



# RoHS TEST REPORT

For

LED BULB

Model No.: VT-2017, VT-2013, VT-2015, VT-1899, VT-2053, VT-1900, VT-1884D, VT-1864D, VT-2099, VT-2055, VT-2139, VT-2111, VT-2117, VT-2000, VT-2112, VT-2113, VT-2089, VT-2166, VT-2176, VT-245, VT-265, VT-285, VT-295, VT-237, VT-246, VT-209, VT-210, VT-211, VT-212, VT-215, VT-217, VT-263, VT-280, VT-220, VT-230, VT-238, VT-218, VT-216, VT-224, VT-235, VT-240, VT-288, VT-298, VT-283, VT-289, VT-290, VT-233, VT-2256, VT-2235, VT-2245, VT-2089, VT-2210, VT-2212, VT-2217, VT-2216, VT-2218, VT-2220, VT-1227, VT-2219, VT-2211, VT-2229, VT-2224, VT-2311, VT-2318, VT-242, VT-2307, VT-2310, VT-2315, VT-262D

Applicant : V-TAC EXPORTS LIMITED

ROOM NO.301, KAM ON BUILDING 176A QUEENS ROAD CENTRAL,  
CENTRAL, HONGKONG

Manufacturer : V-TAC EXPORTS LIMITED

ROOM NO.301, KAM ON BUILDING 176A QUEENS ROAD CENTRAL,  
CENTRAL, HONGKONG

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Report Number : J02.06.0180R-R5

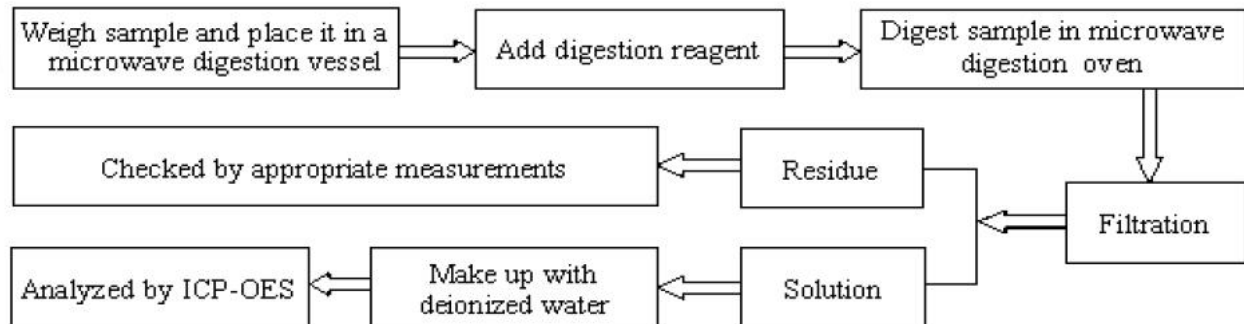
Issued Date : December 26, 2019

Date of Report : December 26, 2019

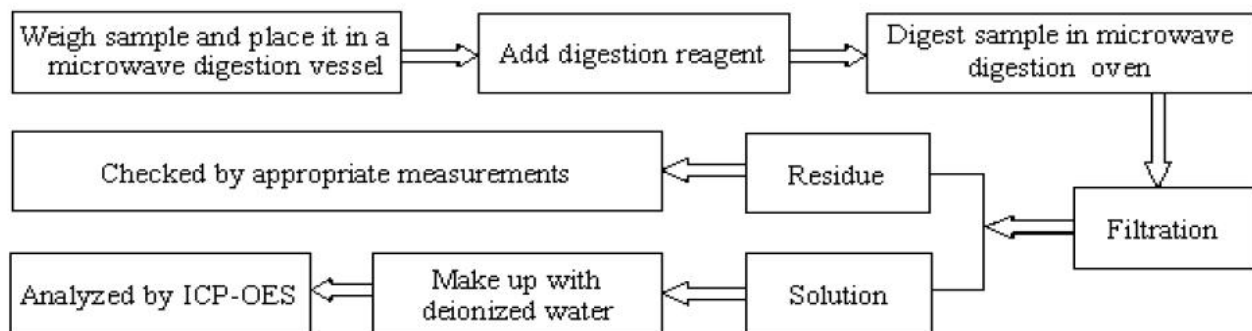
## Note:

