

PV modules comparison 2024

Manufacturer	Series	Product / performance guarantee (a)	Annual power loss (% / a)	Max. Power (Wp)	Power Output Tolerance	Efficiency (%)	Temp. coefficient (% / °C)	Cell type	Cell technology	Bifacial	Half-cut	Optimizers	Backsheet	Glass/Glass	Snow load (Pa)	Wind load (Pa)	Module dimensions (L x W x H)	Weight (kg)						
AIKO	Neostar 2S	25 / 30	0.35	455	+ 3 %	22.8	- 0.26	n-Type	ABC	-	Halfcut	Partial shading optimization	Black	-	5,400	2,400	1757 x 1134 x 30	21.5						
	Neostar 2S+												✓	24.5										
EGING PV KEENSTAR	Star Series	12 / 25	0.53	390 – 410	+ 3 %	19.97 – 20.99	- 0.35	p-Type	PERC	-	Half-cut	-	White	-	5,400	2,400	1722 x 1134 x 30	20.2						
Jinko Solar	Tiger Neo N-Type 54HL4	15 / 30	0.40	415 – 425	+ 3 %	21.25 – 21.76	- 0.30	n-Type	TopCon	-	Half-cut	-	White	-	5,400	2,400	1722 x 1134 x 30	22.0						
	Tiger Neo Rectangular 54HL4R			435 – 440		21.77 – 22.52							Black				6,000		4,000	1762 x 1134 x 30				
	Tiger Neo Rectangular 54HL4R Black	25 / 30	425 – 445	21.27 – 22.27	White	5,400	2,400	1692 x 1029 x 30	19.0															
JOLYWOOD	Niwa Black Series	25 / 30	0.40	410 – 435	+ 5 W	21.25 – 22.27	- 0.30	n-Type	TopCon	✓	Half-cut	-	Black	✓	5,400	2,400	1722 x 1134 x 30	24.5						
	Niwa Pro Series			420 – 440		21.51 – 22.53							Transparent				1756 x 1039 x 30	23.0						
	JW-HD-120N	15 / 30	390	21.38	- 0.31	White	5,400	2,400	1722 x 1134 x 30	20.8														
LONGI	Hi-MO 5m LR5-54 HIH	12 / 25	0.55	400 – 420	+ 3 %	20.50 – 21.50	- 0.34	p-Type	PERC	-	Half-cut	-	White	-	5,400	2,400	1722 x 1134 x 30	20.8						
	Hi-MO X6 Explorer LR5-54 HTH	15 / 25	435	22.30		- 0.29			HPBC				Black											
	Hi-MO X6 Explorer LR5-54 HTB	25 / 25	435	22.00		- 0.29			HPBC				White											
	Hi-MO X6 Scientist LR5-54 HTH		435	22.80		- 0.29			HPBC				White											
MEYER BURGER	Meyer Burger Black	25 / 25	0.25	390	+ 5 W	21.20	- 0.259	n-Type	HJT	-	Half-cut	-	Black	-	5,400	2,400	1767 x 1041 x 35	19.7						
	Meyer Burger White			395		21.50							- 0.259				HJT		White	✓				
	Meyer Burger Glass	30 / 30	380 – 385	21.20 – 21.50	✓	Transparent	-	1722 x 1041 x 35	24.4															
solar edge	Smart Module	25 / 25	-	370 – 375	+ 5 W	19.80 – 20.07	- 0.364	n-Type	PERC	-	Halfcut	✓	White	-	5,400	2,400	1755 x 1038 x 40	22.0						
	Smart Module Black			370		20.31							Black											
solar fabrik	Mono S4 Halfcut	15 / 25	-	405 – 415	+ 3 %	20.19 – 21.43	- 0.33	p-Type	PERC	-	Halfcut	-	White	-	5,400	2,400	1722 x 1134 x 30	21.2						
	Mono S4 Halfcut Black			405		20.74							Black				1722 x 1134 x 35		21.4					
	Mono S4 - Innovation Powerline N	30 / 30	425	21.80	- 0.30	n-Type	TopCon	✓	Transparent	✓	5,400	2,400	1722 x 1134 x 30	23.4										
	Mono S4 - Trend Powerline N		440	22.02	- 0.30	n-Type	TopCon	-	White				24.1											
	Mono S5 - Installer Series N		315	21.69	- 0.30	n-Type	TopCon	✓	Transparent				1650 x 880 x 30		18.5									
Trinasolar	Vertex S (R) Black	15 / 25	0.55	415 – 420	+ 5 W	20.80 – 21.00	- 0.34	p-Type	PERC	-	Triple-cut-cells	-	Black	-	6,000	4,000	1762 x 1134 x 30	20.8						
	Vertex S (R)			420 – 425		21.00 – 21.30							White					21.8						
	Vertex S + (R)	25 / 30	0.4	430 – 445	+ 5 W	21.50 – 22.50	- 0.3	n-Type	TopCon	-	Triple-cut-cells	-	White	✓	5,400	2,400	1762 x 1134 x 30	21.1						
	Vertex S + (R) Bifacial			435		21.80							- 0.3				n-Type	TopCon	✓	Transparent	21			
TW SOLAR	TW Solar TWMND-54HS	15 / 30	0.4	435 – 440	+ 5 W	22,3 – 22,5	- 0.3	n-Type	TopCon	-	Halfcut	-	White	-	5,400	2,400	1722 x 1134 x 30	20.5						
	TW Solar TWMND-54HB			430 – 435		22,0 – 22,3							- 0.3				n-Type	TopCon	-	Halfcut	-	Black	1762 x 1134 x 30	20.9
	TW Solar TWMNH-48HD			435 – 445		21,8 – 22,3							- 0.3				n-Type	TopCon	✓	White	1762 x 1134 x 30	20.9		

