



## SunGen SGM-180D Advantages

1. 180 Watt Monocrystalline.
2. +/- 3% tolerance.
3. PTC (real world output) of 161 watts.
4. Cleave Energy 1 year comprehensive product and installation warranty.
5. 5 year product warranty.
6. 10 year 90% minimum rated power output warranty.
7. 25 year 80% minimum rated power output.
8. Bypass diodes are integrated in the junction box to minimize shading power loss.
9. Module is glass to back sheet laminated.
10. Water-protected connector system, for easy installation.
11. A compact panel with high output for its surface area.

### Real World Panel Output Comparison

The California Energy Commission wanted to level the playing field for solar panel manufacturers, so they hired an independent testing laboratory called PVUSA to test and rate every solar panel that was to participate in the State's rebate program. For example a solar panel that had a manufacturer provided STC (Standard Test Condition) or labeled rating of 100 Watts would have their panel tested by PVUSA and might be given a PTC rating or PVUSA rating of 89.4 Watts. It wasn't that the manufacturers were being dishonest it's just that PVUSA uses different parameters that they feel represent more real world conditions.

So the higher the PTC rating, the more power you'll get from a solar panel.

**866 980-9260**

Manufacturer Name	Module Model Number	Description	PTC
Sharp	NT-180U1	180W Monocrystalline Module	156.3
<b>SUNGEN</b>	<b>SGM-180D</b>	<b>180W Monocrystalline Module</b>	<b>161</b>
Suntech Power	STP180S-24/Ab-1	180W Monocrystalline Module	156.5

Source: <http://www.gosolarcalifornia.org/equipment/pvmodule.html>