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May 25, 2011

Letter Report No. 100332228CRT-001a
Project No. G100332228

Mr. Qing Kou
Morningstar Corporation
8 Pheasant Run
Newton, PA 18940

Ph: (215) 321-4457

email: lgordon@morningstarcorp.com

Subject: Test Report of the Solar Charge Controllers - TriStar MPPT Family

Dear Mr. Qing Kou,

This letter represents the test results of the above referenced equipment to the requirements contained in the following standards:

IEC 62093 Balance of System Components for Photovoltaic Systems – Design Qualification Natural Environments, First Edition, 2005-03


The following tests were performed on the solar charge controller TS-MPPT-60 as representative of TriStar MPPT product family covered by ETL listing report 3185898CRT-001a.

Test	IEC 62093	Results
Protection Against Mechanical Impact (IK Code)	11.6	Pass
Vibration Test	11.8	Pass
Shock Test	11.9	Pass
Damp Heat Test	11.13	Pass
Robustness of Terminals Test	11.14	Pass
Damp Heat Cyclic Test	11.15	Pass


If there are any questions regarding the results contained in this report, or any of the other services offered by Intertek, please do not hesitate to contact the undersigned.

Please note, this Letter Report does not represent authorization for the use of any Intertek certification marks.

Completed by: Zhiyong Hu
Title: Senior Project Engineer

Signature: 
Date : May 26, 2011

Reviewed by: Thomas R. Brown
Title: Engineering Team Leader

Signature: 
May 26, 2011

Page 1 of 1

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