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# **EnergyPal**

## **Solar Panel Guide Specification Data Sheet**

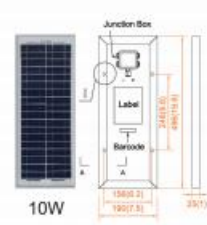
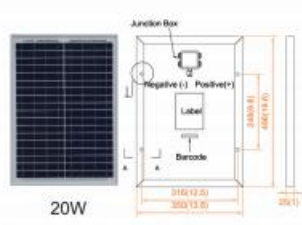
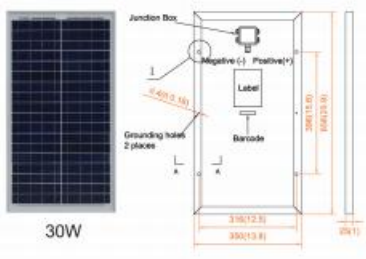
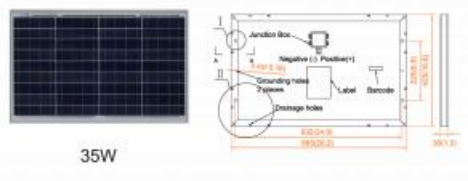
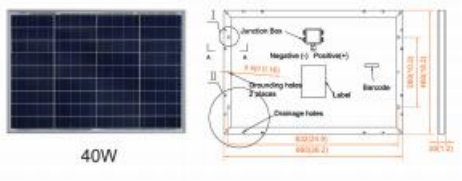
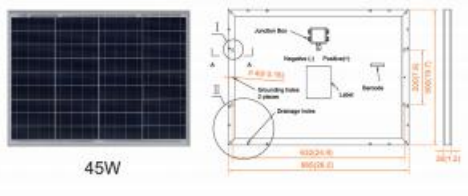
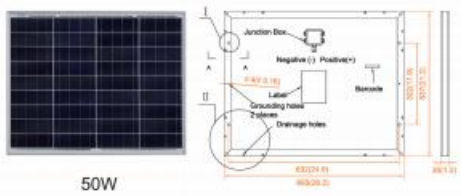
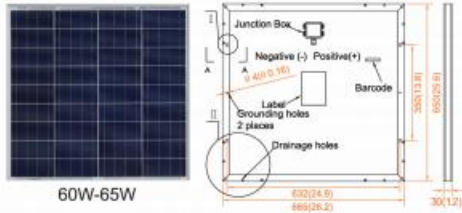
**Guangdong Haotech New Energy Technology Co.,  
Ltd.  
HT-P-10-65  
40P-12**

Also available on the web at  
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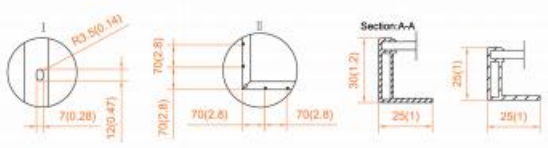
# 10~65 Watt



\*BLACK FRAME/BLACK BACK-SHEET PRODUCTS ARE AVAILABLE UPON REQUEST



\*All Dimensions in mm(inch)



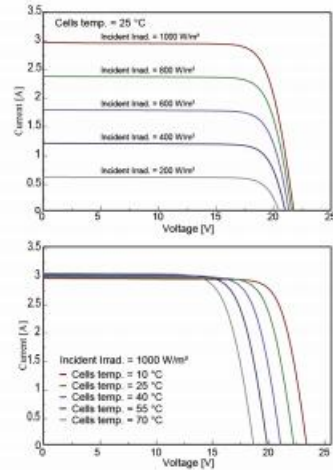
### Electrical Characteristics (STC)

Module Type	CST10P-12	CST20P-12	CST30P-12	CST35P-12	CST40P-12
Maximum Power- Pmax(W)	10	20	30	35	40
Open Circuit Voltage - Voc(V)	22.1	22.1	22.6	22.0	22.1
Short- Circuit Current - Isc(A)	0.60	1.19	1.76	2.10	2.39
Voltage at Pmax - Vmp(V)	18.1	18.1	18.4	18.0	18.1
Current at Pmax - Imp(A)	0.55	1.10	1.63	1.94	2.21
Module Efficiency - $\eta$ m (%)	10.61	11.52	13.07	12.36	13.08

Module Type	CST45P-12	CST50P-12	CST55P-12	CST60P-12	CST65P-12
Maximum Power- Pmax(W)	45	50	55	60	65
Open Circuit Voltage - Voc(V)	22.2	22.3	22.2	22.2	22.4
Short- Circuit Current - Isc(A)	2.67	2.95	3.26	3.56	3.82
Voltage at Pmax - Vmp(V)	18.2	18.3	18.2	18.2	18.4
Current at Pmax - Imp(A)	2.47	2.73	3.02	3.30	3.53
Module Efficiency - $\eta$ m (%)	13.53	14.00	13.78	13.86	15.04

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25 °C, Air Mass 1.5  
Power measurement tolerance 0→3%

### I-V Curve (CST50P-12)



### Mechanical Specifications

Module Type	CST60P/65P-12	CST55P-12	CST50P-12	CST45P-12
Dimensions	650*665*30mm	600*665*30mm	537*665*30mm	500*665*30mm
Weight	5.2kg	4.8kg	4.3kg	4.0kg
Poly Solar Cells	66*156mm (36pcs)	58.5*156mm (36pcs)	52*156mm (36pcs)	48*156mm (36pcs)

Module Type	CST40P-12	CST35P-12	CST30P-12	CST20P-12	CST10P-12
Dimensions	460*665*30mm	425*665*30mm	656*350*25mm	496*350*25mm	496*190*25mm
Weight	3.7kg	3.4kg	2.5kg	2.0kg	1.2kg
Poly Solar Cells	45*156mm (36pcs)	39*156mm (36pcs)	31.2*156mm (36pcs)	22.28*156mm (36pcs)	22.28*78mm (36pcs)

Front glass	3.2 mm low iron tempered glass	Frame	Anodized aluminum alloy
Junction Box	IP67	Mechanical Load	5400 Pa

### Packing Configuration

Module Type	CST60P/65P-12	CST55P-12	CST50P-12	CST45P-12
Carton Dimensions	665*680*175mm	615*680*175mm	552*680*175mm	515*680*175mm
Pallet Dimensions	1370*1100*2170mm	1270*1100*2170mm	1400*1130*2170mm	1400*1100*2190mm
Pallet Weight	1012.8kg	940.8kg	1110kg	1038kg
Pieces/Pallet	180(5pcs/carton)	180(5pcs/carton)	240(5pcs/carton)	240(5pcs/carton)

Module Type	CST40P-12	CST35P-12	CST30P-12	CST20P-12	CST10P-12
Carton Dimensions	475*680*175mm	440*680*175mm	670*280*365mm	510*390*365mm	510*390*400mm
Pallet Dimensions	1400*1100*2030mm	1360*1100*2170mm	1370*1150*1960mm	1600*1050*1960mm	1600*1050*2135mm
Pallet Weight	961.2kg	898.8kg	1070kg	1190kg	1414kg
Pieces/Pallet	240(5pcs/carton)	270(5pcs/carton)	400(10pcs/carton)	560(14pcs/carton)	1120(28pcs/carton)