



Report No.: CTB150520001C

Date: May 27, 2015

Page: 1 of 14

Customer: GuangZhou Topsun Lighting Science and Technology Co., Ltd.

Address: 3th Floor, No.10 Taipingli South Street, Jiaoxin, Shijing Town,
Baiyun District, Guangzhou, China

Report Number: CTB150520001C

Total Page: 14 Pages

Report on the submitted sample said to be:

Sample name: pattern beam light

Model: ZY-470A, ZY-230B, ZY-230G, ZY-120A, ZY-300A, ZY-300B,
ZY-132A, ZY-132G, ZY-280S, ZY-280G, ZY-330A, ZY-330B, ZY-330G,
ZY-350A, ZY-350F, ZY-470B, ZY-470D

Manufacture: GuangZhou Topsun Lighting Science and Technology Co., Ltd.

Address: 3th Floor, No.10 Taipingli South Street, Jiaoxin, Shijing Town,
Baiyun District, Guangzhou, China

Sample received date: May 23, 2015

Testing period: May 24, 2015–May 27, 2015

Test (Issue) laboratory: Shenzhen CTB Testing Technology Co., Ltd.

Test location: First floor, E building, Huayang Technology Industry Park, Gushu
Village, Bao'an District, Shenzhen City, P.R.C

Basis council directive: EU RoHS Directive 2011/65/EU

Test Conclusion:

Test Requested	Conclusion
EU RoHS Directive 2011/65/EU and its amendment directives	PASS

***** FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S) *****

Signed for and on behalf of CTB

Tested by: _____

Approved by: _____

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.

Web: <http://www.ctb-lab.com>

Fax: +86-0755-23208027

Telephone number
+86-0755-61996588



Report No.: CTB150520001C

Date: May 27, 2015

Page: 2 of 14

Test item:

- (1) Cd, Pb, Hg
- (2) Cr(VI)
- (3) PBBs, PBDEs

Test standard:

- (1) With reference to IEC 62321, Ed.1 111/95/CDV, EPA3050B:1996,EPA3052:1996 Analysis was performed by ICP
- (2) With reference to IEC 62321, Ed.1 111/95/CDV, EPA3060A:1996, EPA 7196A:1992, ISO3613:2000(E), Analysis was performed by UV
- (3) With reference to IEC 62321, Ed.1 111/95/CDV, EPA3540C:1996, Analysis was performed by GC-MS

Conclusion: The delivery sample complied with ROHS directive

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.

Web: <http://www.ctb-lab.com>

Fax: +86-0755-23208027

Telephone number
+86-0755-61996588



SAMP LE NO.	COMPONEN TS	Item	Results of EDXRF (P/F/D)	Results of testing (mg/kg)	Chemical testing limit (mg/kg)	Conclusion (P/F)
1	The shell	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	P	N.D.	< 1000	P
		PBDEs	P	N.D.	< 1000	P
2	transformer	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	D	/	< 1000	P
		PBDEs	D	/	< 1000	P
3	PCB board	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	P	N.D.	< 1000	P
		PBDEs	P	N.D.	< 1000	P
4	Coating	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	D	/	< 1000	P
		PBDEs	D	/	< 1000	P
5	Screw	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	D	/	< 1000	P
		PBDEs	D	/	< 1000	P

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.



SAMPL E NO.	COMPON ENTS	Item	Results of EDXRF (P/F/D)	Results of testing (mg/kg)	Chemical testing limit (mg/kg)	Conclusion (P/F)
6	Red cable	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	P	N.D.	< 1000	P
		PBDEs	P	N.D.	< 1000	P
7	Black cable	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	P	N.D.	< 1000	P
		PBDEs	P	N.D.	< 1000	P
8	Blue cable	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	P	N.D.	< 1000	P
		PBDEs	P	N.D.	< 1000	P
9	IC	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	P	N.D.	< 1000	P
		PBDEs	P	N.D.	< 1000	P
10	Y capacitor	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	P	N.D.	< 1000	P
		PBDEs	P	N.D.	< 1000	P

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.



