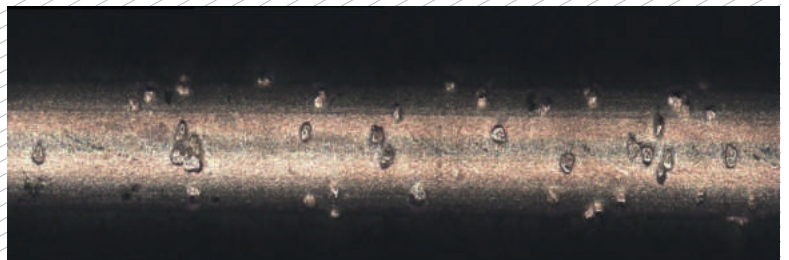




# ThermoSolar®

By THERMOCOMPACT

DIAMOND WIRES  
NEW GENERATION  
FOR PHOTOVOLTAIC  
INDUSTRY



## THERMOSOLAR IS DEDICATED TO PHOTOVOLTAIC INDUSTRY

### PRODUCT PROPERTIES:

#### › High cutting ability due to its fixed abrasive properties

ThermoSolar® reduces:

- the total thickness variation (TTV)
- bow and warp

#### › High stability and results in the machining process

ThermoSolar® resistance reduces significantly wire breakages and loss of diamond grains with a tensile strength >3000 MPa

#### › High productivity gains by reducing the cutting time

ThermoSolar® reduces:

- the cutting time and the operating costs
- the energy consumption of the machines and the cooling and cleaning requirements.

### ECONOMICAL ADVANTAGES

Lower cost of ownership

Easily **adjustable on lengths** to meet your cutting requirements

Ensures high efficiency for **surface and finish quality** requirements

### ENVIRONMENTAL FRIENDLY

Increases the waste recycling:  
**less wire using**

No slurry management

### CUSTOM MADE PROCESS according to:

Your brand of machine

The optimal diamond density required

The length

The pitch

The diameter

on your needs

## ENGINEERED BY A DEDICATED TEAM

The R&D team of Thermocompact offers a **COMPLETE TECHNICAL and LONG TERM SUPPORT FOR YOUR COMPETITIVE NEEDS**, including personalized recommendations. **We tailor technologies for your specifications and/or technical requirements.**

We develop innovative products and applications like ThermoSolar® for **optimal performance, part design, and greater return on investment.**

## WORLD PATENTED PRODUCT:

ThermoSolar® is manufactured by **Thermocompact**. Master of our manufacturing process, we engineer and work on world class production lines, **in state-of-the-art**, certified in Europe:



## SECURED WORLD PATENTS FOR:

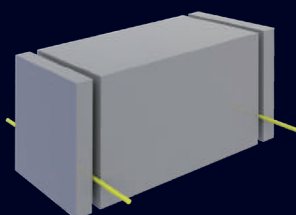
- › Manufacturing and process
- › Fixed abrasive wire
- › Loops

## DEVELOPPED WITH MAJOR PARTNERSHIP IN THE PHOTOVOLTAIC (PV) INDUSTRY:

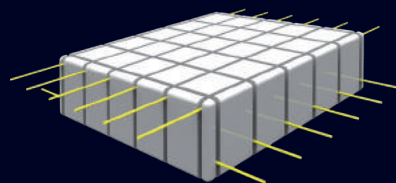


## SLICING WITH ThermoSolar®

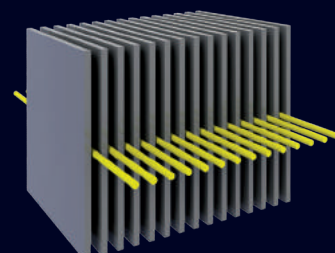
Wafering is the key part of the process followed and requires the best quality Diamond Wire.



CROPPING



SQUARING



SLICING

## WITH THERMOSOLAR® WE OFFER WIRES CORE FROM 70µm TO 500µm DIAMETER

APPLICATION FIELDS		WIRE DIAMETER (µm)	DIAMOND GRAIN SIZE (µm)	BREAKING LOAD (N)	DIAMOND DENSITY
WAFERING (mono, monolike and polycrystalline)	Silicon	70	8-16	>15	40-50
		80		>19	25-35
SQUARING	Silicon	100	8-16	>31	25-35
		120	12-25	>43	
CROPPING	Silicon	250	30-40	150	40-60
		350		230	
CROPPING	Silicon	500	40-60	350	40-60
		700	60-80	680	

### EXAMPLE WITH THERMOSOLAR® WIRE CORE 70µm

#### GENERAL CONDITIONS

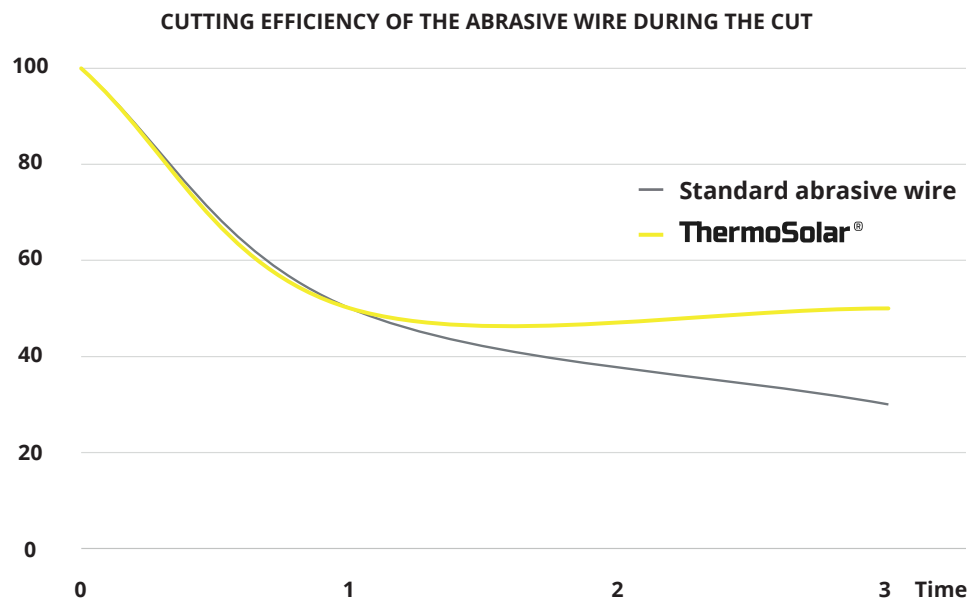
Wire material	High strength steel
Wire core diameter	70 µm
Abrasive material	Diamonds 8 -16 µm

