

The image features a large, dark solar panel with a shingled design, set against a background of glowing blue and red circuit patterns. The panel is mounted on a metallic, reflective surface. The overall aesthetic is futuristic and high-tech.

**Puma**  
SERIES

**SHINGLED  
TECHNOLOGY**

SUPERIOR PERFORMANCE  
AND RELIABILITY

**RECOM**  
TECHNOLOGIES®

## SHINGLED TECHNOLOGY

Over 420Wp & Over 675Wp



### ADVANTAGES OF PUMA SHINGLED MODULES

#### REDUCED RISK OF MICRO CRACKS

The replacement of soldered ribbons with a low temperature and flexible ECA decreases thermal stresses during the modules production and operation, decreasing the risk of micro cracks formation.

Mechanical stresses (e.g. snow load) are relieved by the flexible interconnection, improving the reliability in harsh environments (as reflected in the increased warranty provided).

#### HIGHER CELLS DENSITY AND IMPROVED AESTHETICS

The inactive area is considerably reduced, no ribbons and cells gaps on strings improving the efficiency and aesthetic in full black modules.

#### LOWER RESISTIVE LOSSES AND THERMAL COEFFICIENT

The resistive losses in strings are considerably decreased thanks to the lower current of shingles (1/6 or 1/7 of the original cell) and the lack of interconnection ribbons in strings, improving at the same time the performance at high temperatures.



Higher yield per surface area



Higher yield in hot climate



Low Pmax at  $-0,34\% / ^\circ\text{C}$



## MONO CRYSTALLINE SHINGLED MODULE

### KEY BENEFITS



25 Years product warranty



87,2% performance output warranty after 25 years



Over 20Wp more compared to standard modules



Reduced transportation costs



Reduced Risk Of Micro Cracks



Module efficiency up to 21,7%

### PERFORMANCE AT HIGH TEMPERATURES



HIGHER OUTPUT IN HOT CLIMATE

**+ 0,9 %**

Specific yield (kWh/kWp) due to low temperature coefficient



MORE EFFICIENT SPACE UTILIZATION

**- 3,1 %**

Space required for 1MWp of PUMA modules



HIGHER GENERATION PER UNIT AREA

**+ 4,1 %**

PV plant yield /sq.m. in hot climate

**PEAK POWER**  
Up to 675Wp

**MODULE EFFICIENCY 21,7%**

**TEMPERATURE RATIO - 0,34 %/°C**

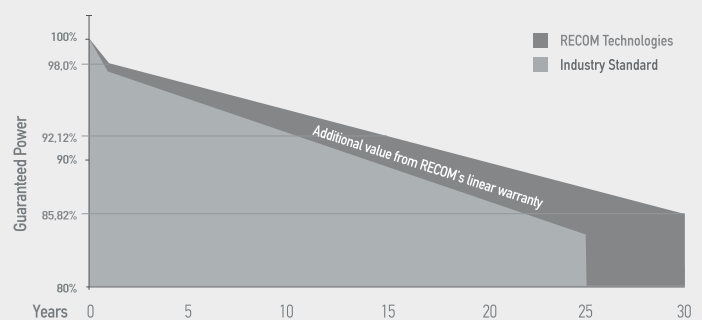
#### SMALL SIZE FOR ROOF TOP INSTALLATION

The PUMA module with power class over 555Wp, efficiency up to 21,6% and 25 years product & up to 30 years output warranty is:

- Best "Value for money" choice
- Ideal for rooftop installations (in the same size of the rooftop, more power can be installed compared to standard modules)
- Low LCOE

#### FOR COMMERCIAL & UTILITY INSTALLATIONS

The PUMA module with power class up to 675Wp, efficiency up to 21,7% and 25 years product & output warranty.



First Year Output |  $\geq 98.0\%$     2-30 Year Decline |  $\leq 0.42\%$     30 Year Output |  $\geq 85.82\%$

Great appearance

**BLENDS PERFECTLY WITH THE ROOFTOP**





SHINGLED TECHNOLOGY



FRENCH MANUFACTURER



[WWW.RECOM-TECH.COM](http://WWW.RECOM-TECH.COM)



**USA**

580 California Street,  
12th & 16th Floors  
San Francisco, California  
CA 94104  
E: [info@recom-tech.com](mailto:info@recom-tech.com)  
T: +1 (415) 568 2112

**GERMANY**

Speditionstraße 21  
Düsseldorf,  
40221  
Germany  
E: [info@recom-tech.com](mailto:info@recom-tech.com)  
T: +49 211 88231669

**FRANCE**

4 Avenue  
Pierre Marzin  
22300 Lannion  
France  
[contact@recom-sillia.com](mailto:contact@recom-sillia.com)  
T: +33 0296058050

**ITALY**

Via dell' Artigianato, Z. I.,  
Vanzo di San Pietro  
Viminario,  
PD 35020  
Italy  
E: [info@recom-tech.com](mailto:info@recom-tech.com)

**SINGAPORE**

Level 39, Tower 2  
Marina Bay Financial Centre  
10 Marina Boulevard  
018983 Singapore  
E: [info@recom-tech.com](mailto:info@recom-tech.com)  
T: +65 68186030

**GREECE**

1 Poseidonos Str.  
17342, Ag. Dimitrios  
Athens  
Greece  
E: [info@recom-tech.com](mailto:info@recom-tech.com)  
T: +30 2182189858

**CYPRUS**

1 Avlonos Street, Maria  
House, 4th Floor,  
Office No.7,  
1075 Nicosia, Cyprus  
T: +357 22 767543  
E: [info@recom-tech.com](mailto:info@recom-tech.com)

**U.A.E.**

Office 801, Twin Towers,  
Baniyas Street, Dubai, United  
Arab Emirates.  
PO.Box 41423,  
T:+971(4)2678443  
E: [Info@Recom-Tech.AE](mailto:Info@Recom-Tech.AE)