



Ref. Certif. No.

DE 2-019777

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST  
CERTIFICATES FOR ELECTRICAL EQUIPMENT  
(IECEE) CB SCHEMESYSTEME CEI D'ACCEPTATION MUTUELLE DE  
CERTIFICATS D'ESSAIS DES EQUIPEMENTS  
ELECTRIQUES (IECEE) METHODE OCCB TEST CERTIFICATE  
CERTIFICAT D'ESSAI OCProduct  
Produit

LED downlight

Name and address of the applicant  
Nom et adresse du demandeurSHENZHEN KING WATT OPTO-ELECTRONICS CO.,LTD.  
Bld A1,Zhongtai IT Park No. 2  
of Dezheng Road,Shilongzai Block  
District, Shenzhen, China  
Shiyan Town,Bao'anName and address of the manufacturer  
Nom et adresse du fabricantSHENZHEN KING WATT OPTO-ELECTRONICS CO.,LTD.  
Bld A1,Zhongtai IT Park No. 2  
of Dezheng Road,Shilongzai Block  
District, Shenzhen, China  
Shiyan Town,Bao'anName and address of the factory  
Nom et adresse de l'usineSHENZHEN KING WATT OPTO-ELECTRONICS CO.,LTD.  
Bld A1,Zhongtai IT Park No. 2  
of Dezheng Road,Shilongzai Block  
District, Shenzhen, China  
Shiyan Town,Bao'anNote: When more than one factory, please report on page 2  
Note: Lorsque il y plus d'une usine, veuillez utiliser la 2<sup>ème</sup> pageRatings and principal characteristics  
Valeurs nominales et caractéristiques principalesAC 100-240V or AC 220-240V; 50/60Hz; IP20; Class II; ta:35°C  
For other ratings, see test report.Trade mark (if any)  
Marque de fabrique (si elle existe)

KWT

Model/type Ref.  
Ref. de type

For model names, see test report.

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

-see also test report ref. no. 17052937 001.

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

PUBLICATION

EDITION

IEC 60598-1:2008  
IEC 60598-2-2:2011  
for national deviations see test reportAs 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 une partie de ce Certificat

17052937 001

This CB Test Certificate is issued by the National Certification Body  
Ce Certificat d'essai OC est établi par l'Organisme National de CertificationTÜV Rheinland LGA Products GmbH  
Tillystraße 2 · 90431 Nürnberg, Germany  
Phone + 49 221 806-1371  
Fax + 49 221 806-3935  
Mail: cert-validity@de.tuv.com  
Web: www.tuv.com

Date: 07.01.2016

Signature:

Dipl.-Ing. (FH) C. Nasca

TÜV Rheinland (China) Ltd.  
Member of TÜV Rheinland Group



SHENZHEN KING WATT OPTO-ELECTRONICS  
CO.,LTD.

Date : 2016-01-07  
Our ref. : awa ZD  
Your ref.: 0164046605

Bld A1,Zhongtai IT Park No. 2  
of Dezheng Road, Shilongzai Block,  
Shiyan Town, Bao'an District, Shenzhen,  
China

Ref : CB Certificate Germany

Type of Equipment: LED downlight  
Model Designation: See Certificate  
Certificate No. : DE 2-019777 01  
Report No. : 17052937 001

Dear Ladies and Gentlemen,

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 though our extensive range of technical services. Please feel free to contact us whatever your requirements may be.

With kind regards,

Certification Body

Dipl.-Ing. (FH) C. Nasca

Enclosure

证书的详细资料请登陆[www.tuvdotcom.com](http://www.tuvdotcom.com)查阅,或拨打我司客服热线800 999 3668 / 400 883 1300咨询



**TEST REPORT**  
**IEC 60598-2-2**  
**Luminaires**  
**Part 2: Particular requirements:**  
**Section Two – Recessed luminaires**