Report No.: CTB150520001C

Date: May 27, 2015

Page: 5 of 14

SAMPL E NO.	COMPONE NTS	Item	Results of EDXRF (P/F/D)	Results of testing (mg/kg)	Chemical testing limit (mg/kg)	Conclusion (P/F)
11	Common-mode inductor	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	P	N.D.	< 1000	P
		PBDEs	P	N.D.	< 1000	P
12	Yellow cable	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	P	N.D.	< 1000	P
		PBDEs	P	N.D.	< 1000	P
13	Fan	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	P	N.D.	< 1000	P
		PBDEs	P	N.D.	< 1000	P
14	Electrolytic capacitor	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	P	N.D.	< 1000	P
		PBDEs	P	N.D.	< 1000	P
15	Led	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	P	N.D.	< 1000	P
		PBDEs	P	N.D.	< 1000	P

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.

Web: <http://www.ctb-lab.com>

Fax: +86-0755-23208027

Telephone number
+86-0755-61996588



SAMPL E NO.	COMPONE NTS	Item	Results of EDXRF (P/F/D)	Results of testing (mg/kg)	Chemical testing limit (mg/kg)	Conclusion (P/F)
16	Heat sinks	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	D	/	< 1000	P
		PBDEs	D	/	< 1000	P
17	Electrolytic capacitor	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	P	N.D.	< 1000	P
		PBDEs	P	N.D.	< 1000	P
18	Diode	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	P	N.D.	< 1000	P
		PBDEs	P	N.D.	< 1000	P
19	White Cable	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	P	N.D.	< 1000	P
		PBDEs	P	N.D.	< 1000	P
20	X capacitor	Cd	P	N.D.	< 100	P
		Cr	P	N.D.	< 1000	P
		Hg	P	N.D.	< 1000	P
		Pb	P	N.D.	< 1000	P
		PBBs	P	N.D.	< 1000	P
		PBDEs	P	N.D.	< 1000	P

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.



Remark:

(1) It is the result on total Br while test PBBs and PBDEs by EDXRF. It is the result on total Cr while test Hexavalent Chromium by EDXRF.

(2) Results are obtained by EDXRF for primary screening, and chemical testing by ICP (for Cd, Pb, Hg), UV-VIS (Cr(VI)) and GCMS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321:2008 (unit:mg/kg)

Element	Polymer	Metal	Composite material
Cd	$P \leq 70-3\sigma < D < 130+3\sigma \leq F$	$P \leq 70-3\sigma < D < 130+3\sigma \leq F$	$P \leq 50-3\sigma < D < 150+3\sigma \leq F$
Pb	$P \leq 700-3\sigma < D < 1300+3\sigma \leq F$	$P \leq 700-3\sigma < D < 1300+3\sigma \leq F$	$P \leq 500-3\sigma < D < 1500+3\sigma \leq F$
Hg	$P \leq 700-3\sigma < D < 1300+3\sigma \leq F$	$P \leq 700-3\sigma < D < 1300+3\sigma \leq F$	$P \leq 500-3\sigma < D < 1500+3\sigma \leq F$
Br	$P \leq 300-3\sigma < D$	-----	$P \leq 250-3\sigma < D$
Cr	$P \leq 700-3\sigma < D$	$P \leq 700-3\sigma < D$	$P \leq 500-3\sigma < D$

P = PASS; F = FAIL; D = DETECTED;

(3) mg/kg = ppm; N.D. = NOT DETECTED (<MDL) Pb, Cd, Hg: 10 mg/kg; Cr(VI): 2mg/kg; PBBs, PBDEs: 5mg/kg

(4) According to IEC 62321:2008, result on Cr(VI) for metal sample is shown as Positive/Negative. Positive = Presence of Cr(VI) coating, Negative = Absence of Cr(VI) coating

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.



Report No.: CTB150520001C

Date: May 27, 2015

Page: 8 of 14

Photo Documentation

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.

