

1. Electrical Characteristics

1.1 Electrical Performance at Standard Test Conditions(*STC)

60Cells Panel Description		Karra-240	Karra-245	Karra-250	Karra-255
Item	Unit				
Max. Power (Pmax)	Wp	240	245	250	255
Max. Power voltage (Vmp)	V	29.6	29.8	30	30.2
Max. Power current (Imp)	A	8.1	8.2	8.3	8.4
Open circuit voltage (Voc)	V	37.3	37.5	37.7	37.9
Short circuit current (Isc)	A	8.7	8.7	8.8	8.8
Panel efficiency	%	13.8	14.1	14.4	14.6
Power tolerance	%	±3			

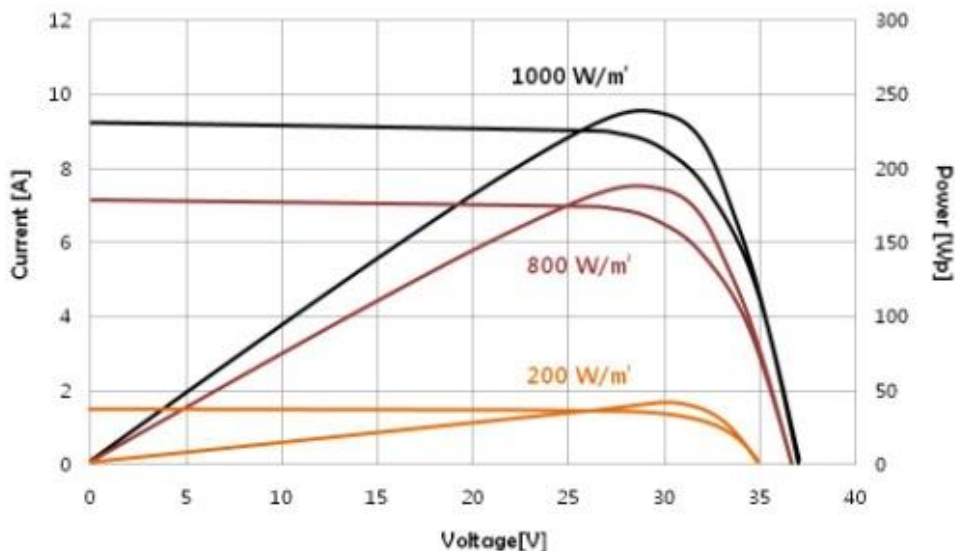
*STC(Standard Test Condition) : 1,000W/m², AM 1.5, 25°C

1.2 Electrical Performance at Nominal Operating Cell Temperature Conditions(*NOCT)

60Cells Panel Description		Karra-240	Karra-245	Karra-250	Karra-255
Item	Unit				
Max. Power (Pmax)	Wp	194	199	203	207
Max. Power voltage (Vmp)	V	30.6	30.8	31.0	31.2
Max. Power current (Imp)	A	6.4	6.4	6.5	6.6
Open circuit voltage (Voc)	V	37.7	37.9	38.1	38.3
Short circuit current (Isc)	A	7.0	7.0	7.0	7.0

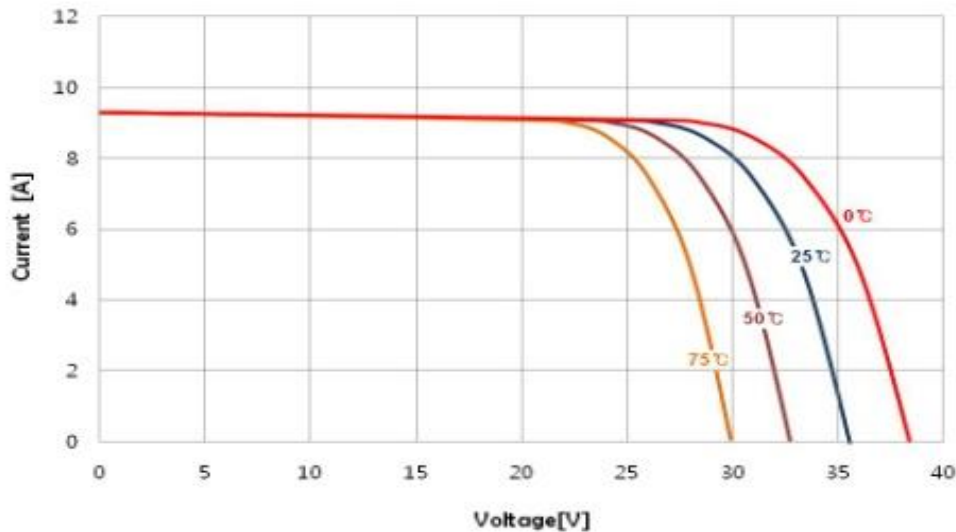
*NOCT(Nominal Operating Cell Temperature) : 800W/m², 20°C, wind speed 1m/s

1.3 Dependence of Irradiance



1.5 Thermal Characteristics

Rating		Unit	Value
NOCT		°C	45±2
Temperature Coefficient	Isc	%/°C	+ 0.06
	Voc	%/°C	- 0.35
	Pmax	%/°C	- 0.42



1.6 AC Inverter(Optional)

INPUT(DC) DATA	P250LV-240
Recommended STC Panel Input Power Rating	235 W - 280 W
Maximum Continuous Input Power	250 W
Maximum Input Voltage	48 V
MPPT Voltage Range	18 V - 37 V
Maximum Power Voltage Range	25 V - 37 V
Maximum DC Short Circuit Current	15 A
Maximum Input Current	10 A

OUTPUT(DC) DATA	P250LV-240
Maximum Continuous Output Power	238 W
Nominal Output Current	0.99 A
Nominal Voltage	240 V
Operating Voltage Range	211 V - 264 V
Operating Frequency Range	59.3 Hz - 60.5 Hz
Adjustable Frequency Range	57 Hz - 62.5 Hz
Power Factor	> 0.99
Total Harmonic Distortion	IEEE 1547 Compliant

2. Mechanical Characteristics

Cells per Panel	60 Cells (6 x 10)
Cell Type	156x156 mm Multi-crystalline
Panel Dimension (L x W x H)	1,667 x 1,000 x 40 mm
Panel Weight	18.5 Kg (without inverter / 2.3 Kg)
Front Glass	3.2 mm Tempered Glass
Back Sheet	DuPont Tedlar film-based
Junction Box	Rated Current 30A / Rated Voltage 1000V(IEC) / IP65
Frame	Anodized Aluminum
Output cable	(+,-) 600mm / 4 mm ² cable / MC4
Edge seal & J-box Sealant	Dow Corning
AC Inverter(Optional)	SolarBridge P250LV-240 / 27.2 x 10.1 x 3.5 mm



3. Qualification Tests

Temp cycling range	-40°C to 85°C for 200cycles
Damp heat test	85°C and 85% relative humidity for 1000hr
Front load test	2400 Pa (Snow)
Rear static load test	5400 Pa (Wind)
Hailstone impact test	25mm hail at 23m/s from 1m distance

8. Panel Drawing

