

# Solar Panel Comparison

| Manufacturer                          | Evergreen Solar |               | Schott Solar    |                 | Sharp           | Siliken S.A.           |                        |                        |                        | SolarWorld AG    | SunPower       |                |                |                |
|---------------------------------------|-----------------|---------------|-----------------|-----------------|-----------------|------------------------|------------------------|------------------------|------------------------|------------------|----------------|----------------|----------------|----------------|
| Model                                 | ES-A-210-fa2    | ES-A-210-fa3  | SCHOTT POLY 217 | SCHOTT POLY 220 | ND-216UC1       | SLK60P6L BLK/BLK 215Wp | SLK60P6L BLK/BLK 220Wp | SLK60P6L BLK/WHT 215Wp | SLK60P6L SLV/WHT 215Wp | SW220 Mono Black | SPR-215-WHT    | SPR-217-WHT-U  | SPR-220-BLK-U  | SPR-220-WHT-U  |
| STC Rated Power Output (W)            | 210             | 210           | 217             | 220             | 216             | 215                    | 220                    | 215                    | 215                    | 220              | 215            | 217            | 220            | 220            |
| Voltage at Rated Power (V)            | 18.30           | 18.30         | 29.60           | 29.70           | 28.90           | 29.00                  | 29.20                  | 29.00                  | 29.00                  | 29.40            | 39.80          | 39.80          | 41.00          | 39.80          |
| Current at Rated Power (A)            | 11.48           | 11.48         | 7.33            | 7.41            | 7.48            | 7.41                   | 7.54                   | 7.41                   | 7.41                   | 7.50             | 5.40           | 5.40           | 5.37           | 5.53           |
| Open Circuit Voltage (V)              | 22.80           | 22.80         | 36.40           | 36.50           | 36.50           | 36.60                  | 36.70                  | 36.60                  | 36.60                  | 37.20            | 48.30          | 48.30          | 48.60          | 48.30          |
| Short Circuit Current (A)             | 12.11           | 12.11         | 8.10            | 8.15            | 8.10            | 8.02                   | 8.10                   | 8.02                   | 8.02                   | 8.10             | 5.80           | 5.80           | 5.75           | 5.95           |
| Fill Factor                           | 76.1%           | 76.1%         | 73.6%           | 74.0%           | 73.1%           | 73.2%                  | 74.0%                  | 73.2%                  | 73.2%                  | 73.0%            | 76.7%          | 77.5%          | 78.7%          | 76.6%          |
| Panel Efficiency                      | 13.4%           | 13.4%         | 12.6%           | 13.1%           | 13.3%           | 13.2%                  | 13.6%                  | 13.2%                  | 13.2%                  | 13.1%            | 17.3%          | 17.4%          | 17.7%          | 17.7%          |
| Power Tolerance                       | 2.50% ~ 0.00%   | 0.00% ~ 2.50% | -4.00% ~ 4.00%  | 0.00% ~ 2.00%   | -5.00% ~ 10.00% | -3.00% ~ 3.00%         | -3.00% ~ 3.00%         | -3.00% ~ 3.00%         | -3.00% ~ 3.00%         | 0.00% ~ 0.50%    | -5.00% ~ 5.00% | -5.00% ~ 5.00% | -5.00% ~ 5.00% | -5.00% ~ 5.00% |
| Power Temperature Coefficiency (%/°C) |                 | -0.43         |                 | -0.45           | -0.49           | -0.43                  | -0.43                  | -0.43                  | -0.43                  | -0.45            | -0.38          | -0.39          | -0.41          | -0.39          |
| Temperature Coefficiency VOC (%/°C)   |                 | -0.31         | -0.38           | -0.33           | -0.36           | -0.36                  | -0.36                  | -0.36                  | -0.36                  | -0.33            | -0.27          | -0.29          | -0.30          | -0.29          |
| Temperature Coefficiency ISC (%/°C)   |                 | 0.050         | 0.100           | 0.030           | 0.053           | 0.062                  | 0.062                  | 0.056                  | 0.062                  | 0.042            | 0.058          | 0.043          | 0.045          | 0.043          |
| NOCT (°C)                             |                 | 45.0          |                 | 47.2            | 47.5            | 49.0                   | 49.0                   | 49.0                   | 49.0                   | 47.0             | 45.0           | 48.0           | 49.0           | 48.0           |
| Panel Height (mm)                     | 1650            | 1650          | 1685            | 1685            | 1640            | 1640                   | 1640                   | 1640                   | 1640                   | 1675             | 1559           | 1559           | 1559           | 1559           |
| Panel Width (mm)                      | 951             | 951           | 810             | 993             | 994             | 990                    | 990                    | 990                    | 990                    | 1001             | 798            | 798            | 798            | 798            |
| Panel Depth (mm)                      | 46              | 40            | 50              | 50              | 58              | 40                     | 40                     | 40                     | 40                     | 31               | 46             | 46             | 46             | 46             |
| Panel Area (M^2)                      | 1.57            | 1.57          | 1.36            | 1.67            | 1.63            | 1.62                   | 1.62                   | 1.62                   | 1.62                   | 1.68             | 1.24           | 1.24           | 1.24           | 1.24           |
| Panel Weight (kg)                     | 18.6            | 18.6          | 19.2            | 23.0            | 20.0            | 19.0                   | 19.0                   | 19.0                   | 19.0                   | 22.0             | 15.0           | 15.0           | 15.0           | 15.0           |
| Material/Output Warranty (Years)      |                 | 5/10/25       |                 | 5/10/25         | 5/10/25         | 10/10/25               | 10/10/25               | 10/10/25               | 10/10/25               | 5/10/25          | 10/12/25       | 10/12/25       | 10/12/25       | 10/12/25       |
| PTC Power Output (W)                  | 190.0           | 190.0         |                 | 198.5           | 190.4           | 191.8                  | 196.4                  | 191.8                  | 192.4                  | 195.9            | 195.5          | 197.4          | 198.2          | 200.2          |
| PTC/STC Ratio                         | 90.5%           | 90.5%         |                 | 90.2%           | 88.1%           | 89.2%                  | 89.3%                  | 89.2%                  | 89.5%                  | 89.0%            | 90.9%          | 91.0%          | 90.1%          | 91.0%          |
| Estimated Power At NOCT (W)           |                 | 153.6         |                 | 158.4           | 153.7           | 154.2                  | 157.8                  | 154.2                  | 154.2                  | 158.6            | 158.9          | 158.0          | 158.7          | 160.2          |

- PTC Power: The output power under PVUSA Test Conditions. 1000 W/M2 solar irradiance, 20°C ambient air temperature, and 1m/s wind speed at 10 meters above ground level.
- Estimated Power At NOCT: The estimated output power under the NOCT conditions: 800 W/M2 solar irradiance, 20°C ambient air temperature, and 1m/s wind speed.
- The report is generated from the solar panel database at [www.posharp.com](http://www.posharp.com). Contact Posharp at 888-429-7989 for special services, including solar panel supplies