Web: <http://www.ctb-lab.com>

Fax: +86-0755-23208027

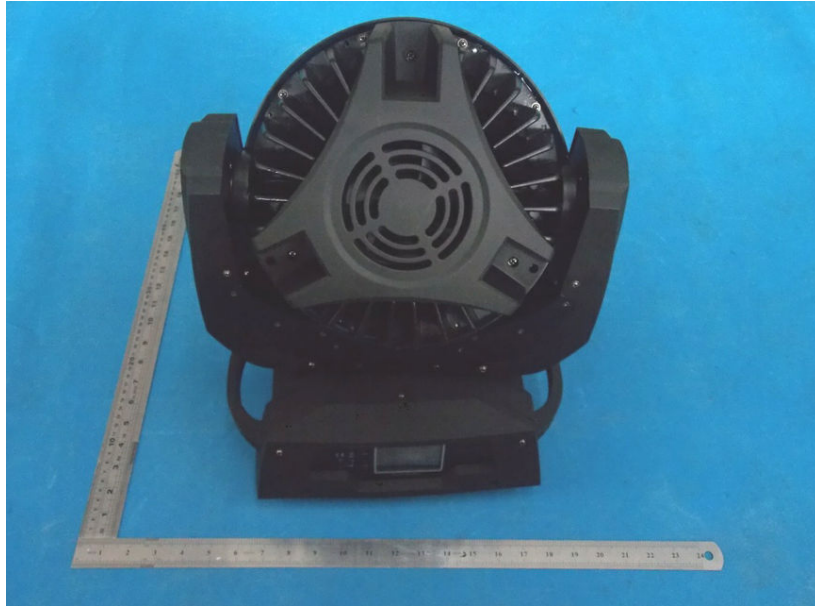
Telephone number
+86-0755-61996588



Report No.: CTB150520001C

Date: May 27, 2015

Page: 9 of 14

Photo Documentation

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.

Web: <http://www.ctb-lab.com>

Fax: +86-0755-23208027

Telephone number
+86-0755-61996588

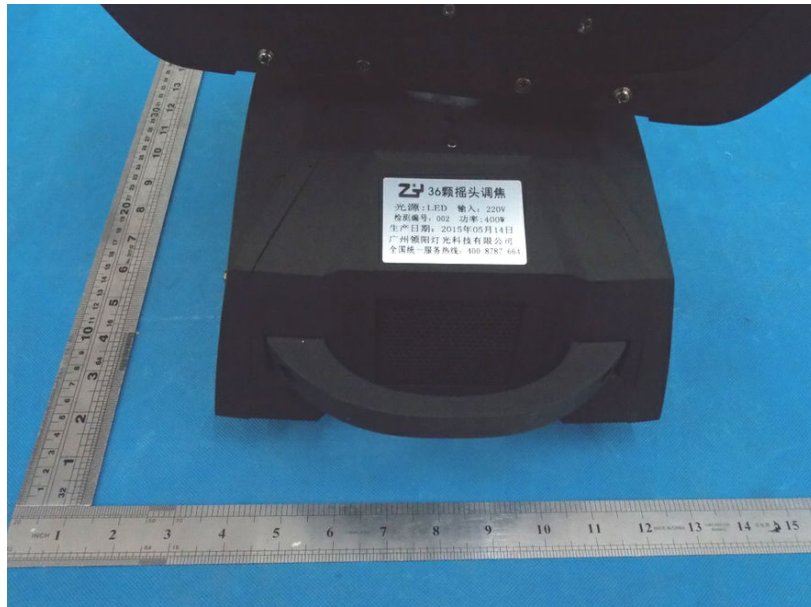


Report No.: CTB150520001C

Date: May 27, 2015

Page: 10 of 14

Photo Documentation



This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.

