Fill Factor in solar PV panels

Fill Factor (FF) is essentially a measure of quality of the solar cell. It is the ratio of the actual maximum obtainable power to the product of the open circuit voltage and circuit current. This is a key parameter in evaluating performance. In 2009, typical commercial solar cells had a fill factor > 0.70. Grade B were usually between 0.4 to 0.7(28). Cells with a high fill factor have a low equivalent series resistance and a high equivalent shunt resistance, so less of the current produced by the cell is dissipated in internal losses.

Panel	Imp	Vmp	Isc	Voc	FF
Suntech STP 260-20	8.42	30.9	8.89	37.7	**0.776**
Suntech STP 265-20	8.56	31	9.02	37.8	**0.778**
Suntech STP 270-20	8.69	31.1	9.15	37.9	**0.779**
LG 260SIK-B3	8.34	31.2	8.88	38.2	**0.767**
LG 265SIK-B3	8.42	31.5	9.03	38.4	**0.764**
LG270SIK-B3	8.52	31.7	9.12	38.6	**0.767**
Qcell Pro G3-260	8.53	30.78	9.09	38.18	**0.756**
Qcell Pro GS-265	8.69	30.79	9.28	38.52	**0.748**
Trina TSM 260	8.5	30.6	9	38.2	**0.756**
Trina TSM 265	8.61	30.8	9.1	38.3	**0.761**
Trina TSM 270	8.73	30.9	9.18	38.4	**0.765**
Opal Solar OSR260P	8.5	30.6	9.04	37.8	**0.761**
Opal Solar OSR265P	8.58	30.9	9.12	38	**0.765**
Opal Solar OSR 270P	8.66	31.2	9.2	38	**0.772**