

Application for PACT Testing Services

Version 1.0

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Sandia National Laboratories is a multimission laboratory managed and operated by National Technology & Engineering Solutions of Sandia, LLC, a wholly owned subsidiary of Honeywell International Inc., for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-NA0003525.

APPLICATION FORM

Companies interested in testing their perovskite PV modules at the PACT center should fill out the following form and return to Kailey Wulfert (kwulfer@sandia.gov) for processing. After review, PACT will contact the company to discuss next steps. Please refer to the PACT Module Design Acceptance Criteria for more information (available: <https://pvfact.sandia.gov/publications-and-protocols/>)

Company Information

Company Name:
 Company Address:
 Company Website:

Technical point of contact:

Name:
 Title:
 Email:
 Phone Number:

NDA/MTA Business Point of Contact (if different than technical point of contact)

Name:
 Title:
 Email:
 Phone number:

Which testing services are you interested in? (Rank in order of preference, 1=highest priority)

Testing Services	1	2	3	4	5	6
Outdoor testing in Albuquerque* with energy yield monitoring						
Multiple climate outdoor testing with energy yield monitoring						
Indoor performance testing**						
Accelerated ageing test						
Environmental toxicity testing (leaching, fire)						
Postmortem (destructive vs. nondestructive)						

*Note: PACT has funding to test industry modules in Albuquerque at Sandia National Laboratories and CFV Labs. We plan to offer testing sites in other climates in future years.

** Note: PACT indoor testing services include development of module preconditioning and rapid testing methods (e.g., flash). Companies should contact NREL if they want modules tested for evaluation against the Champion PV Module Efficiency Chart.

Additional comments:

Module Technology

Cell Technology

Please list/describe the materials used for the following:

Substrate material:

Contact:

Transport:

Absorber:

Transport:

Contact:

Module Specifications

Materials used:

Top cover material:

Back cover material:

Encapsulant material:

Edge seal material:

Junction box:

Wires/ribbons:

Outer dimensions (Length, width, thickness) – specify units:

Total area:

Active area:

Geographic fill factor:

Number of cells in series:

Number of strings in parallel:

Expected or Measured STC module performance?:

Isc (A):

Voc (V):

Pmp (W):

Fill Factor:

Module Samples

Number of modules that can be provided to PACT:

Date modules can be available:

Describe module recurring delivery schedule (if applicable):

Module Testing (prior to PACT)

What testing has been completed on the current module design? Note: PACT may be able to help companies obtain such preliminary testing.

- Performance characterization (e.g., STC IV curves, MPPT, etc.)?
Yes
No
Unsure
- Wet leakage current test (IEC 61215-2 MQT 15)?
Yes
No
Unsure
- 100 hours of ISOS-L2?
Yes
No
Unsure
- 100 hours of ISOS-D2?
Yes
No
Unsure
- 100 hours of ISOS-V1?
Yes
No
Unsure
- Lead wipe test?
Yes
No
Unsure

- Other:

Briefly describe your commercialization plan. What markets are you targeting? What is your plan and schedule for manufacturing? How do you plan to scale up production and module size?

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BLACK & VEATCH



CFV Labs