



FLEXIBLE SOLAR PANELS

CLM-65MF/CLM-70MF

Flexible Panels To Power Your Next Adventure

Couleenergy Flexible panel use unique shingled cells technology. The panel made with conducting resin paste without ribbon to minimize the optical and resistive losses, improve mechanical load to flexing over 30 degrees, and are able to withstand harsh weather conditions and are almost impervious to corrosion.

Key Features

- The latest Shingled PERC solar cells technology.
- Over 30 degrees of ultimate bending no cells cracks.
- Improved 15~20% power of output than the traditional panel.
- Minimizes the optical and resistive losses.
- 5 years workmanship and materials warranty.
- OEM and ODM supported.



Powerful



Weather Resistant

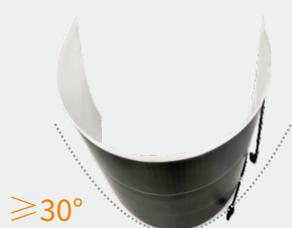
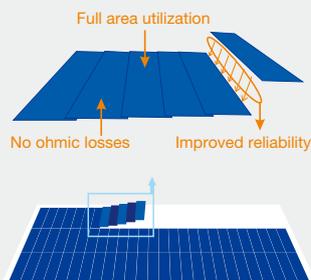
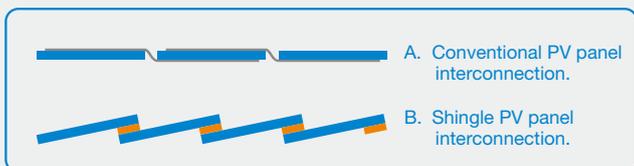


Flexible

What Is Shingled Cells Technology Advantage?

Shingled-cell technology, by cutting cells., these smaller currents will help reduce "Cell To Module" loss, which means higher output and more flexible.

The innovative shingled-cell technology allows no ribbon soldering internally and smaller branch current, so that internal resistance is lower, and increase the efficiency of the modules. The unique parallel design reduces the hot-spot effect significantly, and the gorgeous aesthetic appearance will bring different visual enjoyment.



Typical Electrical Data

at STC: Irradiance 1000 W/m² module temperature 25°C AM=1.5;

Model	CLM-65MF	CLM-70MF
Pmax (W)	65W	70W
Power Tolerance	0 ~ +3%	0 ~ +3%
Vmp (V)	18.42	18.6
Imp (A)	3.58	3.79
Voc (V)	22.32	22.5
Isc (A)	3.8	4
Working Temperature	-40°C ~+ 85°C	-40°C ~+ 85°C
Nominal Operating cell Temp	45± 2°C	45± 2°C
Temp coefficient of Pmax	-0.4%/ °C	-0.4%/ °C
Temp coefficient of Voc	-0.3 %/ °C	-0.3 %/ °C
Temp coefficient of Isc	0.06 %/ °C	0.06 %/ °C
Temp coefficient of Vmpp	-0.35 %/ °C	-0.35 %/ °C
Nominal Voltage	12V	12V
Max. System Voltage	600VDC	600VDC
Max. Fusing Current	15A	15A

Mechanical Data

Cells Type	Prime Monocrystalline PERC solar cells	
Module Dimensions(L/W/H)	1120*375mm	
Module weight	1.0kg	
Cell's Efficiency	20.8%	22.4%
Front Cover (material/ thickness)	Higher Strength TPT/ETFE/ 2.2mm	
Back Sheet (color)	White/ Black	
Bending Range	≥30°	
Junction Box (protection degree)	≥IP65/IP68 with by-pass diode	
Grommets	316 stainless Steel /6 Mounting holes/ Square & Round corners	
Cables & Connectors	0.5 m/2.5&4.0mm ² /MC4 compatible/IP68	

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FLEXIBLE SOLAR PANELS

CLM-80M/CLM-85M

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Powerful



Weather Resistant

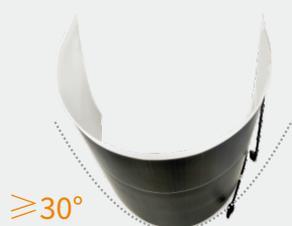
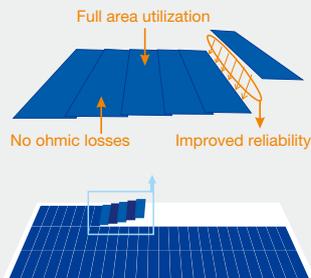
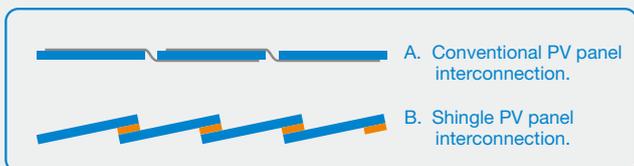