**Report Number**..... : 17052937 001  
**Date of issue**..... : 2015-01-06  
**Total number of pages** ..... 74

**Applicant's name** ..... : SHENZHN KING WATT OPTO-ELECTRONICS CO., LTD.  
**Address**..... : Bld A1, Zhongtai IT Park No.2 of Dezheng Road, Shilongzai Block, Shiyuan Town, Bao'an District, Shenzhen, China

**Test specification:**  
**Standard** ..... : IEC 60598-2-2(ed.3):2011 used in conjunction with IEC 60598-1(ed.7):2008  
**Test procedure** ..... : CB Scheme  
**Non-standard test method**..... : N/A

**Test Report Form No.** ..... : IEC60598\_2\_2C  
**Test Report Form(s) Originator** .... : Intertek Semko AB  
**Master TRF** ..... : 2013-02

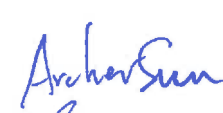
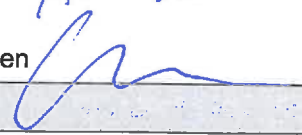
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If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

**This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.**

**Test item description**..... : LED downlight  
**Trade Mark**..... : See marking plate  
**Manufacturer** ..... : Same as applicant  
**Model/Type reference** ..... : See model list  
**Ratings**..... : See model list

<b>Testing procedure and testing location:</b>	
<input checked="" type="checkbox"/> <b>CB Testing Laboratory:</b>	TÜV Rheinland (Shenzhen) Co., Ltd.
Testing location/ address .....	East of F/1, F/2~F/4, Building 1, Cybio Technology Building No. 6 Langshan No.2 Road, North Hi-tech Industry Park 518057 Shenzhen Nanshan District CHINA
<input type="checkbox"/> <b>Associated CB Laboratory:</b>	
Testing location/ address .....	
Tested by (name + signature) .....	Archer Sun 
Approved by (+ signature) .....	Winston Chen 
<hr/>	
<input type="checkbox"/> Testing procedure: TMP	
Testing location/ address .....	
Tested by (name + signature) .....	
Approved by (+ signature) .....	
<hr/>	
<input type="checkbox"/> Testing procedure: WMT	
Testing location/ address .....	
Tested by (name + signature) .....	
Witnessed by (+ signature) .....	
Approved by (+ signature) .....	
<hr/>	
<input type="checkbox"/> Testing procedure: SMT	
Testing location/ address .....	
Tested by (name + signature) .....	
Approved by (+ signature) .....	
Supervised by (+ signature) .....	

**List of Attachments (including a total number of pages in each attachment):**

Attachment 1: 15 pages of photos.

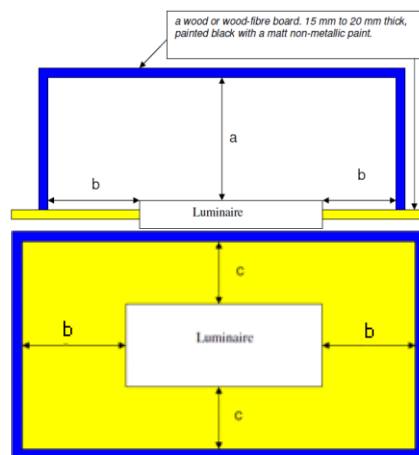
**Summary of testing:****Tests performed (name of test and test clause):**

Besides full tests of IEC 60598-2-2:2011 used in conjunction with IEC 60598-1:2008, this report include:

- Annex 5: European group differences and national differences
- Annex 6: Differences between IEC 60598-1:2008, and AS/NZS 60598.1:2013
- Annex 7: Differences between IEC 60598-2-2 Ed 2.1 and AS/NZS 69598.2.2:2001
- Annex 8: Test according to IEC/EN 62031+A1
- Annex 9: Tests of IEC/EN 62471

**Remark 1:**

During heating test, fix the luminaire to a ceiling, a box as following cover the luminaire,  $b=c=100\text{cm}$ ,  $a=100\text{ cm}$ .

**Remark 2:**

DLC1070-A840, DLC0650-A850, DLC0638-A850, DLD0850C-850, DLD0845A-865, DLD0425-850 were performed the differences tests.

