

- ◆ Outstanding performance under low light, different angles of installation and high temperatures conditions
- ◆ Greater efficiency and faster return of investment due to broader spectrum of solar radiations
- ◆ Significant BOS savings based on large module size and various mounting options
- ◆ Suitable for architectural integrations result from aesthetically pleasing design



Module	Unit	EST-540	EST-520	EST-500	EST-480	EST-460	EST-440
Electrical Data							
Performance at Standard Test Conditions (SCT) : 1000W/m ² , 25 °C, AM 1.5 Spectrum							
Nominal power (Pmax)	Wp	540	520	500	480	460	440
Open Current Voltage (Voc)	V	292	288	286	284	282	280
Short Circuit (Isc)	A	2.92	2.88	2.86	2.84	2.82	2.80
Max.power Voltage (Vmpp)	V	226	222	216	210	206	200
Max.power Current (Impp)	A	2.39	2.36	2.32	2.28	2.24	2.20
Performance at Normal Operating Cell Temperature (NOCT) : 800W/m ² , 40 °C, AM 1.5 Spectrum							
Nominal power (Pmax)	Wp	424	408	392	376	360	344
Open Current Voltage (Voc)	V	272	268	266	264	262	260
Short Circuit (Isc)	A	2.38	2.36	2.34	2.32	2.30	2.28
Max.power Voltage (Vmpp)	V	218	214	208	202	198	192
Max.power Current (Impp)	A	1.96	1.92	1.89	1.86	1.83	1.80

The efficiency of ENN Solar Energy's EST series PV modules experiences an increase of 1% at 200W/m² when compared to at 1000W/m².

Mechanical Data		
Length	mm	2600(8.5')
Width	mm	2200(7.2')
Thickness (excl.J-box & rail)	mm	7.5(295")
Thickness (incl.J-box & rail)	mm	45(1.77")
Weight	kg	117
Front Glass	mm	3.2(Low iron float glass)
Back Glass	mm	3.2(Normal float glass)
PVB	mm	1.14
Junction Box	Protection class IP 67, with by-pass diode	
Connector	MC-4	

Temperature Coefficient (STC)		
Temperature Coefficient of Voc	%/°C	-0.35
Temperature Coefficient of Isc	%/°C	+0.1
Temperature Coefficient of Pmax	%/°C	-0.28

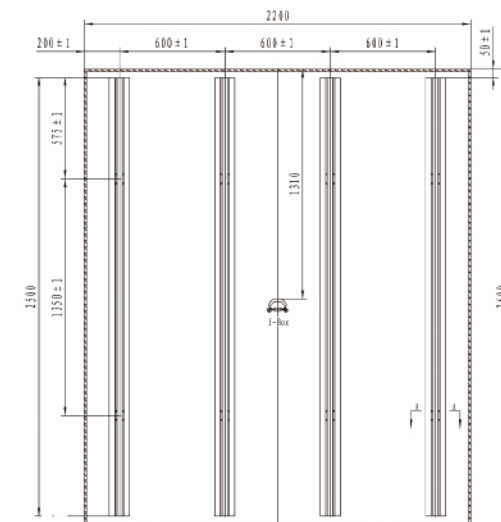
Limits		
Max System Voltage	V	IEC1000, UL600
Operation Module Temperature	°C	-40 to +85

Packaging Data		
Quantity/Case	Pcs	20
Quantity/40' HQ	Pcs	160

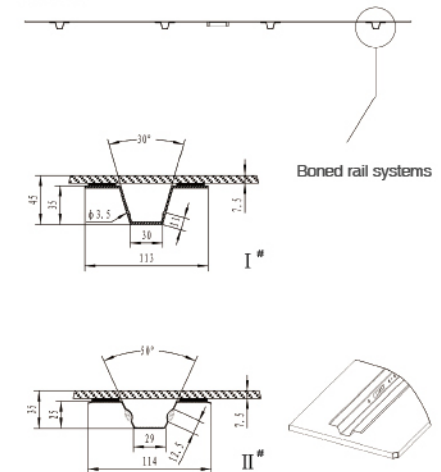
Warranty	
Output Warranty	10 years ≥ 90% and 25 years ≥ 80% of rated power

*All ratings +/-5%, unless specified otherwise.

Back View#



Side view



Boned rail systems

Edge Deletion
12mm

Shadow areas are schematic drawing of boned rail system.
ENN Solar Energy provides various boned rail systems upon customers' request.





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Module	Unit	EST-135	EST-130	EST-125	EST-120	EST-115	EST-110
Electrical Data							
Performance at Standard Test Conditions (SCT) : 1000W/m², 25°C, AM 1.5 Spectrum							
Nominal power (P _{max})	Wp	135	130	125	120	115	110
Open Current Voltage (V _{oc})	V	146	143	142	141	140	139
Short Circuit (I _{sc})	A	1.46	1.44	1.43	1.42	1.41	1.40
Max.power Voltage (V _{mpp})	V	113	111	108	105	103	100
Max.power Current (I _{mpp})	A	1.20	1.18	1.16	1.14	1.12	1.10
Performance at Normal Operating Cell Temperature (NOCT) : 800W/m², 40°C, AM 1.5 Spectrum							
Nominal power (P _{max})	Wp	106	102	98	94	90	86
Open Current Voltage (V _{oc})	V	136	134	133	132	131	130
Short Circuit (I _{sc})	A	1.19	1.18	1.17	1.16	1.15	1.14
Max.power Voltage (V _{mpp})	V	109	107	104	101	99	96
Max.power Current (I _{mpp})	A	0.98	0.96	0.945	0.93	0.915	0.9
The efficiency of ENN Solar Energy's EST series PV modules experiences an increase of 1% at 200W/m² when compared to at 1000W/m².							
Mechanical Data							
Length	mm	1300(4.26')					
Width	mm	1100(3.6')					
Thickness (excl.J-box & rail)	mm	7.5(2.95")					
Thickness (incl.J-box & rail)	mm	35(1.38")					
Weight	kg	29.5					
Front Glass	mm	3.2(Low iron float glass)					
Back Glass	mm	3.2(Normal float glass)					
PVB	mm	1.14					
Junction Box		Protection class IP 67, with by-pass diode					
Connector		MC-4					
Temperature Coefficient (STC)							
Temperature Coefficient of V _{oc}	%/°C	-0.35					
Temperature Coefficient of I _{sc}	%/°C	+0.1					
Temperature Coefficient of P _{max}	%/°C	-0.28					
Limits							
Max System Voltage	V	IEC1000, UL600					
Operation Module Temperature	°C	-40 to +85					
Packaging Data							
Quantity/Case	Pos	25					
Quantity/40' HQ	Pos	800					
Warranty							
Output Warranty		10 years ≥90% and 25 years ≥80% of rated power					

*All ratings +/±5%, unless specified otherwise.

Back View[#]

Side view

