



International
Institute of
Technology

*"We accomplish what others
cannot accomplish and go
where others cannot go"*

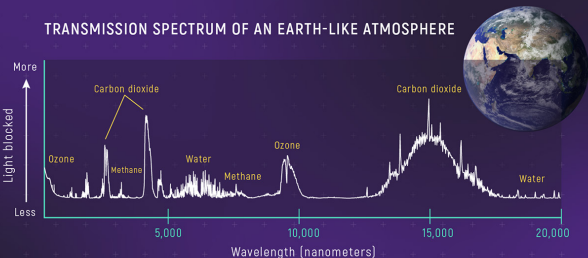
RESEARCH CENTER



I²T Fotovoltaic Technology

In our research Lab, we analyzed starting from the NASA James Webb Space Telescope, developed in partnership with ESA and CSA, the transmission spectrum of our atmosphere. We have studied absorption peaks related to the elements composing it.

TRANSMISSION SPECTRUM OF AN EARTH-LIKE ATMOSPHERE



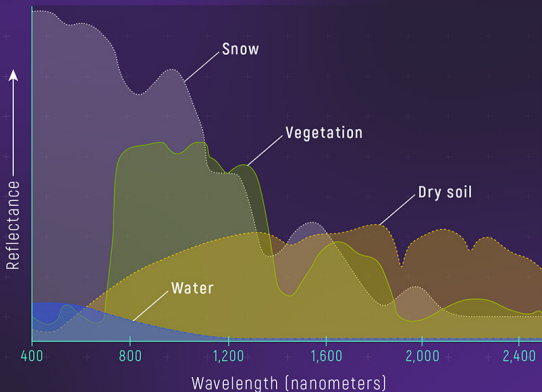
State of the art fotovoltaic technology converts with an average efficiency of 20% only the visible part of the light spectrum ranging from 380nm to 700nm. All the remaining part of the energy spectrum is transferred to the photovoltaic solar panel in forms of heat, decreasing drastically its performance.

Furthermore, there is also an hidden problem related to the reflected light from the surrounding environment...

I2T Fotovoltaic Technology

Reflectance spectra shows how most of the energy goes into the infrared spectrum that traditional photovoltaic technology is not able to convert.

REFLECTANCE SPECTRA: EARTH'S SURFACE MATERIALS



I²T MARK2 Research

We have developed after many years of research and development in collaborations with TOP universities and research centers a nanostructured material able to exploit a broader fraction of the light spectrum



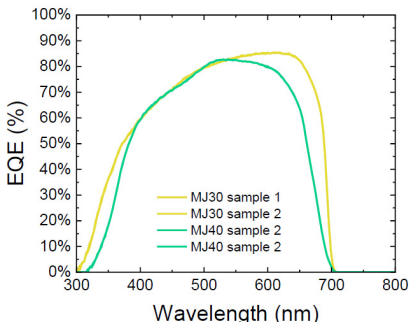
I2T MARK2 Revolutionary Approach

The way we have achieved outstanding efficiency results is by playing with interference and from many small low energy waves achieve as a result the conversion of a small number of high-energy waves converted into electricity by a specifically studied direct bandwidth nanostructured material



I2T MARK2 Experimental Testing

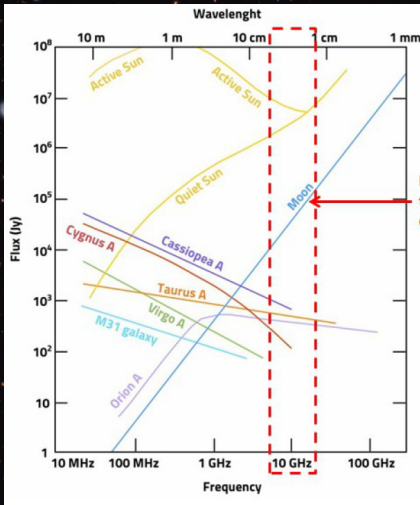
We have tested the material in collaboration with KIWA and the University of Padova in different scenarios with resulting efficiency higher than 80%



I²T Technology Works at Night

Night sky is full of energy in terms of low energy radiations under the spectrum of infrared and microwaves, and in some specific frequencies their power can be greater than the one of the sun.

The developed nanostructured material has been designed to empower these frequencies to be able to produce energy also during the night.



I²T High Density Energy Conversion

I²T Mark2 very important ability is the conversion of concentrated energy into electricity. The material is able to convert up to $640\text{KW}/\text{m}^2$ as well as it irradiated with the appropriate incoming power density. This property allows the fabrication of concentrating parabolas of low fabrication and installation cost while minimizing the I²T nanostructured material construction.