**Testing location:****TÜV Rheinland (Shenzhen) Co., Ltd.**

East of F/1, F/2~F/4, Building 1, Cybio Technology Building No. 6 Langshan No.2 Road, North Hi-tech Industry Park 518057 Shenzhen Nanshan District CHINA

**Summary of compliance with National Differences:**

List of countries addressed: DE, AU

DE= Germany

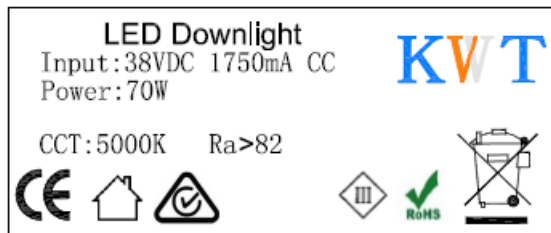
AU=Australia

NZ=New Zealand

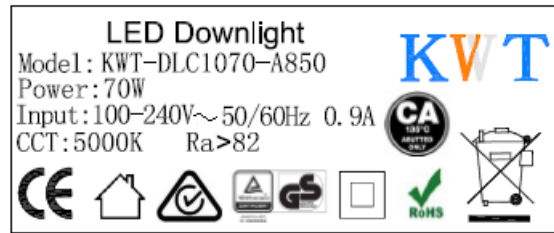
The product fulfils the requirements of EN 60598-1:2008+A11:2009, EN 60598-2-2:2012, AS/NZS 60598.1:2013, AS/NZS 60598.2.2:2001.

**Copy of marking plate**

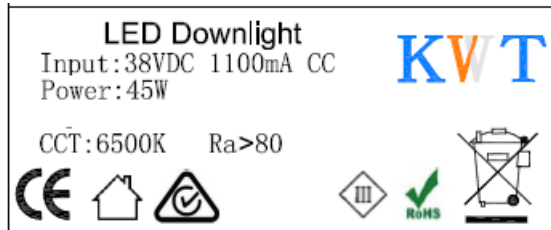
The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



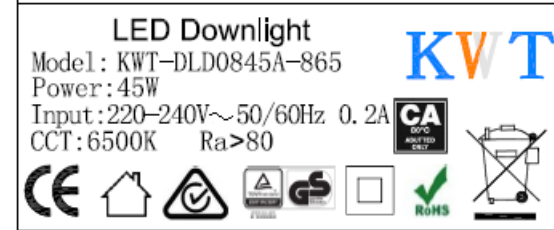
Label for downlight



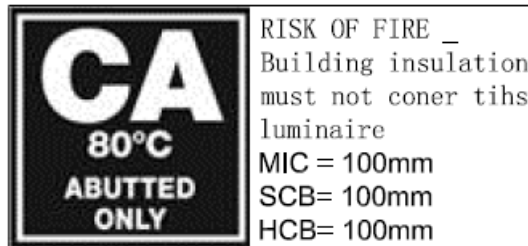
label for package



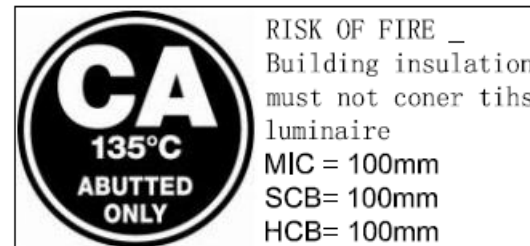
Label for downlight



label for package



Symbol for CA80



Symbol for CA135



Symbol for luminaires not suitable for covering with thermally insulating material



Cord tag for Australia or New Zealand market

Note: other models labels are the same design, except model name or symbol bearing.