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Typical Electrical Data		
at STC: Irradiance 1000 W/m ² module temperature 25°C AM=1.5;		
Model	CLM-80M	CLM-85M
Pmax (W)	80W	85W
Power Tolerance	0 ~ +3%	0 ~ +3%
Vmp (V)	15.07	15.24
Imp (A)	5.32	5.58
Voc (V)	18.28	18.45
Isc (A)	5.58	5.88
Working Temperature	-40°C ~+ 85°C	-40°C ~+ 85°C
Nominal Operating cell Temp	45± 2°C	45± 2°C
Temp coefficient of Pmax	-0.4%/ °C	-0.4%/ °C
Temp coefficient of Voc	-0.3 %/ °C	-0.3 %/ °C
Temp coefficient of Isc	0.06 %/ °C	0.06 %/ °C
Temp coefficient of Vmpp	-0.35 %/ °C	-0.35 %/ °C
Nominal Voltage	12V	12V
Max. System Voltage	600VDC	600VDC
Max. Fusing Current	15A	15A

Mechanical Data	
Cells Type	Prime Monocrystalline PERC solar cells
Module Dimensions(L/W/H)	935*530mm
Module weight	1.2kg
Cell's Efficiency	20.7% 22.0%
Front Cover (material/ thickness)	Higher Strength TPT/ETFE/ 2.2mm
Back Sheet (color)	White/ Black
Bending Range	≥30°
Junction Box (protection degree)	≥IP65/IP68 with by-pass diode
Grommets	316 stainless Steel /6 Mounting holes/ Square & Round corners
Cables & Connectors	0.5 m/2.5&4.0mm ² /MC4 compatible/IP68

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FLEXIBLE SOLAR PANELS

CLM-100MF/CLM-105MF

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Powerful



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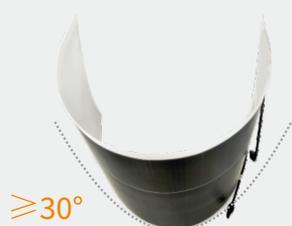
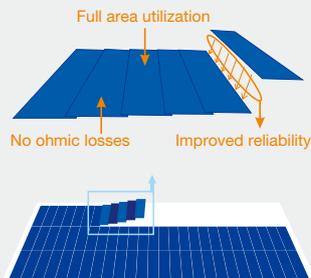
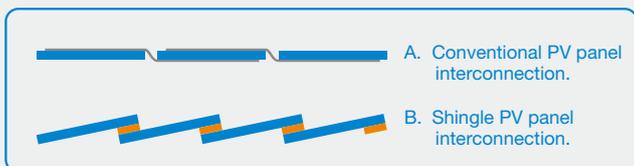


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Typical Electrical Data		
at STC: Irradiance 1000 W/m ² module temperature 25°C AM=1.5;		
Model	CLM-100MF	CLM-105MF
Pmax (W)	100W	105W
Power Tolerance	0 ~ +3%	0 ~ +3%
Vmp (V)	18.43	18.61
Imp (A)	5.47	5.65
Voc (V)	22.33	22.51
Isc (A)	5.79	5.97
Working Temperature	-40°C ~+ 85°C	-40°C ~+ 85°C
Nominal Operating cell Temp	45± 2°C	45± 2°C
Temp coefficient of Pmax	-0.4%/ °C	-0.4%/ °C
Temp coefficient of Voc	-0.3 %/ °C	-0.3 %/ °C
Temp coefficient of Isc	0.06 %/ °C	0.06 %/ °C
Temp coefficient of Vmpp	-0.35 %/ °C	-0.35 %/ °C
Nominal Voltage	12V	12V
Max. System Voltage	600VDC	600VDC
Max. Fusing Current	15A	15A

Mechanical Data	
Cells Type	Prime Monocrystalline PERC solar cells
Module Dimensions(L/W/H)	1120*530mm
Module weight	1.5kg
Cell's Efficiency	21.3% 22.4%
Front Cover (material/ thickness)	Higher Strength TPT/ETFE/ 2.2mm
Back Sheet (color)	White/ Black
Bending Range	≥30°
Junction Box (protection degree)	≥IP65/IP68 with by-pass diode
Grommets	316 stainless Steel /6 Mounting holes/ Square & Round corners
Cables & Connectors	0.5 m/2.5&4.0mm ² /MC4 compatible/IP68



