

## Solar Panel Technology overview: Why Solbian Pb Merlin “SR+”?

### Solbian “Powered by Merlin” SR+ key features:

Only Solbian Powered by Merlin SR+ solar panels provide the combination of: 1) the world’s highest conversion efficiency Panasonic Proprietary Silicon Heterojunction Intrinsic Thinlayer (HIT) Solar cells, together with 2) Merlin’s patented \*MTAT technology

Maximizes every inch your boat’s available solar energy potential

Highest output and most durable semi-flexible technology available, Made in USA

Semi-flexible Panels: can be walked on, mounted on canvas, etc

Durability backed up by 5-year warranty

### \*MTAT Technology:

MTAT addresses the common solar cell failure: microscopic cell cracking from flexing and thermal stresses (differential expansion and contraction of different materials in the panel); fracture of the intercell connecting grids; and delamination/water intrusion.

- Contains more interconnection points on a cell: microscopic cracking has little impact on energy collection;

- Neutralizes the harmful effects of differential rates of thermal expansion and contraction by incorporating a ‘spring’ effect within each cell

- Boasts a dramatically more rugged and reliable cell interconnected system than conventional land-based busbar approach.

Superior power output during increased temperatures: A typical weak link with solar cells, this means high power output even during hot summer days: you are buying more lifetime power

### Safety & Durability: Marine tested:

Every cell is electroluminescence (EL) tested before incorporation in a panel. Then, every panel is EL tested following manufacturing to ensure there are no hidden flaws.

### Summary:

SR+ is a technically significant advance in efficiency and reliability for marine solar. The first marine solar panel to use Panasonic’s (HIT) cells + MTAT + EL = “SR+”, the most efficient and most rugged semi-flexible solar panels in the marine marketplace.