#### SPECIFIC CONDITIONS

Mono silicon wafers	156 mm pseudo square
Cutting time	140 min
Wire consumption	1m/wafer

#### RESULTS:

- > TTV: 5 -10
- > Kerf: 95 µm



Thanks to the high performance of its 3 patented technologies, THERMOSOLAR® guarantees a better wire stability in the wafering process on a long time.

Newest fixed abrasive  
highly technical  
engineered wire,  
**ThermoSolar®** is the  
result of:

- › A century of technological know-how and innovation in electroplating.
- › The R&D's team dynamic and proven approach of research and progress.



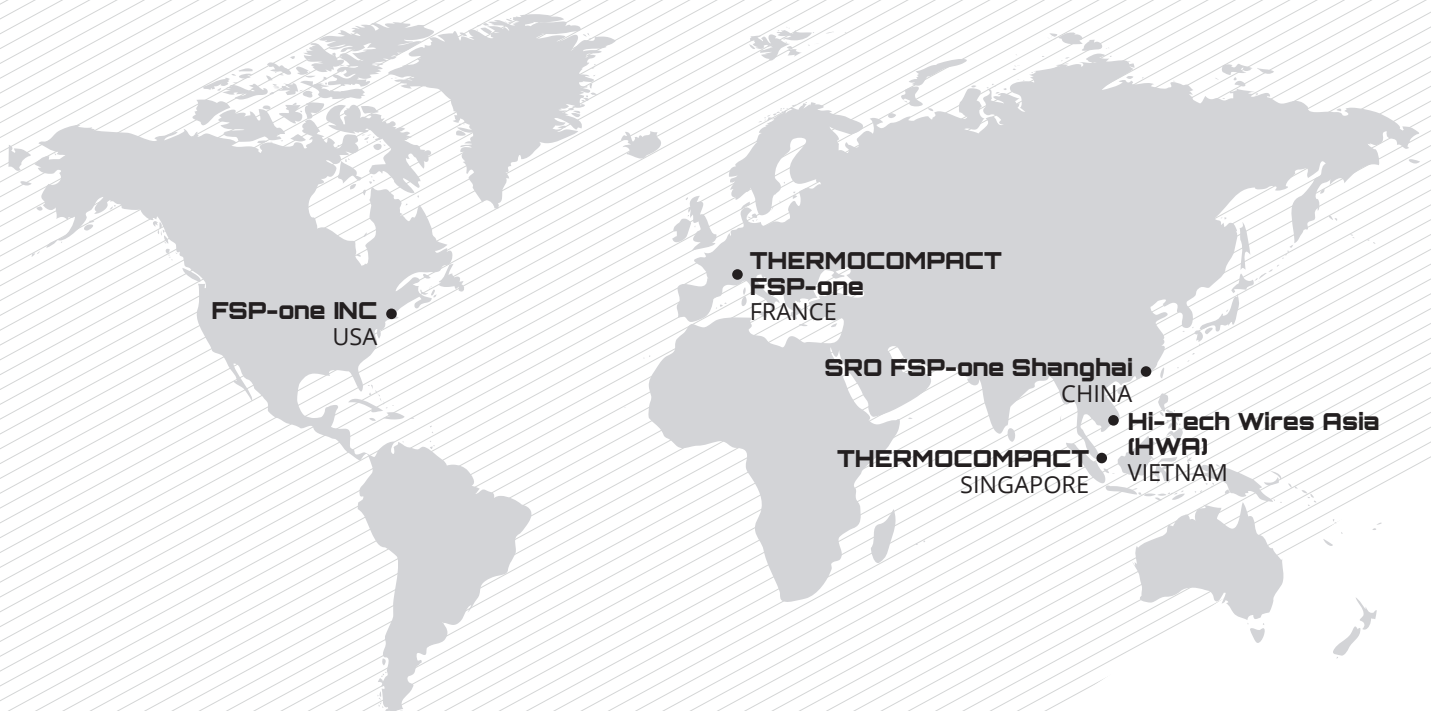
 **ThermoSolar®**  
By THERMOCOMPACT

ThermoSolar® is a brand of Thermocompact.

Thermocompact is part of the **THERMO** Technologies group that includes FSP-One (France and USA) and HWA (Vietnam). To reach the goals of technical and improved productivity of our customers, we apply our founding values **since 1913**:

**Expertise – Excellence – Innovation.**

## WHEREVER YOU ARE IN THE WORLD



### THERMOCOMPACT HEADQUARTERS

181, Route des Sarves – Metz-Tessy  
Z.I. "Les Iles"  
CS 70021  
74371 PRINGY cedex - France

45°55'38.5"N / 6°06'53.3"E

Tel +33 (0) 4 50 27 20 02  
Fax +33 (0) 4 50 27 17 37

[diamond-wires@thermocompact.com](mailto:diamond-wires@thermocompact.com)  
[www.thermo-technologies.com](http://www.thermo-technologies.com)