FLEXIBLE SOLAR PANELS

CLM-120M/CLM-125M

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Powerful



Weather Resistant

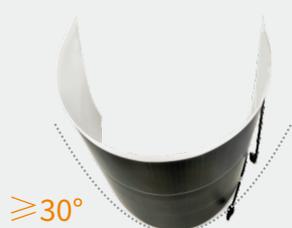
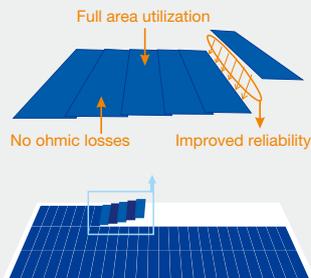
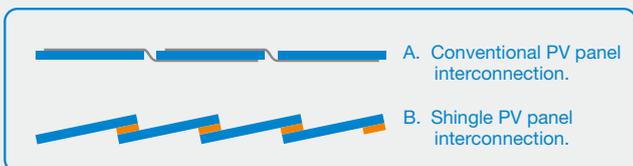


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Typical Electrical Data		
at STC: Irradiance 1000 W/m ² module temperature 25°C AM=1.5;		
Model	CLM-120M	CLM-125M
Pmax (W)	120W	125W
Power Tolerance	0 ~ +3%	0 ~ +3%
Vmp (V)	17.18	17.36
Imp (A)	7.03	7.21
Voc (V)	20.83	21.01
Isc (A)	7.40	7.58
Working Temperature	-40°C ~+ 85°C	-40°C ~+ 85°C
Nominal Operating cell Temp	45± 2°C	45± 2°C
Temp coefficient of Pmax	-0.4%/ °C	-0.4%/ °C
Temp coefficient of Voc	-0.3 %/ °C	-0.3 %/ °C
Temp coefficient of Isc	0.06 %/ °C	0.06 %/ °C
Temp coefficient of Vmpp	-0.35 %/ °C	-0.35 %/ °C
Nominal Voltage	12V	12V
Max. System Voltage	600VDC	600VDC
Max. Fusing Current	15A	15A

Mechanical Data	
Cells Type	Prime Monocrystalline PERC solar cells
Module Dimensions(L/W/H)	1120*685mm
Module weight	1.7kg
Cell's Efficiency	20.4% 21.2%
Front Cover (material/ thickness)	Higher Strength TPT/ETFE/ 2.2mm
Back Sheet (color)	White/ Black
Bending Range	≥30°
Junction Box (protection degree)	≥IP65/IP68 with by-pass diode
Grommets	316 stainless Steel /6 Mounting holes/ Square & Round corners
Cables & Connectors	0.5 m/2.5&4.0mm ² /MC4 compatible/IP68

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FLEXIBLE SOLAR PANELS

CLM-150M/CLM-160M

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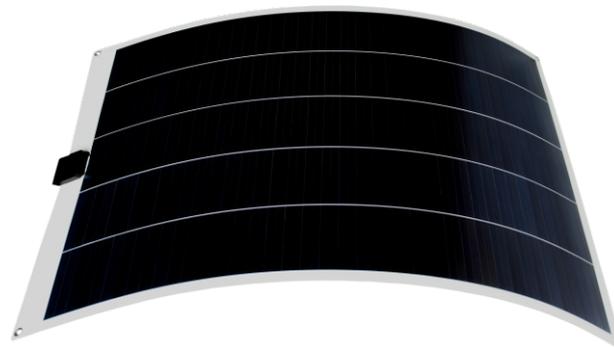
Powerful



Weather Resistant



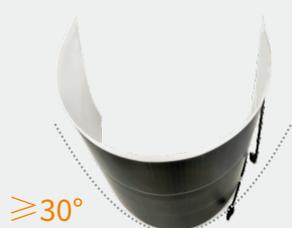
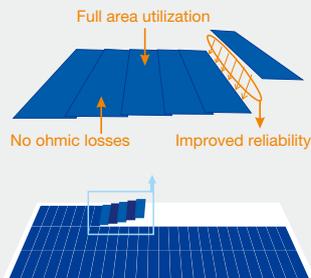
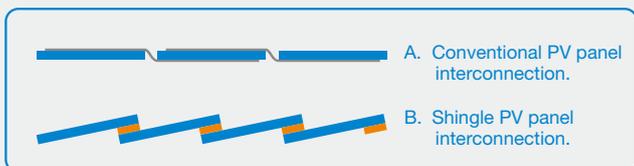
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Typical Electrical Data		
at STC: Irradiance 1000 W/m ² module temperature 25°C AM=1.5;		
Model	CLM-150M	CLM-160M
Pmax (W)	150W	160W
Power Tolerance	0 ~ +3%	0 ~ +3%
Vmp (V)	17.2	18.27
Imp (A)	8.72	8.8
Voc (V)	20.9	22.15
Isc (A)	9.3	9.25
Working Temperature	-40°C ~+ 85°C	-40°C ~+ 85°C
Nominal Operating cell Temp	45± 2°C	45± 2°C
Temp coefficient of Pmax	-0.4%/ °C	-0.4%/ °C
Temp coefficient of Voc	-0.3 %/ °C	-0.3 %/ °C
Temp coefficient of Isc	0.06 %/ °C	0.06 %/ °C
Temp coefficient of Vmpp	-0.35 %/ °C	-0.35 %/ °C
Nominal Voltage	12V	12V
Max. System Voltage	600VDC	600VDC
Max. Fusing Current	15A	15A

