

Morningstar Corporation  
Bill Mellema  
Director of Engineering  
8 Pheasant Run  
Newtown 18940  
USA

Date : 16.02.2016  
Our ref. : DJW ZJ  
Your ref.: 154122641

**Ref : CB Certificate Japan**

Type of Equipment : TriStar PWM Charge Controller  
Model Designation : See Certificate  
Certificate No. : JPTUV-069518  
Report No. : 15092911 001

Dear Bill Mellema,

Thank you very much for your interest in our services.

Please find enclosed your certification documents.

We appreciate your support and would like to offer our assistance in the approval of your future products through our extensive range of technical services.

Please feel free to contact us whatever your requirements may be.

With kind regards,

Certification Body

  
Best C.C. Chen

CC: Morningstar Corporation

Enclosure

**TÜV RHEINLAND TAIWAN LTD.**

11F., No. 758, Sec. 4, Bade Rd.,  
Songshan Dist., Taipei City 106,  
Taiwan R. O. C.  
Tel.(02) 2172-7000  
Fax (02) 2528-0018  
<http://www.tuv.com>

TAICHUNG BRANCH:  
No. 9, Lane 36, Sec. 3, Minsheng Rd.,  
Daya Dist., Taichung City 428  
Taiwan, R. O. C.  
Tel.(04) 2560-2998  
Fax(04) 2566-3598



Ref. Certif. No.

JPTUV-069518

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST  
CERTIFICATES FOR ELECTRICAL EQUIPMENT  
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE  
CERTIFICATS D'ESSAIS DES EQUIPEMENTS  
ELECTRIQUES (IECEE) METHODE OC

## CB TEST CERTIFICATE

## CERTIFICAT D'ESSAI OC

Product  
Produit

TriStar PWM Charge Controller

Name and address of the applicant  
Nom et adresse du demandeur

Morningstar Corporation  
8 Pheasant Run  
Newtown 18940, USA

Name and address of the manufacturer  
Nom et adresse du fabricant

Morningstar Corporation  
8 Pheasant Run  
Newtown 18940, USA

Name and address of the factory  
Nom et adresse de l'usine

Orient Semiconductor Electronics, Ltd.  
16 East 3rd St. N.E.P.Z.  
Kaohsiung, Taiwan 81170 Taiwan

Ratings and principal characteristics  
Valeurs nominales et caractéristiques principales

Solar input: 125Vd.c. max; 1)45A, 2)60A; Class I  
Operation : 9-68Vd.c.; 1) 45A, 2) 60A

Trademark (if any)  
Marque de fabrique (si elle existe)

MORNINGSTAR

Type of Manufacturer's Testing Laboratories used  
Type de programme du laboratoire d'essais constructeur

N/A

Model / Type Ref.  
Ref. de type

1) TriStar-45  
2) TriStar-60

Additional information (if necessary may also be  
reported on page 2)  
Les informations complémentaires (si nécessaire,  
peuvent être indiqués sur la 2<sup>ème</sup> page)

For model differences, refer to the test report.

A sample of the product was tested and found  
to be in conformity with  
Un échantillon de ce produit a été essayé et a été  
considéré conforme à la

IEC 62109-1:2010  
EN 62109-1:2010

As shown in the Test Report Ref. No. which forms part  
of this Certificate  
Comme indiqué dans le Rapport d'essais numéro de  
référence qui constitue partie de ce Certificat

15092911 001

This CB Test Certificate is issued by the National Certification Body  
Ce Certificat d'essai OC est établi par l'Organisme National de Certification



TÜV Rheinland Japan Ltd.  
Global Technology Assessment Center  
4-25-2 Kita-Yamata, Tsuzuki-ku  
Yokohama 224-0021 Japan  
Phone + 81 45 914-3888  
Fax + 81 45 914-3354  
Mail: info@jpn.tuv.com  
Web: www.tuv.com

Signature:

Best C.C. Chen

Date: 16.02.2016