Web: <http://www.ctb-lab.com>

Fax: +86-0755-23208027

Telephone number
+86-0755-61996588

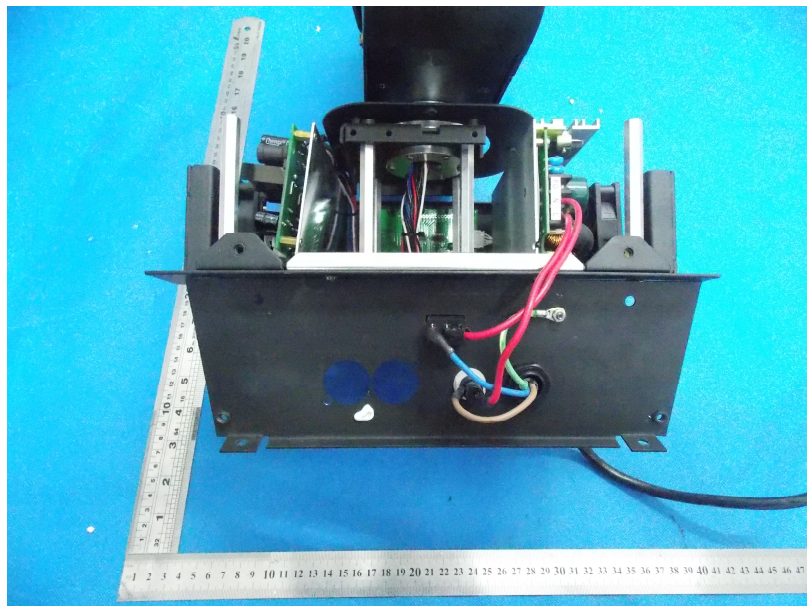


Report No.: CTB150520001C

Date: May 27, 2015

Page: 11 of 14

Photo Documentation



This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.

Web: <http://www.ctb-lab.com>

Fax: +86-0755-23208027

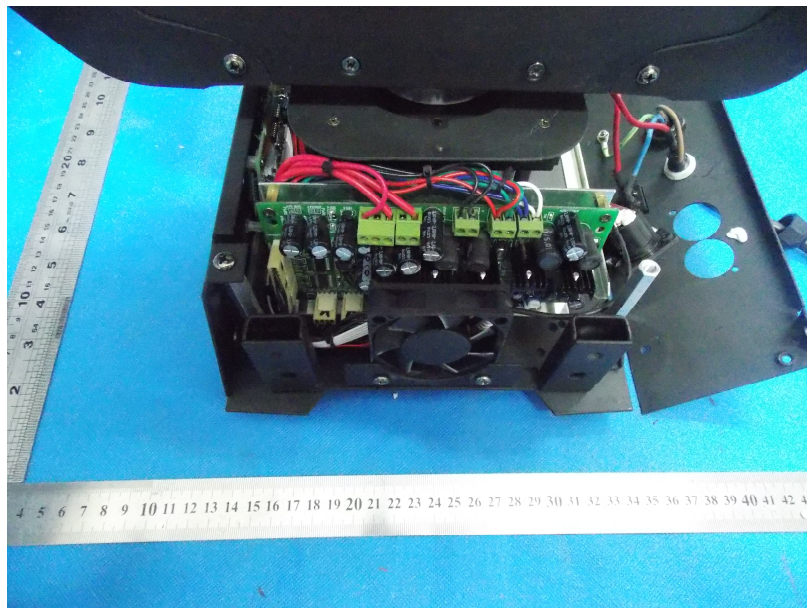
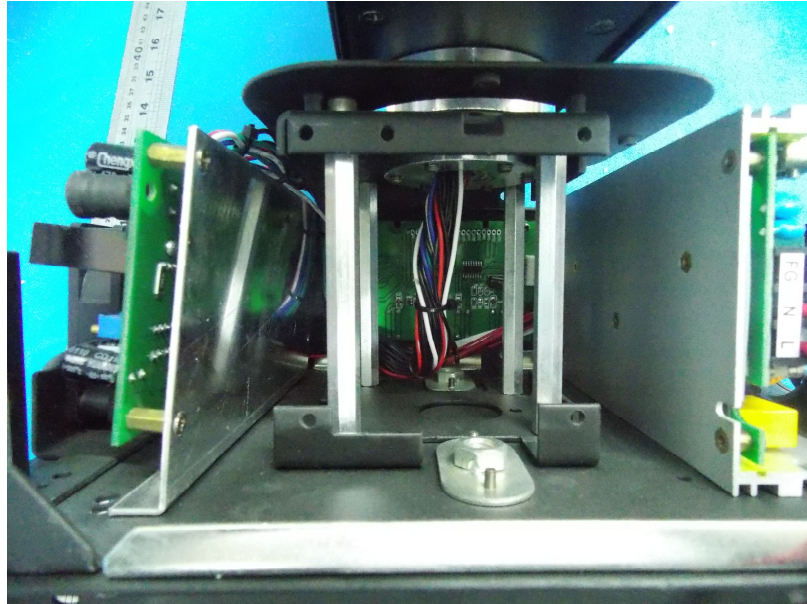
Telephone number
+86-0755-61996588



