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# Smart Module

Monocrystalline PERC Module with Half-Cut Cell Technology and Integrated Power Optimizer

SPV355-R60DBMG, SPV360-R60DBMG

SMART MODULE



## PV to grid solution including full service from SolarEdge

- Easy installation with module pre-assembled power optimizer
- Optimized energy output by constantly tracking the maximum power point (MPPT) of each module individually
- Module-level voltage shutdown for installer and firefighter safety
- Full visibility of system performance from module to grid
- Superior quality control with full automatic production line
- Excellent mechanical loading and shock resistance performance
- Elegant design with an all-black module
- 15-year module warranty and 25-year performance warranty
- Specifically designed to work with SolarEdge inverters

# Smart Module

## Monocrystalline PERC Module with Half-Cut Cell Technology and Integrated Power Optimizer

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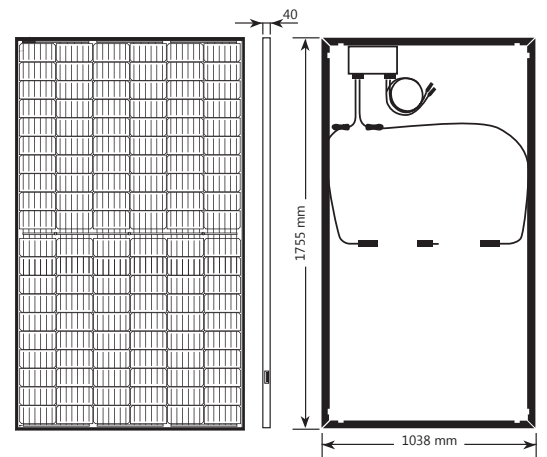
### MODULE ELECTRICAL PROPERTIES

| STC <sup>(1)</sup>          | SPV355-R60DBMG | SPV360-R60DBMG |     |
|-----------------------------|----------------|----------------|-----|
| Module Power                | 355            | 360            | W   |
| Max. Power Voltage (Vmp)    | 33.74          | 33.87          | V   |
| Max. Power Current (Imp)    | 10.53          | 10.63          | A   |
| Open Circuit Voltage (Voc)  | 41.51          | 41.66          | V   |
| Short Circuit Current (Isc) | 10.96          | 11.07          | A   |
| Maximum System Voltage      |                | 1000           | Vdc |
| Maximum Series Fuse Rating  |                | 20             | A   |
| Module Efficiency           | 19.0           | 19.27          | %   |
| Power Measurement Tolerance |                | 0 ~ +5         | W   |
| NOCT <sup>(2)</sup>         |                |                |     |
| Module Power                | 266            | 270            | W   |
| Max. Power Voltage (Vmp)    | 30.97          | 31.09          | V   |
| Max. Power Current (Imp)    | 8.59           | 8.67           | A   |
| Open Circuit Voltage (Voc)  | 38.66          | 38.80          | V   |
| Short Circuit Current (Isc) | 9.01           | 9.10           | A   |

### MODULE MECHANICAL PROPERTIES

|  |                              |    |
|--|------------------------------|----|
| Cells                                    | 120 (6 x 20)                 |    |
| Cell Type                                | Monocrystalline PERC         |    |
| Cell Dimensions                          | 166 x 83                     | mm |
| Dimensions (L x W x H)                   | 1755 x 1038 x 40*            | mm |
| Front Side Maximum Load (Snow)           | 5400                         | Pa |
| Rear Side Maximum Load (Wind)            | 2400                         | Pa |
| Weight (with Power Optimizer)            | 21.3*                        | kg |
| Front Glass                              | 3.2mm, coated tempered glass |    |
| Frame                                    | Black anodized aluminium     |    |
| Junction Box                             | IP68, three diodes           |    |
| Connector Type                           | Staubli MC4                  |    |
| Operating Temperature                    | -40 to +85                   | °C |
| Packaging Information (units per pallet) | 26                           |    |

\* The dimensions and weight displayed in this table apply to modules manufactured from February 2021 (SPVxxx-R60DBMG-2M2C01). Modules manufactured prior to February 2021 (SPVxxx-R60DBMG-2C01) have dimensions of 1776 x 1052 x 40 mm and weigh 23.0 kg



### CERTIFICATIONS & WARRANTY

|                         |  |
|-------------------------|--|
| Module Certifications   | IEC61215:2016, IEC61730:2016, AU listing CEC, Ammonia, PID       |
| Product Warranty        | Power Optimizer — 25-year warranty,<br>Module — 15-year warranty |
| Output Warranty of Pmax | 25-year linear module warranty <sup>(3)</sup>                    |