Mechanical Data	
Cells Type	Prime Monocrystalline PERC solar cells
Module Dimensions(L/W/H)	1120*845mm
Module weight	2.2kg
Cell's Efficiency	20.4% 20.5%
Front Cover (material/ thickness)	Higher Strength TPT/ETFE/ 2.2mm
Back Sheet (color)	White/ Black
Bending Range	≥30°
Junction Box (protection degree)	≥IP65/IP68 with by-pass diode
Grommets	316 stainless Steel /6 Mounting holes/ Square & Round corners
Cables & Connectors	0.5 m/2.5&4.0mm ² /MC4 compatible/IP68

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FLEXIBLE SOLAR PANELS

CLM-180MF/CLM185MF

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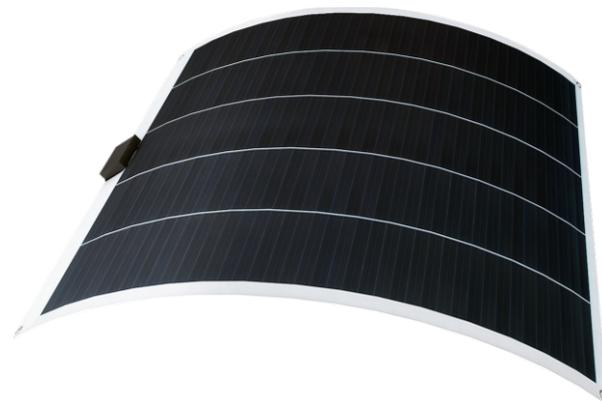
Powerful



Weather Resistant



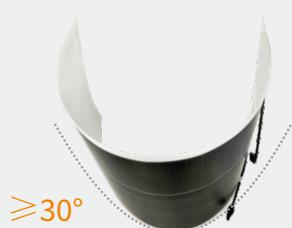
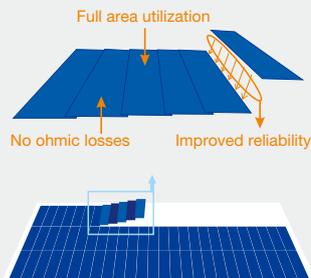
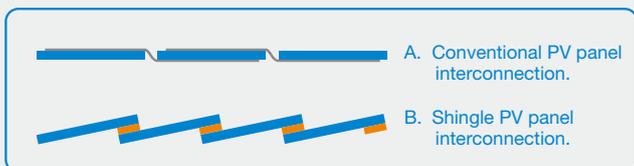
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Typical Electrical Data		
at STC: Irradiance 1000 W/m ² module temperature 25°C AM=1.5;		
Model	CLM-180MF	CLM-185MF
Pmax (W)	180W	185W
Power Tolerance	0 ~ +3%	0 ~ +3%
Vmp (V)	17.15	17.33
Imp (A)	10.53	10.71
Voc (V)	20.8	21
Isc (A)	11.1	11.27
Working Temperature	-40°C ~+ 85°C	-40°C ~+ 85°C
Nominal Operating cell Temp	45± 2°C	45± 2°C
Temp coefficient of Pmax	-0.4%/ °C	-0.4%/ °C
Temp coefficient of Voc	-0.3 %/ °C	-0.3 %/ °C
Temp coefficient of Isc	0.06 %/ °C	0.06 %/ °C
Temp coefficient of Vmpp	-0.35 %/ °C	-0.35 %/ °C
Nominal Voltage	12V	12V
Max. System Voltage	600VDC	600VDC
Max. Fusing Current	15A	15A

Mechanical Data	
Cells Type	Prime Monocrystalline PERC solar cells
Module Dimensions(L/W/H)	1120*1005
Module weight	2.4kg
Cell's Efficiency	20.4% 21.0%
Front Cover (material/ thickness)	Higher Strength TPT/ETFE/ 2.2mm
Back Sheet (color)	White/ Black
Bending Range	≥30°
Junction Box (protection degree)	≥IP65/IP68 with by-pass diode
Grommets	316 stainless Steel /6 Mounting holes/ Square & Round corners
Cables & Connectors	0.5 m/2.5&4.0mm ² /MC4 compatible/IP68

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