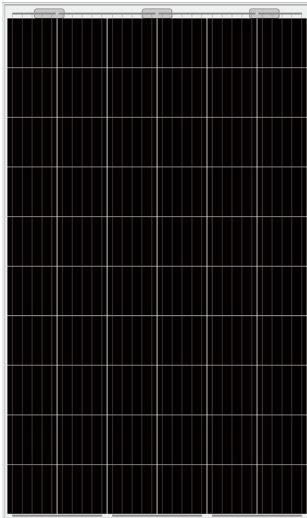


**YLM  
GG  
60CELL**

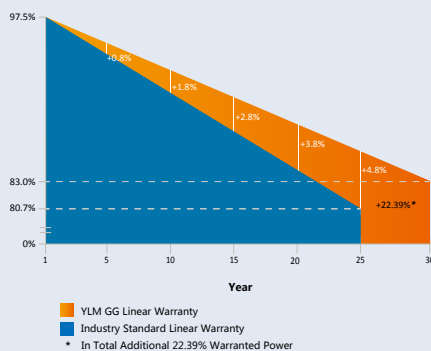


**22.5%**  
CELL EFFICIENCY

**12 YEAR**  
PRODUCT WARRANTY

**0 to +5W**  
POWER SELECTION TOLERANCE

**30 Years Linear Warranty**



# DOUBLED STRENGTH FOR MULTIPLIED RELIABILITY

Whenever the conditions are requiring a more robust solution, our modules are the right choice. Carefully chosen materials, state of the art solar cells and our experience in manufacturing to ensure high product quality.



**Bifacial Power**

In contrast to conventional modules, YLM GG modules can generate energy from both sides. As the backside makes use of the reflected and scattered light from the surroundings, these modules could yield significantly more power, depending upon the albedo.



**High Yield**

YLM GG modules often generate more energy due to their low LID and the temperature coefficient of p-type monocrystalline silicon solar cells.



**Higher Bifaciality**

Imagine a solar module flipped upside down with its back to the sun. The amount of power that it can still produce is compared against the nameplate badge, which is the bifaciality factor. A major advantage of choosing YLM GG modules is that the backside will perform at an industry leading of the p-type bifacial modules.



**Higher Durability**

The double glass construction improves the long-term mechanical performance of the module. Furthermore, YLM GG modules work well in muggy conditions, and independently tested for harsh environmental conditions, such as exposure to salt mist, ammonia, dust or known PID risk factors.



**Optimal Self-cleaning**

Choose our frameless "DL" module for optimal self-cleaning.



**Mechanical Performance**

Choose our specially designed aluminium framed "DF" module for enhanced mechanical performance and more ease of use in traditional installation methods.

**Yingli Solar**

Founded in 1987, Yingli Energy (China) Company Limited, known as "Yingli Solar", is one of the world's oldest leading solar panel manufacturers with the mission to provide affordable green energy for all. Yingli Solar makes solar power possible for communities everywhere by using our global manufacturing and logistics expertise to address unique local challenges.

# YLM GG 60CELL



## ELECTRICAL PERFORMANCE

|             |   |
|-------------|---|
| Module type | 60DL (60 cell, p-type mono-Si, frameless): YLxxxDG2530L-2 (xxx=Pmax)<br>60DF (60 cell, p-type mono-Si, framed): YLxxxDG2530F-2 (xxx=Pmax) |
|-------------|---|

| Electrical Parameters at Standard Test Conditions (STC) |                  |   |        |       |       |       |       |       |
|---|------------------|---|--------|-------|-------|-------|-------|-------|
| Power output  | $P_{max}$        | W | 335    | 330   | 325   | 320   | 315   | 310   |
| Voltage at $P_{max}$                                    | $V_{Pmax}$       | V | 34.15  | 33.85 | 33.54 | 33.23 | 32.92 | 32.60 |
| Current at $P_{max}$                                    | $I_{Pmax}$       | A | 9.81   | 9.75  | 9.69  | 9.63  | 9.57  | 9.51  |
| Open-circuit voltage                                    | $V_{oc}$         | V | 40.70  | 40.45 | 40.20 | 39.95 | 39.70 | 39.45 |
| Short-circuit current                                   | $I_{sc}$         | A | 10.34  | 10.28 | 10.22 | 10.16 | 10.10 | 10.04 |
| Power output tolerance                                  | $\Delta P_{max}$ | W | 0 / +5 |       |       |       |       |       |
| Module efficiency@60DL                                  | $\eta_{Pmax}$    | % | 20.11  | 19.81 | 19.51 | 19.21 | 18.91 | 18.61 |
| Module efficiency@60DF                                  | $\eta_{Pmax}$    | % | 19.92  | 19.62 | 19.32 | 19.02 | 18.73 | 18.43 |

| Electrical Parameters at Nominal Module Operating Temperature (NMOT) |            |   |        |        |        |        |        |        |
|--|------------|---|--------|--------|--------|--------|--------|--------|
| Power output   | $P_{max}$  | W | 254.50 | 250.72 | 246.90 | 243.10 | 239.33 | 235.52 |
| Voltage at $P_{max}$   | $V_{Pmax}$ | V | 32.43  | 32.14  | 31.85  | 31.56  | 31.26  | 30.96  |
| Current at $P_{max}$   | $I_{Pmax}$ | A | 7.85   | 7.80   | 7.75   | 7.70   | 7.66   | 7.61   |
| Open-circuit voltage   | $V_{oc}$   | V | 38.60  | 38.36  | 38.13  | 37.89  | 37.65  | 37.42  |
| Short-circuit current  | $I_{sc}$   | A | 8.33   | 8.28   | 8.23   | 8.18   | 8.14   | 8.09   |

