

Detailed Technical Datasheet

Modules	Crystalline	Yes
	First Solar	Yes
	Solar Frontier	Yes
	Bifacial	Yes
Civil	Slope Tolerance (N-S)	7% standard, can go to 10% special order
	Slope Tolerance (E-W)	13%
	Tracker follows slope (Y/N)	Yes
Self Perform	Mechanical Installation	available upon request
	Mod install - tilt or flat rack	either
	Hardware packaging (bulk, kits)	bulk, kits available
	Max offload for deliveries	as per customer requirement
	Specialty Tools Required	No
Electrical	String Design	Compatible with any string size
	Cable Supports	free hole punching as per customer requirement
	Controller Box	ZIGBEE wireless or wireline communications, 24v solar panel and battery or wireline power
	Control System	ZIGBEE wireless or RS45 wireline communications, SCADA/MODBUS and other communications as required
	# of Motors	out of masters
	1000V System	28 to 52 / MW depending on panel wattage and loading conditions (35 typical conditions)
	1500V System	Yes
	Grounding Method	Yes
	DC Trenching Req'd?	ETL/UL 2703 completed in 2016, ETL/UL 3703 in process
	UL Listed Assembly	No
	NEMA Ratings	ETL UL 2703 Tested/ Classified
	# Weather Station / MW	IP66 stroke tube end /67 waterproof motor end (NEMA 3x/4 equivalent)
	Monitoring System	1 per 6 MW, .167 per MW
		Web portal interface, also as per customer requirement compatible with all standard third party monitoring vendors

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Structural

Piles per MW	450/MW typical
Racking Coating	HDG standard piles, G235/HDG drive piles, G90/G180 superstructure
Operating Wind Load (Std)	105mph
Operating Wind Load (Premium 1)	130mph
Operating Wind Load (Premium 2)	150mph
Snow Load (Std)	5psf
Snow Load (Premium1)	20psf
Snow Load (Premium2)	50psf
Seismic Load (Std)	1.5G
Seismic Load (Premium)	Can be installed in High Seismic Regions
Tracking Range (Std)	45 Degrees
Tracking Range (Premium)	60 Degrees
Pile Sections	I beam for all standard piles, hat or I beam for drive piles
Pile Size (Interior)	W6x7 or W6x9 or W6x15
Pile Size (Exterior)	W6x7 or W6x9 or W6x15
Motor Foundation	6.5x8 Hat or W6x15 or larger I beam
Standard Embedment	5 - 7 ft
Flood Plain Allowance	Up to 6 feet

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Design#1

Module Layout	1Up in Portrait for Crystalline and First Solar Series 6, 3 to 4 up landscape First Solar series 4
Modules per Table	Up to 340 ft. (for example 102 72 cell crystalline)
GCR	any coverage available as per customer request, typically 28-50%
Rows per Tracker	n/a, distributed drive system
Powering System	Onboard Solar Panel with battery, wireline power, or parasitic all available as customer desires
Compliance	ETL/UL 2703
Min Ground to Top of Pier	51"
Max Ground to Top of Pier	ground clearance + 51" + 9" adjustment range
Typical Height	51" (33" clearance)
Typical Width	Panel Width
Typical Length	Up to 340 feet per table
Backtracking	Yes, although can be turned off as needed for First Solar modules
Temperature Range	With battery and small solar panel standard: -10/+60C and -20/+60C optional, also available with wireline power-30/+65C
MCC 3rd party design verified	Compliant with MCC guidelines

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Design#2

Module Layout for First Solar Series 4	3 or 4 up landscape
Modules per Table	up to 102 crystalline
GCR	as per customer requirement, typically 28 to 45%
Rows per Tracker	as many as customer allows (distributed drive system)
Powering System	24v DC battery or wireline 110 or 220 AC
Compliance	Compliant with 2703, NEC etc.
Min Ground to Top of Drive Pile	51 inches
Min Ground to Top of Drive Pile	ground clearance + 51" + 9" adjustment range
Typical Height	51 inches
Typical Width	one panel portrait 1m, or 3 panels landscape FSLR 6 ft
Typical Length	300 ft
Backtracking	Yes, although can be turned off as needed for First Solar modules
Module Layout for First Solar Series 4	3 or 4 up landscape
Modules per Table	up to 102 crystalline

O&M

Warranty	5 year drive & control, 10 year structural
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Shipping

Max load	45,000 pounds per truckload 5,000 pounds maximum bundle size 2,900 pounds or other maximum as requested by customers
Shipping Containers or flatbeds	flat beds for structure, dry vans for hardware
# Trucks per MWdc	2.76 typical

Commissioning

Backfeed required?	no
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