Report No.: CTB150520001C

Date: May 27, 2015

Page: 12 of 14

Photo Documentation

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.

Web: <http://www.ctb-lab.com>

Fax: +86-0755-23208027

Telephone number
+86-0755-61996588

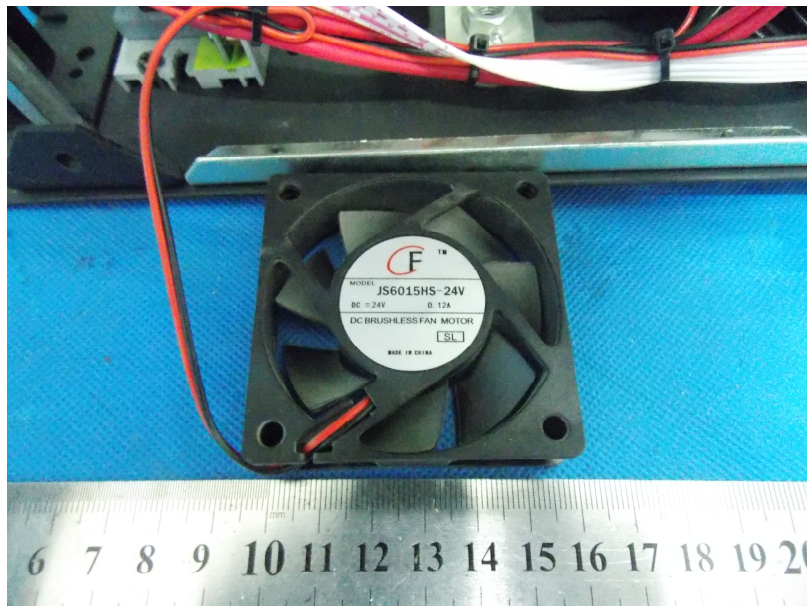
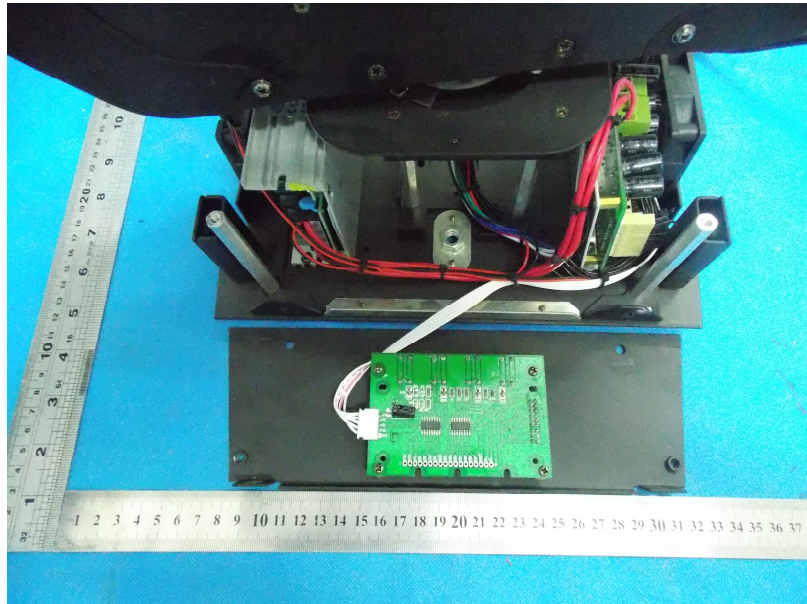


Report No.: CTB150520001C

Date: May 27, 2015

Page: 13 of 14

Photo Documentation



This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.