1. The test data and result is based on the tested sample only.
2. Please verify information in the report on GST web: [www.gstslab.com](http://www.gstslab.com) through report number.
3. All rights reserve, the pirate edition investigates necessarily! This report shall not be reproduced unless under the authority of Global-Standard Testing Service Co., Ltd.
4. This report is based on report J02.06.0180R-R4 which issued on April 19, 2019.

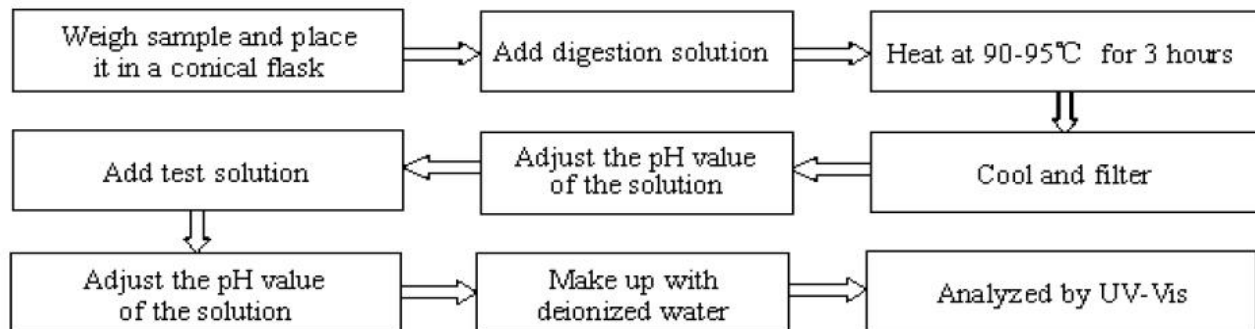
### 1. Lead(Pb), Cadmium(Cd)



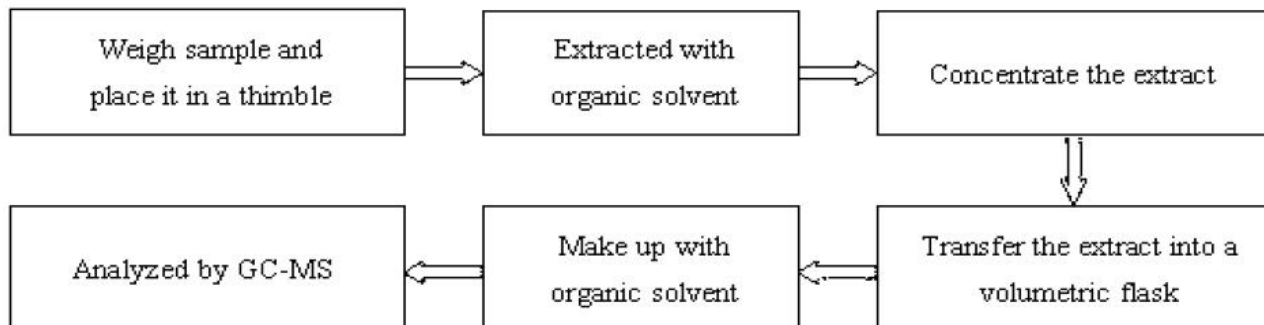
### 2. Mercury(Hg)



### 3. Hexavalent Chromium (Cr(VI))



**4. Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers(PBDEs) ,  
HBCDD, DBP, DEHP, BBP**



**Method Detection Limit (MDL) in wet chemical test**

Test Items	Pb	Cd	Hg	PBBs & PBDEs
Unit	mg/kg	mg/kg	mg/kg	mg/kg
MDL	2	2	2	2

<b>Result</b>	:	<b>Pass</b>
<b>Conclusion</b>	:	An independent evaluation on the above-mentioned product(s) has been conducted pursuant to 2011/65/EU and (EN)2015/863 of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment, and concluded that the equipment under evaluation met the legislative requirements of this directive.

