

# SOLAR MODULES

## MD230M(60)



### Characteristics

| Model                          | MD250M(60) | MD245M(60) | MD240M(60) | MD235M(60) |
|--------------------------------|------------|------------|------------|------------|
| Module Efficiency              | 15.27%     | 14.97%     | 14.66%     | 14.36%     |
| Open circuit voltage(Voc)      | 37.5V      | 37.4V      | 37.3V      | 37.2V      |
| Optimum operating voltage(Vmp) | 30.2V      | 30.1V      | 30.0V      | 29.9V      |
| Short circuit current(Isc)     | 8.81A      | 8.65A      | 8.51A      | 8.35A      |
| Optimum operating current(Imp) | 8.28A      | 8.14A      | 8.0A       | 7.86A      |
| Maximum Power at STC(Pm)       | 250Wp      | 245Wp      | 240 Wp     | 235 Wp     |
| Model                          | MD230M(60) | MD225M(60) | MD220M(60) |            |
| Module Efficiency              | 14.05%     | 13.75%     | 13.44%     |            |
| Open circuit voltage(Voc)      | 37.1V      | 36.9V      | 36.8V      |            |
| Optimum operating voltage(Vmp) | 29.8V      | 29.7V      | 29.6V      |            |
| Short circuit current(Isc)     | 8.19A      | 8.06A      | 7.91A      |            |
| Optimum operating current(Imp) | 7.72A      | 7.58A      | 7.44A      |            |
| Maximum Power at STC(Pm)       | 230 Wp     | 225 Wp     | 220 Wp     |            |

STC: Irradiance 1000W/m<sup>2</sup>, Module temperature 25°C, AM=1.5.

### Specifications

|                              |  |
|------------------------------|--|
| Cell                         | Mono-crystalline silicon solar cells 156×156mm |
| No. of cells and connections | 60(6×10)                                       |
| Dimension of module (mm)     | 1650×992×40mm                                  |
| Weight                       | 19.5Kg   |
| Power Tolerance              | 0~ + 3%  |

### Limits

|                            |                           |
|----------------------------|---------------------------|
| Operating temperature      | -40°C ~ +85°C             |
| Maximum system voltage     | (IEC)1000 V DC (UL)600VDC |
| Maximum Series Fuse Rating | 15A                       |

### Temperature and Coefficients

|                               |            |
|-------------------------------|------------|
| NOCT                          | 45±2°C     |
| Temp. Coeff.of Isc(TK Isc)    | 0.05%/°C   |
| Temp. Coeff.of Voc(TK Voc)    | -0.33% /°C |
| Temp. Coeff.of Pmax(TK Pmax)  | -0.45%/°C  |
| Maximum wind loads            | 2400Pa     |
| Maximum snow load             | 5400Pa     |
| Maximum Hail diameter @ 23m/s | 25mm       |

NOCT: Nominal Operation Cell temperature

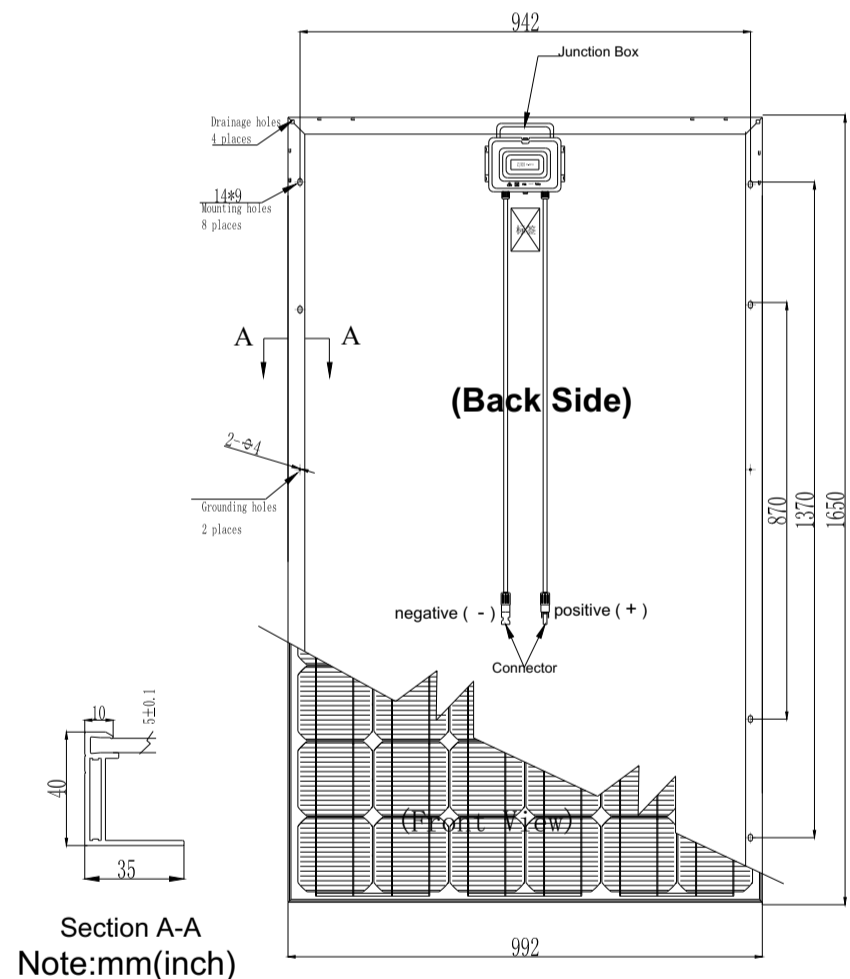
### Output

|                         |                              |
|-------------------------|------------------------------|
| Type of output terminal | Junction box                 |
| Cable                   | NanYang(4.0mm <sup>2</sup> ) |
| Asymmetrical lengths    | 900mm (-), 900mm(+)          |
| Connection              | MC4                          |

### Packing Quantity

|                       |      |      |
|-----------------------|------|------|
| Container             | 20GP | 40HC |
| Pallets per container | 6    | 14   |
| Pieces per container  | 264  | 672  |

Blueprint of the module



230W PV I-V characteristic curves