<b>Test item particulars</b> .....	
Classification of installation and use .....	LED Recessed luminaires
Supply Connection .....	Power cords
.....	
.....	
<b>Possible test case verdicts:</b>	
- test case does not apply to the test object .....	N/A
- test object does meet the requirement.....	P (Pass)
- test object does not meet the requirement.....	F (Fail)
<b>Testing</b> .....	
Date of receipt of test item .....	2015-10-08
Date (s) of performance of tests.....	2015-10-08 to 2016-01-06
<b>General remarks:</b>	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. "(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.	
Throughout this report a <input checked="" type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.	
Clause numbers between brackets refer to clauses in IEC 60598-1	
<b>Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60598-1:</b>	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	
<b>Name and address of factory (ies)</b> .....	SHENZHEN KING WATT OPTO-ELECTRONICS CO., LTD. Bld A1, Zhongtai IT Park No.2 of Dezheng Road, Shilongzai Block, Shiyan Town, Bao'an District, Shenzhen, China

**General product information:**

1. LED downlight, Class II,  $t_a=35^{\circ}\text{C}$ , IP20, suitable for mounting on normal flammable surface, and not suitable to be covered with thermal resistance material.
2. For DLC series and DLD0835C-icct, DLD0850C-icct are classified CA 135 luminaire, others are CA 80 luminaires.
3. All models supplied by approved independent SELV LED driver.
4. All models can be painted with white, black or silver color.
5. All models are equipped with the same kind of LED chip, but CCT. is 2700K, 3000K, 3500K, 4000K, or 5000K.

## Model list

Light Model	Rating	Rated Power(W)	Main part dimension	Cut dimension	LED Type
DLC0622-qicct	AC 220-240 V, 50/60Hz	22	Φ190×153	Φ175	CITIZEN COB
DLC0628-qicct		28			
DLC0638-qicct		38	Φ190×168		
DLC0650-qicct		50	Φ190×188		
DLC0660-qicct	AC 100-240 V, 50/60Hz	60	Φ190×208		
DLC0670-qicct		70			
DLC0822-qicct	AC 220-240 V, 50/60Hz	22	Φ230×157	Φ215	
DLC0828-qicct		28			
DLC0838-qicct		38	Φ230×172		
DLC0850-qicct		50	Φ230×192		
DLC0860-qicct	AC 100-240 V, 50/60Hz	60	Φ230×212		
DLC1022-qicct	AC 220-240 V, 50/60Hz	22	Φ280×188		
DLC1028-qicct		28			
DLC1038-qicct		38	Φ280×203		
DLC1050-qicct		50	Φ280×223		
DLC1060-qicct	AC 100-240 V, 50/60Hz	60	Φ280×243		
DLC1070-qicct		70			
DLC1022-Dicct	AC 220-240 V, 50/60Hz	22	Φ280×160	Φ260	
DLC1028-Dicct		28			
DLC1038-Dicct		38	Φ280×175		
DLC1050-Dicct		50	Φ280×195		
DLC1060-Dicct	AC 100-240 V, 50/60Hz	60	Φ280×215		
DLC1070-Dicct		70			



Continued

DLD0416q-icct	AC 220- 240 V, 50/60Hz	16	Φ145×92	Φ125	LM561B	
DLD0420q-icct		20				
DLD0425q-icct		25				
DLD0415C-icct		15	Φ145×92		CITIZEN COB	
DLD0420C-icct		20				
DLD0425C-icct		25				
DLD0618q-icct		18	Φ200×110	Φ175		LM561B
DLD0625q-icct		25				
DLD0632q-icct		32				
DLD0625C-icct		25			CITIZEN COB	
DLD0635C-icct		35				
DLD0825q-icct		25	Φ230×118	Φ215	LM561B	
DLD0832q-icct		32				
DLD0845q-icct		45				
DLD0825C-icct		25			CITIZEN COB	
DLD0835C-icct		35				
DLD0850C-icct	50					

Remark:

q = A or B, means outline appearance. A means one reflector, B means double reflector.

i = 8 or 9, means LED chip color rendering index. 8 means  $\geq 80$ , 9 means  $\geq 90$ 

cc=27, 30, 35, 40 or 50, means LED chip CCT., 27 means 2700K, 30 means 3000K, 35 means 3500K, 40 means 4000K and 50 means 5000K.

t = F, T, D or A, T means TRIAC dimming method, F means not suitable for dimmable, D means DALI dimming method, A means 1-10V dimming method