Produkte
Products

Prüfbericht-Nr.: *Test Report No.*:	**16072755 001**	**Auftrags-Nr.:** *Order No.*:	**174043426**	Seite 1 von 1 *Page 1 of 1*
Kunden-Referenz-Nr.: *Client Reference No.*:	N/A	**Auftragsdatum:** *Order date*:	2016.04.10	
Auftraggeber: *Client*:	Berdis Lighting Co., LTD Floor 6, NO 1., Huatai East Road, Caosan Industrial Park, Guzhen Town, Zhongshan City, Guangdong Province 528421 P.R. China			
Prüfgegenstand: *Test item*:	LED DOWNLIGHT			
Bezeichnung / Typ-Nr.: *Identification / Type No.*:	B0104-05-Y-1-Z, B0104-12-Y-1-Z, B0104-15-Y-1-Z, B0104-24-Y-1-Z, B0104-12-Y-3-Z, B0104-15-Y-3-Z, B0104-24-Y-3-Z (Remark: 'Y'=2700-6500, which indicates the colour temperature of LED module; 'Z'=01-99, which indicates the serial number)			
Auftrags-Inhalt: *Order content*:	CE LVD COC			
Prüfgrundlage: *Test specification*:	EN 60598-2-2:2012, EN 60598-1:2015 EN 62471:2008, EN 62493:2010			
Wareneingangsdatum: *Date of receipt*:	2016.04.10	Keine Fotodokumentation erforderlich *No photo documentation required*		
Prüfmuster-Nr.: *Test sample No.*:	A000314164 001-012			
Prüfzeitraum: *Testing period*:	2016.04.10 to 2016.06.16			
Ort der Prüfung: *Place of testing*:	TÜV Rheinland (Guangdong) Ltd.			
Prüflaboratorium: *Testing laboratory*:	TÜV Rheinland (Guangdong) Ltd.			
Prüfergebnis*: *Test result**:	Pass			

geprüft von / *tested by*:			**kontrolliert von** / *reviewed by*:		
2016-06-24	Mars Yan	Mars Yan/Project Engineer	2016-06-24	Leo Wang	Leo Wang/Group Supervisor
Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*	**Datum** *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*

Sonstiges / *Other*:
--This report bases on CB report 16072754 001 for issuing CE LVD.
--Attachment: Test report 16072757 001 of EN 62493:2010.
--As declared by client that the name (or registered trade mark) and address of the certificate holder (manufacturer) or the importer or authorized representative based within the European Economic Area will be clearly affixed on the product or where that is not possible, on the packaging or in a document accompanying the product.

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
Legend:	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

V04

Prüfbericht-Nr.: *Test Report No.:*	16072757 001	**Auftrags-Nr.:** *Order No.:*	174043426	Seite 1 von 11 *Page 1 of 11*
Kunden-Referenz-Nr.: *Client Reference No.:*	634348	**Auftragsdatum:** *Order date.:*	25. Nov. 2015	
Auftraggeber: *Client:*	Berdis Lighting Co., LTD Floor 6, NO 1., Huatai east Road, Caosan Industrial Park, Guzhen Town Zhongshan City, Guangdong Province P.R. China			
Prüfgegenstand: *Test item:*	LED DOWNLIGHT			
Bezeichnung / Typ-Nr.: *Identification / Type No.:*	B0104-05-Y-1-Z, B0104-12-Y-1-Z, B0104-15-Y-1-Z, B0104-24-Y-1-Z, B0104-12-Y-3-Z, B0104-15-Y-3-Z, B0104-24-Y-3-Z (remark: 'Y'=2700-6500, which indicates the colour temperature of LED module; 'Z'=01-99, which indicates the serial number)			
Auftrags-Inhalt: *Order content:*	CE EMF service			
Prüfgrundlage: *Test specification:*	EN 62493:2010			

Wareneingangsdatum: *Date of receipt:*	25. Nov. 2015
Prüfmuster-Nr.: *Test sample No.:*	174043426-001/002
Prüfzeitraum: *Testing period:*	Refer to test report
Ort der Prüfung: *Place of testing:*	Refer to section 2.1
Prüflaboratorium: *Testinglaboratory:*	TÜV Rheinland (Guangdong) Ltd.
Prüfergebnis*: *Test result*:*	Pass

geprüft von / *tested by:*

Storm Shu

23 May 2016 Storm Shu / Assistant Project Manager

Datum *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*

kontrolliert von / *reviewed by:*

Jeffery Xie

31 May 2016 Jeffery Xie / Section Manager

Datum *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*

Sonstiges/ *Other:*

Zustand des PrüfgegenstandesbeiAnlieferung: *Condition of the test item at delivery:*	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged

* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut	3 = befriedigend F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	4 = ausreichend N/A = nicht anwendbar	5 = mangelhalt N/T = nichtgetestet
Legend:	1 = very good P(ass) = passed a.m. test specifications(s)	2 = good	3 = satisfactory F(ail) = failed a.m. test specifications(s)	4 = sufficient N/A = not applicable	5 = poor N/T = not tested

TEST SUMMARY

4.1 Mains Terminals Disturbance Voltage (20 kHz - 30MHz)

RESULT: Pass

4.2 Radiated Electromagnetic Disturbances (100 kHz – 30 MHz)

RESULT: Pass

4.3 Radiated Disturbances (30MHz – 300 MHz)

RESULT: Pass

4.4 Induced Current Density (20kHz – 10MHz)

RESULT: Pass

Contents

1. General Remarks

When applying the basic standards in this test report, please refer to the applied generic or product family standards for edition information:
For dated basic standards, only the edition cited applies. For undated basic standards, the latest edition (including any amendments) applies.

