



Price benefit Composite frames

Introduction

This report outlines the cost-benefit analysis of composite solar frames compared to traditional aluminium frames, presenting a direct opportunity to reduce frame material costs by up to 30%. Composite frames present a commercially viable alternative for solar module manufacturers worldwide.

Price Comparison

Current aluminium frame prices for batch orders (100,000+ units) range between approximately CNY 25–31 per kg, depending on the finish (silver or black), region, and quantity. This translates to an average material cost of approximately US \$0.05–0.06 per Wp.

In comparison, GF-PU composite frames offer a more cost-efficient profile, with pricing between US \$0.035 and \$ 0.042 per Wp, resulting in up to 30% savings on frame-level material costs.

Actual pricing depends on:

- Frame design and structural requirements
- Module size
- Order volumes
- Application type (tornado-proof or “risk-free” climate)

Conclusion

Switching from aluminium to GF-PU composite frames reduces frame material costs by 30%, depending on design and volume. In addition to the material cost advantage, composite frames benefit from more favorable import tariffs and are not targeted by the CBAM (for EU export).