### TEMPERATURE CHARACTERISTICS

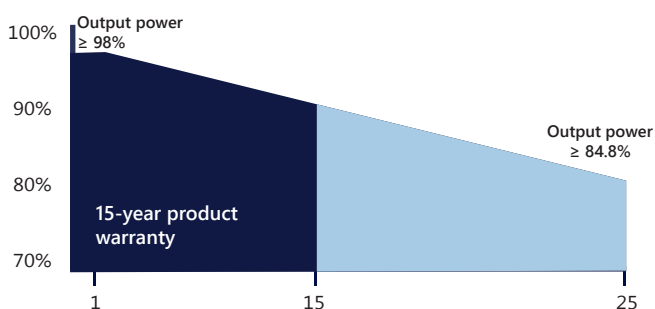
|                                       |        |        |
|---------------------------------------|--------|--------|
| Temperature Coefficient Power (Pm)    | -0.364 | % / °C |
| Temperature Coefficient Voltage (Voc) | -0.281 | % / °C |
| Temperature Coefficient Current (Isc) | 0.039  | % / °C |
| Operating Cell Temperature (NOCT)     | 45 ± 2 | °C     |

(1) STC: Irradiance 1000 W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5

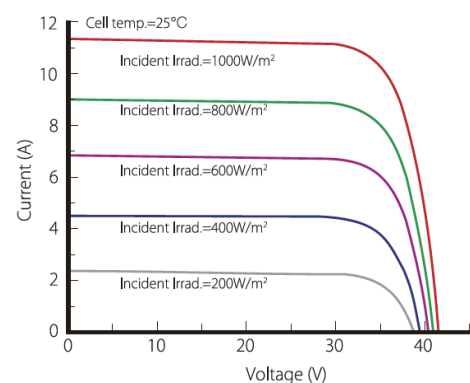
(2) NOCT: Irradiance at 800 W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1 m/s

(3) 1st year: 98%, 84.8% power output over 25 years

#### Linear Warranty 15-Year Product Warranty + 25-Year Linear Power Warranty



#### Module I-V Curve (SPV360-R60LWMG)



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### POWER OPTIMIZER PROPERTIES

#### INPUT

|  |        |     |
|--|--------|-----|
| Rated Input DC Power                                       | 375    | W   |
| Absolute Maximum Input Voltage (Voc at lowest temperature) | 60     | Vdc |
| MPPT Operating Range                                       | 8 - 60 | Vdc |
| Maximum Short Circuit Current (Isc)                        | 11.75  | Adc |
| Maximum Efficiency   | 99.5   | %   |
| Weighted Efficiency  | 98.8   | %   |
| Overvoltage Category                                       | II     |     |

#### OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREEDGE INVERTER)

|                        |    |     |
|------------------------|----|-----|
| Maximum Output Current | 15 | Adc |
| Maximum Output Voltage | 60 | Vdc |

#### OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREEDGE INVERTER OR SOLAREEDGE INVERTER OFF)

|   |         |     |
|---|---------|-----|
| Safety Output Voltage per Power Optimizer | 1 ± 0.1 | Vdc |
|---|---------|-----|

#### STANDARD COMPLIANCE

|             |   |  |
|-------------|---|--|
| EMC         | FCC Part 15 Class B, IEC61000-6-2, IEC61000-6-3 |  |
| Safety      | IEC62109-1 (class II safety), UL1741            |  |
| RoHS        | Yes   |  |
| Fire Safety | VDE-AR-E 2100-712:2013-05                       |  |

#### INSTALLATION SPECIFICATIONS

|                             |                          |         |
|-----------------------------|--------------------------|---------|
| Output Connector            | MC4                      |         |
| Output Wire Length          | 1.2 / 3.9                | m / ft  |
| Operating Temperature Range | -40 to +85 / -40 to +185 | °C / °F |
| Protection Rating           | IP68 / NEMA6P            |         |
| Relative Humidity           | 0 - 100                  | %       |

| PV System Design Using a SolarEdge Inverter            | Single Phase HD-Wave | Single Phase | Three Phase          | Three Phase for 277/480 Grid |   |
|--|----------------------|--------------|----------------------|------------------------------|---|
| Minimum String Length (Power Optimizer) <sup>(4)</sup> | 8                    |              | 16                   | 18                           |   |
| Maximum String Length (Power Optimizers)               | 25                   |              |                      | 50                           |   |
| Maximum Power per String                               | 5700                 | 5250         | 11250 <sup>(5)</sup> | 12750 <sup>(6)</sup>         | W |
| Parallel Strings of Different Lengths or Orientations  | Yes                  |              |                      |                              |   |

(4) Smart modules cannot be used with the SE3K three phase inverter (available in some countries; refer to the three phase inverter SE3K-SE10K datasheet)

(5) For the 230/400V grid: it is allowed to install up to 13,500W per string when the maximum power difference between each string is 2,000W

(6) For the 277/480V grid: it is allowed to install up to 15,000W per string when the maximum power difference between each string is 2,000W