



**Technical Report No. 68.260.9.013.01B**

**Rev. 00**

**Dated 2012-06-04**

Client: Name: EVEREXCEED INDUSTRIAL COMPANY LIMITED  
Address: UNIT E, 3/F, GOOD HARVEST CENTRE, 33 ON CHUEN STREET,  
FANLING, N.T., HONG KONG  
Contact person: LEO WANG

Manufacturing place: Manufacturer's name: EVEREXCEED INDUSTRIAL COMPANY LIMITED  
Address: UNIT E, 3/F, GOOD HARVEST CENTRE, 33 ON CHUEN STREET,  
FANLING, N.T., HONG KONG

Test subject: Product: Poly-crystalline Silicon Photovoltaic (PV) Module(s)  
Type:  
a) 72 6" Poly cells:  
ESM250-156, ESM255-156,  
ESM260-156, ESM265-156,  
ESM270-156, ESM275-156,  
ESM280-156, ESM285-156,  
ESM290-156, ESM295-156,  
ESM300-156;  
b) 60 6" Poly cells:  
ESM215-156, ESM220-156,  
ESM225-156, ESM230-156,  
ESM235-156, ESM240-156,  
ESM245-156;  
c) 54 6" Poly cells:  
ESM185-156, ESM190-156,  
ESM195-156, ESM200-156,  
ESM205-156, ESM210-156;

Test specification: IEC 61215:2005-04, Second Edition; EN 61215:2005  
IEC 61730-1:2004-10, First Edition; EN 61730-1:2007  
IEC 61730-2:2004-10, First Edition; EN 61730-2:2007

Purpose of examination: Test according to the test specification

Test result: The test results show that the presented product is in compliance with the  
specified requirements

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## 1 Description of the test subject

### 1.1 Function

Manufacturer's specification for intended use:  
The PV modules for electricity generation systems with max. voltage of 1000 V DC

### 1.2 Consideration of the foreseeable misuse

- Not applicable  
 Covered through the applied standard  
 Covered by the following comment  
 Covered by attached risk analysis

### 1.3 Technical Data

Module type	ESM250-156	ESM255-156	ESM260-156	ESM265-156	ESM270-156	ESM275-156
Voc [V]	43.2	43.3	43.5	43.6	43.8	44.0
Isc [A]	7.91	7.97	8.03	8.09	8.14	8.21
Vmp [V]	35.3	35.5	35.8	35.9	36.0	36.2
Imp [A]	7.08	7.18	7.27	7.38	7.49	7.61
Pmp [W]	250±5%	255±5%	260±5%	265±5%	270±5%	275±5%
Series Fuse Rating [A]	15	15	15	15	15	15
Module type	ESM280-156	ESM285-156	ESM290-156	ESM295-156	ESM300-156	ESM215-156
Voc [V]	44.2	44.4	45.0	45.2	45.5	36.2
Isc [A]	8.31	8.37	8.41	8.53	8.56	7.88
Vmp [V]	36.5	36.7	37.3	37.7	38.0	29.6
Imp [A]	7.67	7.74	7.79	7.83	7.89	7.28
Pmp [W]	280±5%	285±5%	290±5%	295±5%	300±5%	215±5%
Series Fuse Rating [A]	15	15	15	15	15	15
Module type	ESM220-156	ESM225-156	ESM230-156	ESM235-156	ESM240-156	ESM245-156
Voc [V]	36.3	36.4	36.6	36.8	37.2	37.5
Isc [A]	8.09	8.18	8.26	8.33	8.39	8.59
Vmp [V]	29.9	30.0	30.3	30.4	30.9	31.2
Imp [A]	7.36	7.50	7.59	7.73	7.77	7.85
Pmp [W]	220±5%	225±5%	230±5%	235±5%	240±5%	245±5%
Series Fuse Rating [A]	15	15	15	15	15	15



Module type	ESM185-156	ESM190-156	ESM195-156	ESM200-156	ESM205-156	ESM210-156
Voc [V]	32.3	32.4	32.5	32.7	32.8	33.0
Isc [Adc]	7.85	7.87	8.01	8.12	8.18	8.26
Vmp [V]	26.3	26.5	26.8	26.9	27.1	27.3
Imp [Adc]	7.05	7.17	7.28	7.43	7.56	7.69
Pmp [W]	185±5%	190±5%	195±5%	200±5%	205±5%	210±5%
Series Fuse Rating [A]	15	15	15	15	15	15

## 2 Order

### 2.1 Date of Purchase Order, Customer's Reference

2012-05-14

### 2.2 Receipt of Test Sample, Location

One sample of ESM275-156 was received on 2012-05-28 in Yangzhou Opto-Electrical Products Testing Institute.

### 2.3 Date of Testing

2012-05-31

### 2.4 Location of Testing

Yangzhou Opto-Electrical Products Testing Institute  
No. 10 West Kaifa Road, Yangzhou, 225009 Jiangsu, P. R. China

### 2.5 Points of Non-compliance or Exceptions of the Test Procedure

N/A

## 3 Test Results

### 3.1 Positive Test Results

The following test specifications are met:

- Design qualification and type approval
- PV module safety qualification

## 4 Remark

Co-license project





#### 4.1 Remarks to Factory

The assembly of the product has to comply with the documentation (CDF). Before the implementation of safety relevant modifications to the product into the ongoing production the product must be retested for assessment. The results must be implemented to the documentation and if necessary the certificate must be updated.

The certification according to IEC 61215 and IEC 61730-1, -2 determines the usable material for the production. Modules, that are based on the same materials, component and processing that only differ in size and electrical output power, form a so-called product family or type family.

The larger the diversity of products from a manufacturer, the more materials and material combinations must be tested/certified. All changes in the module design and used materials must be declared to TÜV.

4.2 The user manual has been examined according to the minimum requirements described in the product standard. The manufacturer is responsible for the accuracy of further particulars as well as of the composition and layout.

4.3 When the product is placed on the market, it must be accompanied with safety instructions written in official language of the country. The instructions shall give information regarding safe operation, installation and maintenance.

4.4 The co-license certificate application is based on the following main license certificate:

Certificate no.: Z2 11 08 74315 007

Report no.: 68.260.9.013.01

#### 5 Documentation

- CDF

#### 6 Summary

The test specifications are met.

Jiangsu TÜV Product Service Ltd. Shenzhen Branch  
TÜV SÜD Group

Engineer:

Cavic Wu

Technical Report checked:

Laura Wang

