LONGi's efficiency world records since 2021

From April 2021 to present, LONGi has broken the world record for cell conversion efficiency 23 times across different technological routes.

Month	Year	Technology	Cell Efficiency
April	2021	TOPCon	25.09%
June	2021	HJT	25.26%
June	2021	TOPCon	25.02%
June	2021	TOPCon	25.21%
July	2021	TOPCon	25.19%
October	2021	HJT	25.82%
October	2021	HJT	26.30%
March	2022	HJT	25.40%
March	2022	HJT	25.47%
June	2022	HJT	26.50%
September	2022	HJT	26.12%
November	2022	HJT	26.81%
December	2022	HJT	26.56%
December	2022	HJT	26.09%
October	2023	silicon-perovskite tandem	33.9%
December	2023	HBC	27.09%
May	2024	HBC	27.30%
June	2024	silicon-perovskite tandem	30.1%
June	2024	silicon-perovskite tandem	34.6%
April	2025	silicon-perovskite tandem	34.85%
June	2025	HIBC	27.81%
January	2026	HIBC	28.04%
April	2026	HIBC	28.13%

Summary

Since 2021, LONGi has set the photovoltaic (PV) cell conversion efficiency record 23 times. In 2021 alone, the company broke the record seven times, achieving 25.21% efficiency with TOPCon solar cells and 26.30% with heterojunction (HJT) solar cells. The streak continued in 2022 with another seven records, pushing HJT efficiency to 26.56%. In 2023, LONGi expanded its technology portfolio, reaching 27.09% efficiency with heterojunction back contact (HBC) solar cells and 33.9% with crystalline silicon-perovskite tandem cells. These milestones reinforced LONGi's commitment to back contact technologies, a strategic direction the company has pursued since 2022.

In 2025, LONGi set two world records:

- 27.81% for crystalline silicon heterojunction back contact (HIBC) solar cells
- 34.85% for crystalline silicon-perovskite tandem solar cells

In 2026, LONGi set two new world records for HIBC solar cells:

- January: 28.04%
- April: 28.13%

Additionally, in 2024, LONGi launched its Hybrid Passivated Back Contact (HPBC) 2.0 technology and now holds the module efficiency world record of 25.4%. In May 2025, the company introduced a premium back contact module based on heterojunction (HIBC) at Intersolar, Munich. This is the first time that heterojunction back contact technology has been successfully implemented in a commercialized module. The Hi-MO S10 delivers a world-leading cell efficiency of 27.6% and a module efficiency of up to 25.0%. Modules fabricated based on HIBC solar cells have been certified by the U.S. National Laboratory of the Rockies (NLR), with efficiency breaking through to 26.4% – setting a new record.