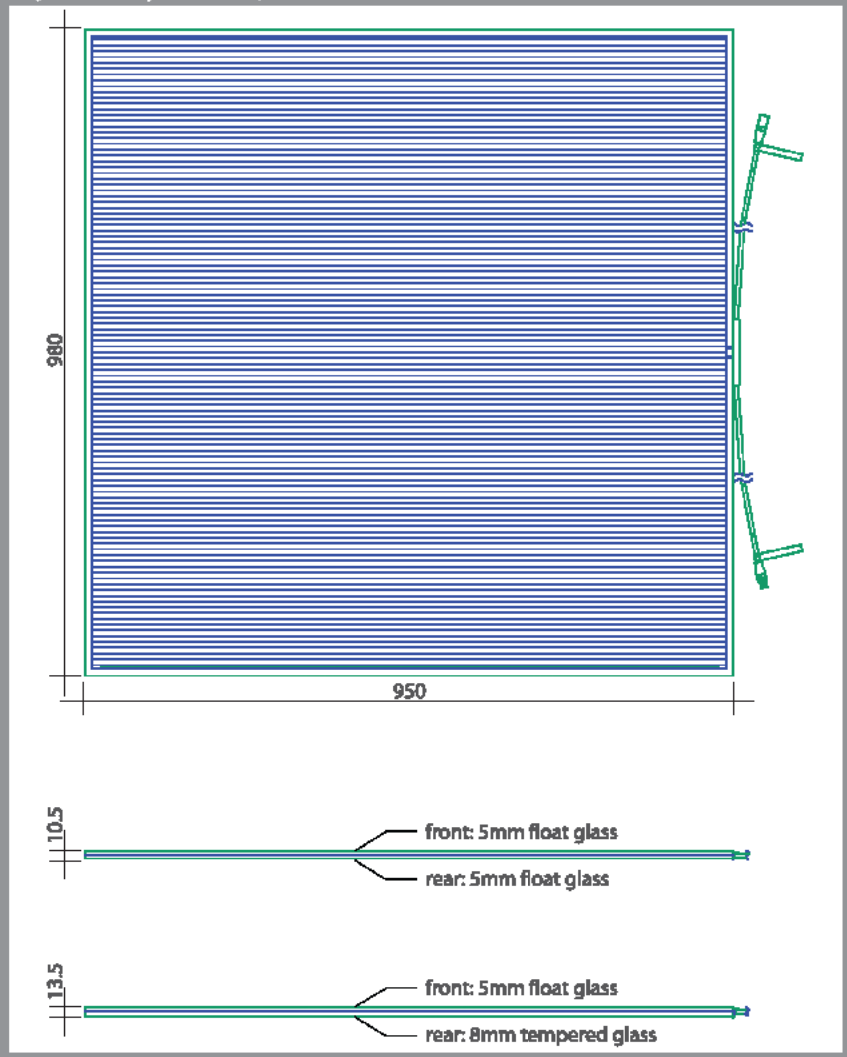
Thermal data

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/m²K
	at 45°	6.5 W/m²K
	horizontal	6.5 W/m²K
U-value (interior to exterior)	vertical	6.0 W/m²K
	at 45°	5.6 W/m²K
	horizontal	4.8 W/m²K

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		80.95cm²
Cell width		8.78mm
Cell height		922mm

20 year warranty for 80% of power



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