I²T MARK2 Revenues

Case study: 1Hectare Power Plant

Standard:

Power	: 1MW
Fotoactive Material (1MW)	: 5000m ²
Revenues (1 year)	: 150 000 €
Revenues (20 years)	: 3 Million €

I²T Mark1:

Power	: 2MW
Fotoactive Material (1MW)	: 4000m ²
Revenues (1 year)	: 300 000 €
Revenues (20 years)	: 6 Million €

I²T Mark2:


Power	: 8MW
Fotoactive Material (1MW)	: 1.56m ²
Revenues (1 year)	: 5 Million €
Revenues (20 years)	: 100 Million €

I²T Mark 2 Technology is the key technology to empower energy transition and make it sustainable

I²T Mark 2 Allows also a power production during the night by minimizing the need for storage systems

I²T Mark 2 Technology is not relying on rare-earth elements such as COLTAN

Structured Production Partners



Technology is patented worldwide and exploitation rights are then given then to STRUCTURED COMPANIES for mass production and only royalties are asked as revenue. ROYALTIES ARE 100% RE-INVESTED to push mankind forward Our Partners in Corea, China, Japan, Switzerland, California, UK, Italy and France are succesfully helping us in our Mission

Certified Production



CERTIFICATE



Certificate number	17473 Rev 0	Replaces	-
Issued	29/11/2023	First edition	29/11/2023
Report number	PKC0012753	Expiry date	13/11/2026
Page	1 of 2	Contract number	PKC0012692

Product Certificate Photovoltaic (PV) Panels

License holder:	I2T SA Via Balestra 15A, 8900 Lugano - Switzerland
Production site(s):	PKC0012692
Model(s):	I2T-3B, I2T-3B, I2T-33, I2T-30, I2T-27, I2T-33, I2T-30, I2T-26, I2T-25 (see extended models in the Annex*)

The product as listed in this certificate and marked with the below given Kiwa Cermet Italia mark for Photovoltaic (PV) Panels, can be considered complying to the requirements of Kiwa Cermet Italia Guideline "TD KI - 0409, Solar Products and Components" based upon the following aspects:

Laboratory testing of the panels, which are performed by an accredited laboratory in accordance to ISO/IEC 17025 - see annex, using the following standards:

- IEC 61215-1:2016 / EN 61215-1:2016
- Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1: Test requirements
- IEC 61215-1-1:2016 / EN 61215-1-1:2016
- Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-1: Special requirements for testing of crystalline silicon photovoltaic (PV) modules
- IEC 61215-2:2016 / EN 61215-2:2017
- Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 2: Test procedures
- IEC 61730-1:2016 / EN IEC 61730-1:2016
- Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction
- IEC 61730-2:2016 / EN IEC 61730-2:2016
- Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing

Remarks: to be used in plants at a maximum system voltage (v_{ov}) at STC) up to 1500 Vdc Class II; fire test (IEC 61730-2 / MST 2) - Class C was performed.

Periodic inspection of the Factory sites, according to "TD KI - 0409", which includes:

- inspection of the manufacturing quality control and production procedures;
- inspection of the produced panels and confirmation that these are identical to the tested panels;
- periodic verification of the manufacturer test facilities.

This certificate is issued in accordance with the Kiwa Cermet Italia regulations.

Publication of the certificate is allowed.

The validity of this certificate is subject to the positive result of periodic surveillance visits.

The validity of this certificate can be verified on request at the following e-mail address: certificati@kiwacermet.it

Any total or partial reproduction of this document in any form, without Kiwa Cermet Italia express authorization, is prohibited.

Kiwa Cermet Italia S.p.A.
Società con socio unico, soggetta
all'attività di direzione e
coordinamento di Kiwa Italia
Holdings Srl
Via Cadorno, 22
43037 Giugombio dell'Emilia (GR)
Tel. +39(0)574493.111
Fax +39(0)51763.382
E-mail: info@kiwacermet.it
www.kiwa.it

President
Giampiero Belcredi



PRD N° 0590

Membro degli Accordi di Mutual Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC Mutual Recognition Agreements



I²T

International Institute of Technology - Switzerland © 2023

Reliable Commercial Partners



Technology is commercialized only by authorized partners. Partners must sell the products providing the full service to end customers.

The policy of our institute is to avoid speculation on the products done by the resale of the asset.

The result is a disruptive technology that goes from the manufacturer directly to the end customer by means of an installation company that is selected in accordance with our values of seriousness and respect

Contacts



We welcome you in our Offices

headquarter
I2T SA
via Balestra, 15A
6900 - Lugano
SWITZERLAND

email
commercial@i2tholding.com

website
www.i2tholding.com