2. Test Sites

2.1 Test Facilities

Dongguang Precise Testing Servise Co.,Ltd

Building D, Baoding Technology Park, Guangming Road 2,
Guangming Community, Dongcheng District, Dongguan, Guangdong, China

The test at these test sites has been conducted under the supervision of a TüV Rheinland engineer.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Disturbance Voltage				☒
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal Until**
EMI Test Receiver	Rohde&Schwarz	ESCI	101417	July 14, 2016
Artificial Mains Network	Narda	L2-16B	000WX31025	July 14, 2016
Artificial Mains Network (AUX)	Rohde&Schwarz	ENV216	101342	Dec.31, 2016
Radiated Emission (Magnetic Field 'Van Veen')				☒
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal Until**
EMI Test Receiver	Rohde&Schwarz	ESCI	101417	July 14, 2016
Triple-Loop Antenna	LAPLACE	RF300	9138	July 14, 2016
Radiated Disturbances (30MHz - 300MHz)				☒
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal Until**
EMI Test Receiver	Rohde&Schwarz	ESCI	101417	July 14, 2016
Trilog Broadband Antenna	SCHWARZBECK	VULB9160	9160-3355	July 14, 2016
Induced Current Density				☒
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal Until**
EMI Test Receiver	Rohde&Schwarz	ESCI	101417	Dec.31, 2016
EMF Tester	AFJ	MSA-210	161303	Dec.31, 2016

☐***: Not Used***
☒***: Used***

3. General Product Information

The 7 new submitted samples are downlight with general light source of LED module. It belongs to self ballasted lamps based on table A.1 of EN 62493:2010.

The all models have the similar inside LED driver and mechanical structure, the deference see model list as below:

Model	Input	Power	LED driver Output	Type
B0104-05-Y-1-Z	AC110-120V / 200-240V, 50/60Hz.	5W	A03-003-0130-101 DC25-35V, 130mA	Not dimmable
B0104-12-Y-1-Z		12W	A03-003-0130-102 DC54-78V, 130mA	
B0104-15-Y-1-Z		15W	A03-003-0260-101 DC36-55V, 260mA	
B0104-24-Y-1-Z		24W	A03-003-0260-102 DC54-78V, 260mA	
B0104-12-Y-3-Z		12W	A03-003-0130-302 DC54-78V, 130mA	Dimmable
B0104-15-Y-3-Z		15W	A03-003-0260-301 DC36-55V, 260mA	
B0104-24-Y-3-Z		24W	A03-003-0260-302 DC54-78V, 260mA	

According to above information, full tests are performed on model B0104-24-5500-1-01 and B0104-24-5500-3-01.
All model's SAR tests were evaluated in EMC test report 16072756 001.

For details please refer to the Technical Documentation.

3.1 Product Function and Intended Use

Refer to Technical Documentation.

3.2 Ratings and System Details

Type designation:	Refer to section 3
Rated input:	Refer to section 3
Rated power:	Refer to section 3
Protection class:	II
Ports:	AC mains
Cables:	Unshielded

Refer to the Technical Documentation for further information.

4. Test Results

4.1 Mains Terminals Disturbance Voltage (20 kHz-30MHz)

RESULT: **Pass**

The details refer to EMC report 16072756 001.

4.2 Radiated Electromagnetic Disturbances (100 kHz – 30 MHz)

RESULT: **Pass**

The details refer to EMC report 16072756 001.

4.3 Radiated Disturbances (30MHz – 300 MHz)

RESULT: **Pass**

The details refer to EMC report 16072756 001.

4.4 Induced Current Density (20kHz – 10MHz)

RESULT: **Pass**

Date of Testing	:	21.Apr. 2016
Test procedure	:	EN 62493:2010, Clause 6
Frequency range	:	20 kHz -10 MHz
Kind of test site	:	Shielded Room
Limits	:	EN 62493:2010, Clause 4.2

Test setup

Input voltage	:	AC 100V, 50Hz & AC 240V, 50Hz
Operation mode	:	On
Test configuration	:	Table-top
Temperature	:	24.4°C
Measurement distance	:	30 cm (see photograph)
Number of Measurement point	:	1
Measurement Uncertainty	:	25%

Measurement

F_{limit}	:	0.85
$F_{measured}$	:	

Rated Voltage / *Model Type*	AC100V, 50Hz	AC240V, 50Hz
B0104-24-5500-1-01	0.04489	0.03434
B0104-24-5500-3-01	0.03717	0.05008

5. Test Set-up Photos

Photograph 1: Set-up for Induced Current Density (20kHz – 10MHz)

6. List of Tables

7. List of Photographs