

Encapsulation optimization of perovskite modules: surpassing damp heat tests

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Halide perovskite (PSK) materials have outstanding properties as photovoltaic materials. However, medium and large-scale methods for encapsulating PSK modules need to be developed to benefit from their light-to-electricity conversion over long periods of time (Si guarantee = 25 years). We performed and tested an encapsulation process to **successfully pass** the damp heat accelerated aging tests (IEC 61215, 85°C/85% R.H. for 1000 h), in parallel to «dummy» samples with humidity sensors. to confirm that modules need an edge sealant of at least **1 cm around the edges to pass D.H. tests**. In addition, we optimized the transparent encapsulant thickness to increase the light transmittance of our PSK modules for their potential use as top subcell for 4-terminal tandem modules.

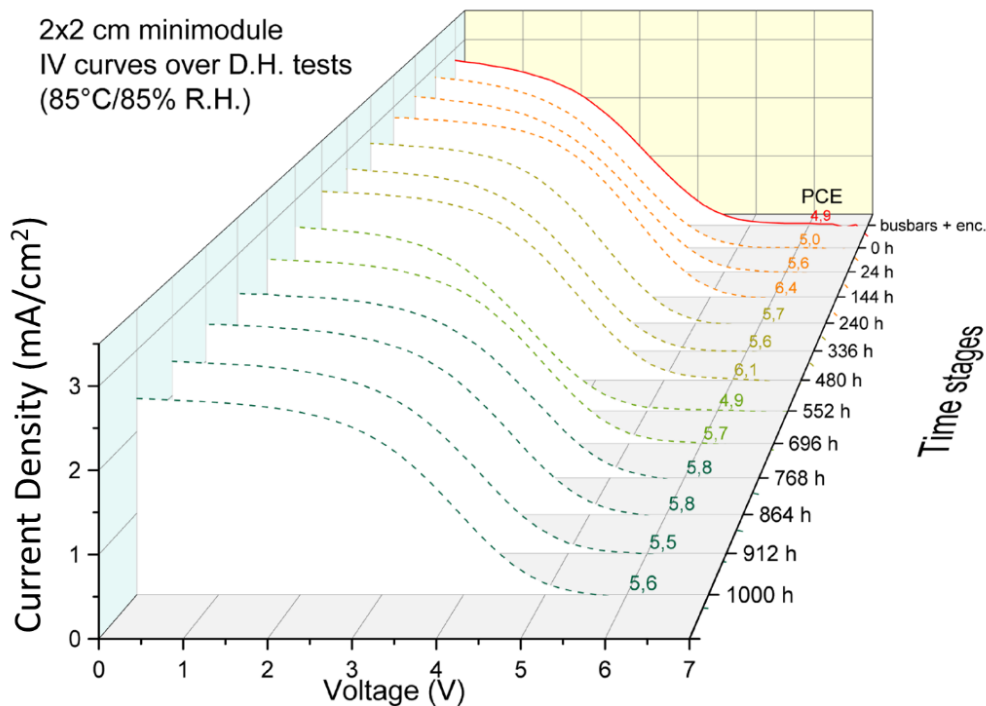


Figure 1. IV curves during D.H. test of a 2x2cm perovskite n-i-p module