| Bifacial Power Output (Backside Power Gain) |             |   |     |     |     |     |     |     |
|---|-------------|---|-----|-----|-----|-----|-----|-----|
| Power output (power gain 10%)               | $P_{max10}$ | W | 369 | 363 | 358 | 352 | 347 | 341 |
| Power output (power gain 15%)               | $P_{max15}$ | W | 385 | 380 | 374 | 368 | 362 | 357 |
| Power output (power gain 25%)               | $P_{max25}$ | W | 419 | 413 | 406 | 400 | 394 | 388 |

| Other Characteristics                                      |        |    |      |                                      |                 |        |       |  |
|--|--------|----|------|--------------------------------------|-----------------|--------|-------|--|
| Nominal module operating temperature                       | NMOT   | °C | 39±2 | Temperature coefficient of $I_{sc}$  | $\alpha_{Isc}$  | % / °C | 0.05  |  |
| Bifaciality factor   | $\phi$ | %  | 70±5 | Temperature coefficient of $V_{oc}$  | $\beta_{Voc}$   | % / °C | -0.30 |  |
| Measurement tolerance of $P_{max}$ , $V_{oc}$ and $I_{sc}$ |        | %  | ±3   | Temperature coefficient of $P_{max}$ | $\gamma_{Pmax}$ | % / °C | -0.36 |  |

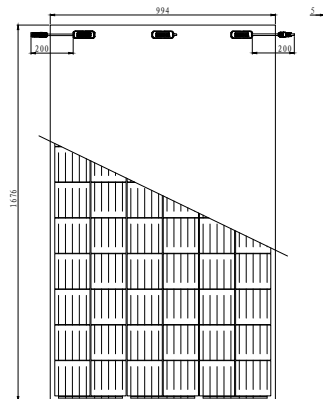
STC: 1000W·m<sup>-2</sup> irradiance, 25°C cell temperature, AM1.5 spectrum according to EN 60904-3.  
NMOT: temperature near maximum power point at 800W·m<sup>-2</sup> irradiance, 20°C ambient temperature, 1m·s<sup>-1</sup> wind speed.

| OPERATING CONDITIONS                   |                            | CONSTRUCTION MATERIALS                    |   |
|--|----------------------------|---|---|
| Max. system voltage                    | 1500V <sub>DC</sub>        | Cell (material / number)                  | p-type mono-Si / 6 x 10                     |
| Max. series fuse rating*               | 20A                        | Glass (material / thickness)              | low-iron semi-tempered glass / 2.0mm x 2    |
| Operating temperature range            | -40°C to 85°C              | Frame (60DL / 60DF)                       | none / anodized aluminium alloy             |
| Hailstone impact (diameter / velocity) | 25mm / 23m·s <sup>-1</sup> | Junction box (type / protection degree)   | 3 diodes / ≥ IP67                           |
| Snow load, front (60DL / 60DF)         | 3000Pa / 5400Pa            | Cable (length / cross-sectional area)     | 200mm, can be customized / 4mm <sup>2</sup> |
| Wind load, back (60DL / 60DF)          | 2400Pa / 2400Pa            | Plug connector (type / protection degree) | match the junction box / IP67               |

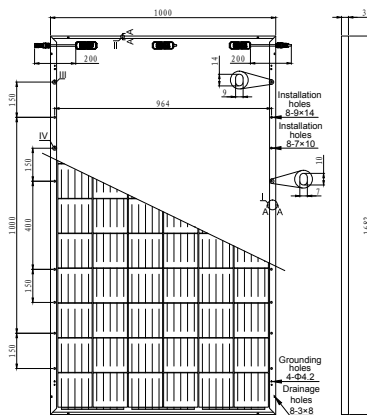
\*DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection.

| PACKAGING SPECIFICATIONS                 |                               |  |                          |
|--|-------------------------------|--|--------------------------|
| Packaging Specifications@60DL            | Packaging Specifications@60DF |  |                          |
| Dimensions (L / W / H)                   | 1676mm / 994mm / 5mm          | Dimensions (L / W / H)                   | 1682mm / 1000mm / 30mm   |
| Weight                                   | 20.0kg                        | Weight                                   | 21.5kg                   |
| Number of modules per pallet             | 36                            | Number of modules per pallet             | 36                       |
| Number of pallets per 40' container*     | 26                            | Number of pallets per 40' container*     | 26                       |
| Packaging pallets dimensions (L / W / H) | 1803mm / 1138mm / 1177mm      | Packaging pallets dimensions (L / W / H) | 1700mm / 1110mm / 1152mm |
| Pallet weight                            | 783kg                         | Pallet weight                            | 809kg                    |

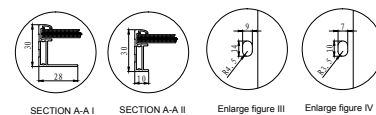
\*Truck transport is prohibited to exceed its maximum load.



Figure@60DL unit: mm



Figure@60DF unit: mm



## QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, CE, ISO 9001: 2015, ISO 14001: 2015, BS OHSAS 18001: 2007



- Due to continuous innovation, research and product improvement, the specifications in this product information sheet are subject to change without prior notice. The specifications may deviate slightly and are not guaranteed.
- The data does not refer to a single module and they are not part of the offer, they only serve for comparison to different module types. The company reserves the final right to explain any of the data included here.
- Proudly made in China.



**Warning:** Read the Installation and User Manual in its entirety before handling, installing and operating Yingli Solar modules.

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