



SPAIN PHOTOVOLTAIC S.L.

## BUILDING INTEGRATED THIN FILM PHOTOVOLTAIC MODULES

Based on technology of thin film amorphous silicon, **VitroSun®** combines the aesthetic of a glass with the functionality of a photovoltaic panel.

Made with the most innovative lamination process, **VitroSun®** is able to generate electrical energy and at the same time, blocks solar rays, transforming solar light into a smooth diffused light, transmitting only the necessary light and eliminating the use of artificial light.

**VitroSun®** is suitable in always due to its integration in all types of buildings. It allows you to generate electrical energy in an environmentally friendly way thanks to its photovoltaic amorphous silicon cells, and drastically reduces the UV radiation apart from increasing the inner temperature caused by solar radiation.

### GENERAL CHARACTERISTICS

- Thin film solar cells based on amorphous silicon technology
- Double glass encapsulation according to the most innovative lamination process
- Low iron solar glass with high light transmission index
- Laminated with high quality anti-aging EVA
- High water resistant and hail impact
- Available in different transparencies to adjust to all necessities
- Simple installation like a laminated glass in facade and cover
- Optionally available with air chamber system
- Reduces the power consumption of the building
- Power guaranteed for 20 years



**SPAIN PHOTOVOLTAIC S.L.**  
C/ Cañada, 15. Paracuellos de Jarama, 28860. Madrid, España.  
Tel.: (+34) 916 584 246. Fax: (+34) 916 581 451.

[WWW.SPAIN-PV.COM](http://WWW.SPAIN-PV.COM)  
e-mail: [info@spain-pv.com](mailto:info@spain-pv.com)

## TECHNICAL DATA SHEET

### Characteristics

| Model                                          |                  | VS44TFS       | VS50TFS       | VS55TFS       |
|------------------------------------------------|------------------|---------------|---------------|---------------|
| Cell technology                                |                  | Thin Film     | Thin Film     | Thin Film     |
| Number of cells                                |                  | 108 in series | 108 in series | 108 in series |
| Cell size                                      | mm               | 8,78x922      | 8,78x922      | 8,78x922      |
| Specific power                                 | W/m <sup>2</sup> | 47,30         | 53,70         | 59,10         |
| Max. power at STC (P <sub>max</sub> )          | Wp               | 44            | 50            | 55            |
| Voltage at P <sub>max</sub> (V <sub>mp</sub> ) | V                | 59,6          | 64,4          | 68            |
| Open-circuit voltage (V <sub>oc</sub> )        | V                | 91,8          | 91,8          | 91,8          |
| Current at P <sub>max</sub> (I <sub>mp</sub> ) | A                | 0,74          | 0,78          | 0,81          |
| Short-circuit current (I <sub>sc</sub> )       | A                | 0,97          | 1,09          | 1,14          |

### Specifications

|                      |    |                            |           |           |
|----------------------|----|----------------------------|-----------|-----------|
| Transparency         | %  | 10                         | 5         | 1         |
| Dimensions of module | mm | 980x950                    | 980x950   | 980x950   |
| Thickness            | mm | 10,5/13,5                  | 10,5/13,5 | 10,5/13,5 |
| Weight               | Kg | 23/30                      | 23/30     | 23/30     |
| Output terminal      |    | Junction box               |           |           |
| Cable                |    | LAPP (4,0mm <sup>2</sup> ) |           |           |
| Connections          |    | Equivalent to MC           |           |           |

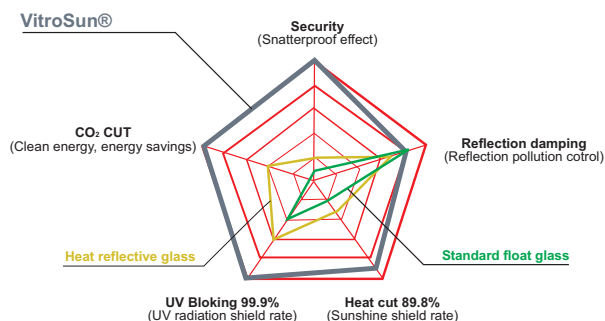
### Limits

|                       |  |              |  |  |
|-----------------------|--|--------------|--|--|
| Operating temperature |  | -40°C a 85°C |  |  |
| Relative humidity     |  | 0 a 100%     |  |  |
| Wind resistance       |  | > 130k/h     |  |  |

STC: Irradiance 1000W/m<sup>2</sup>, Module temperature 25°C, AM = 1,5.

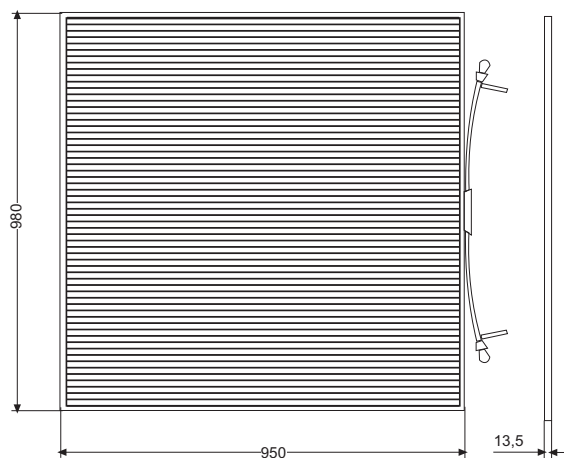
## PRODUCT FEATURES

Comparison of VitroSun® to standard and high performance glass.



**VitroSun®** has superior functional advantages over others glass products. It is a multifunctional glass with both energy generation and energy saving functions.

## VS44TFS - VS50TFS - VS55TFS



(Standard dimensions in millimeters)