Web: <http://www.ctb-lab.com>

Fax: +86-0755-23208027

Telephone number
+86-0755-61996588

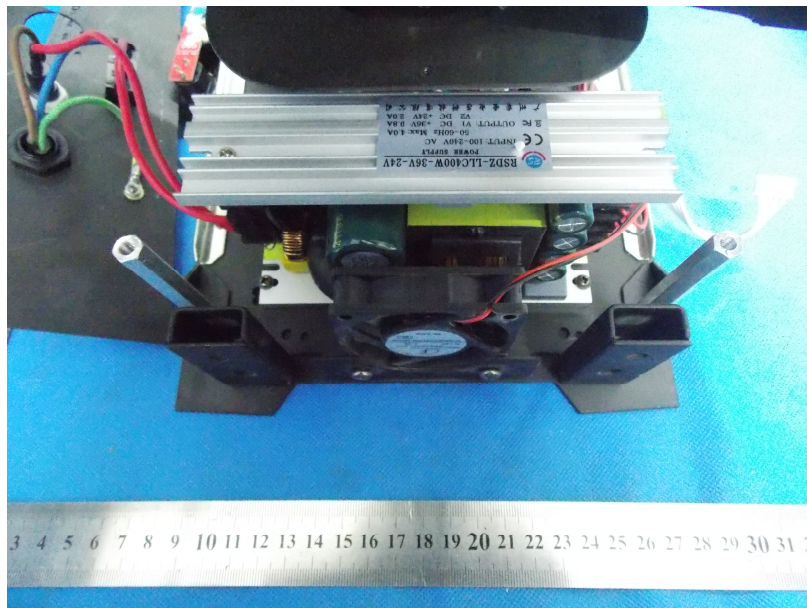
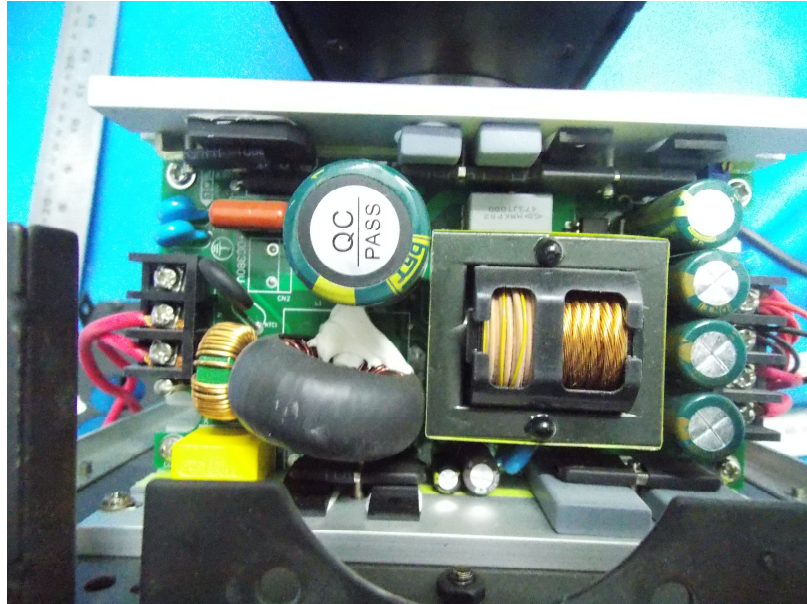


Report No.: CTB150520001C

Date: May 27, 2015

Page: 14 of 14

Photo Documentation



*****End of Report*****

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.

Web: <http://www.ctb-lab.com>

Fax: +86-0755-23208027

Telephone number
+86-0755-61996588