

Solar modules Roadmap & Portfolio

Outlook Q3-2024 & Q4-2024

August 2024

(Next update: October 2024)

Modules Portfolio Q3-2024 & Q4-2024

Brand	Type	Cell type	Colour	Power output Q3-2024**	Power Wp/m2	Module size	Warranty manufacturer	# Pallet / container	Power Q4-2024**	Availability (Current expectation)
All-Black										
DMEGC	DM450M10RT-54HBB-BK	N-type M10	All-black	440/450	225	1762 x 1134 x 30mm	25 years	36/936	440/450	✓✓✓
DMEGC	DM410M10-54HBB-BK	P-type M10	All-black	410	213	1722 x 1134 x 30mm	12 years	36/936	410	✓ (Ending)
Jinko	JKM440N-54HL4R-BK	N-type M10	All-black	435/440	220	1762 x 1134 x 30mm	25 years	36/936	435/440	✓✓✓
Aiko	AK-A-MAH54Mb-445-BK	N-type M10	All-black	440/445	230	1722 x 1134 x 30mm	15 years	36/936	440/445	✓
Aiko	AK-A460-MAH54Mb-BK	N-type M10	All-black	455/460	231	1757 x 1134 x 30mm	25 years	36/936	455/460/465	✓✓✓
Meyer Burger	MB-390-HJT120-HC-BK	N-type M6	All-black	390	212	1767 x 1041 x 35mm	25 years	30/840	390	✓✓✓
Glas/Glas Paneel										
JA Solar	JAM54D41-440N-LB	N-type M10	All black	435/440	220	1762 x 1134 x 30mm	25 years	36/936	435/440	✓✓✓
JA Solar	JAM54D41-435N-GB	N-type M10	All black	435	223	1722 x 1134 x 30mm	25 years	36/936	435	September
JA Solar	JAM54D40-445N-LB	N-type M10	Black frame	445/450	223	1762 x 1134 x 30mm	25 years	36/936	445/450	✓✓✓
JA Solar	JAM54D40-440-GB	N-type M10	Black frame	440	225	1722 x 1134 x 30mm	25 years	36/936	440	✓✓ (Ending)
JA Solar	JAM60D42-525-LB	N-type M10	Silver frame	520/525	222	2063 x 1134 x 30mm	12 years	36/936	525	✓
JA Solar	JAM66D42-580-MB	N-type M10	Silver frame	580	225	2278 x 1134 x 30mm	12 years	36/720	580	✓✓✓
DMEGC	DM450M10RT-B54HBB-BK	N-type M10	All-black	450	225	1762 x 1134 x 30mm	25 years	36/936	450	✓✓✓
DMEGC	DM505M10RT-B60HSW-V	N-type M10	Silver frame	505	228	1950 x 1134 x 30mm	25 years	36/864	505	✓✓
DMEGC	DM580M10T-B72HSW	N-type M10	Silver frame	580	224	2278 x 1134 x 30mm	15 years	36/720	580	✓
Aiko	AK-A460-MAH54Db-BK	N-type M10	All-black	455/460	231	1757 x 1134 x 30mm	25 years	36/936	460	✓✓✓
AEG	AS-M1089B-GA(M10)-HV-455	N-type M10	All-black	455	228	1757 x 1134 x 30mm	25 years	36/936	455	September



* Note: available modules will be a mix of power output (+/- 5Wp). All modules have Staubli MC4-connectors, unless noted differently (Twinsel/QC4/JK03M/ST4). Availability based on situation from publishing roadmap, This might change. Watch availability in the webshop: <https://shop.libra.energy/en/welcome>

Modules Portfolio Q3-2024 & Q4-2024

Brand	Type	Cell type	Colour	Power output Q3-2024**	Power Wp/m2	Module size	Warranty manufacturer	# Pallet / container	Power Q4-2024**	Availability (Current expectation)
White Backsheet										
Jinko	JKM445N-54HL4R-V-B	N-type M10	Black frame	445/450	222	1762 x 1134 x 30mm	15 years	36/936	445/450	✓
Aiko	AK-A465-MAH54Mw-B	N-type M10	Black frame	465	233	1757 x 1134 x 30mm	25 years	36/936	465/470	✓✓
Special										
BISOL	BDO-305M-TERRA-ST4 (ST4)	P-type M10	Terracotta	305	156	1722 x 1134 x 30mm	15 years	35/1050	305	✓✓✓
Aiko	AK-A445-MAH54Tm-B	N-type M10	Polymer	445	223	1758 x 1137 x 30mm	12 years	36/936	445	✓✓✓

Market trends 2024

- After several years of various module sizes seemed to be standardized at 1722x1134mm for residential roofs. Due to German regulations, which is limited at two squared meter, the standard module size is even pushed further to 1762x1134mm. Making it a perfect 2m² module. The size is a little longer, but the with is the same. Manufactureres are making a rectangular solar cell reach this module size.
- There were a lot of shortages in supply chain from 2021 till the first half of 2023. Many Chinese manufacturers increased production capacity a lot. In 2022 there was 239GW of total worldwide installation. Voor 2023 it was expected at 314GW to be installed. At this moment the productioncapacity of polysilicon, wafers, cells and modules are hundreds of gigawatts extra. For this reason there will be a very strong competition between manufacturers and some of them not able to earn back there investment. In China they say: “Winter is coming for the next 1,5 years”. The very big vertically integrated players (polysilicon till module) together with persistent parent companies have the best chance to come out of this difficult period with success.
- At this moment the stock levels in Europe are relatively high. Expectations are that this will normalize in Q2/Q3. Due to heavy competition the prediction is that pricing will stabalize at a relatively low level and maybe increase a little around Q2/Q3.
- The trend we saw from 2021 that technology is changing from P-type to N-type will finalize in 2024. N-type will be fully dominant in the residential segment and very strong in commercial already.