Reviewed by  
  
**APPROVED**  
 Nico Xie  
 Manager  
 December 26, 2019

### Test Data Summary

SAMPLE NO.	COMPONENTS	Item	Results of EDXRF (P/F/D)	Results of testing(mg/kg)	Chemical testing limit (mg/kg)	Conclusion (P/F)
1	Diffuser	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	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
2	Enclosure	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	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
3	Insulation plastic of Lamp base	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	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
4	Screw of lamp base	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	N.A.
		PBDEs	D	/	<1000	N.A.
		HBCDD	D	/	<1000	N.A.
		DEHP	D	/	<1000	N.A.
		DBP	D	/	<1000	N.A.
BBP	D	/	<1000	N.A.		

SAMP LE NO.	COMPONENTS	Item	Results of EDXRF (P/F/D)	Results of testing(mg/kg)	Chemical testing limit (mg/kg)	Conclusio n (P/F)
5	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	D	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
		BBP	D	N.D.	<1000	P
6	LED PCB	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	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
		BBP	D	N.D.	<1000	P
7	Soldering tin	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	N.A.
		PBDEs	D	/	<1000	N.A.
		HBCDD	D	/	<1000	N.A.
		DEHP	D	/	<1000	N.A.
		DBP	D	/	<1000	N.A.
		BBP	D	/	<1000	N.A.
8	Glue	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	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
		BBP	D	N.D.	<1000	P

SAMPLE NO.	COMPONENTS	Item	Results of EDXRF (P/F/D)	Results of testing(mg/kg)	Chemical testing limit (mg/kg)	Conclusion (P/F)
9	Internal wire	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	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
10	Fuse	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	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
11	Heat shrinkable tube	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	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
12	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	D	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
BBP	D	N.D.	<1000	P		

SAMP LE NO.	COMPONENTS	Item	Results of EDXRF (P/F/D)	Results of testing(mg/kg)	Chemical testing limit (mg/kg)	Conclusio n (P/F)
13	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	D	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
BBP	D	N.D.	<1000	P		
14	Resistors	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	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
BBP	D	N.D.	<1000	P		
15	Inductors	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	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
BBP	D	N.D.	<1000	P		
16	Winding of 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	N.A.
		PBDEs	D	/	<1000	N.A.
		HBCDD	D	/	<1000	N.A.
		DEHP	D	/	<1000	N.A.
		DBP	D	/	<1000	N.A.
BBP	D	/	<1000	N.A.		

SAMP LE NO.	COMPONENTS	Item	Results of EDXRF (P/F/D)	Results of testing(mg/kg)	Chemical testing limit (mg/kg)	Conclusio n (P/F)
17	Bobbin of 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	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
BBP	D	N.D.	<1000	P		
18	Insulation tape of 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	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
BBP	D	N.D.	<1000	P		
19	Diodes	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	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
BBP	D	N.D.	<1000	P		
20	Rectifier	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	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
BBP	D	N.D.	<1000	P		



SAMPLE NO.	COMPONENTS	Item	Results of EDXRF (P/F/D)	Results of testing(mg/kg)	Chemical testing limit (mg/kg)	Conclusion (P/F)
21	PCB of LED driver	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	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
BBP	D	N.D.	<1000	P		

Note:

(1) N.D. = Not detected (<MDL)

(2) ppm = mg/kg

(3) N.A. = Not Analyzed

(4) Negative = the concentration of Hexavalent Chromium extracted from 50cm<sup>2</sup> sample is less than the detection limit.

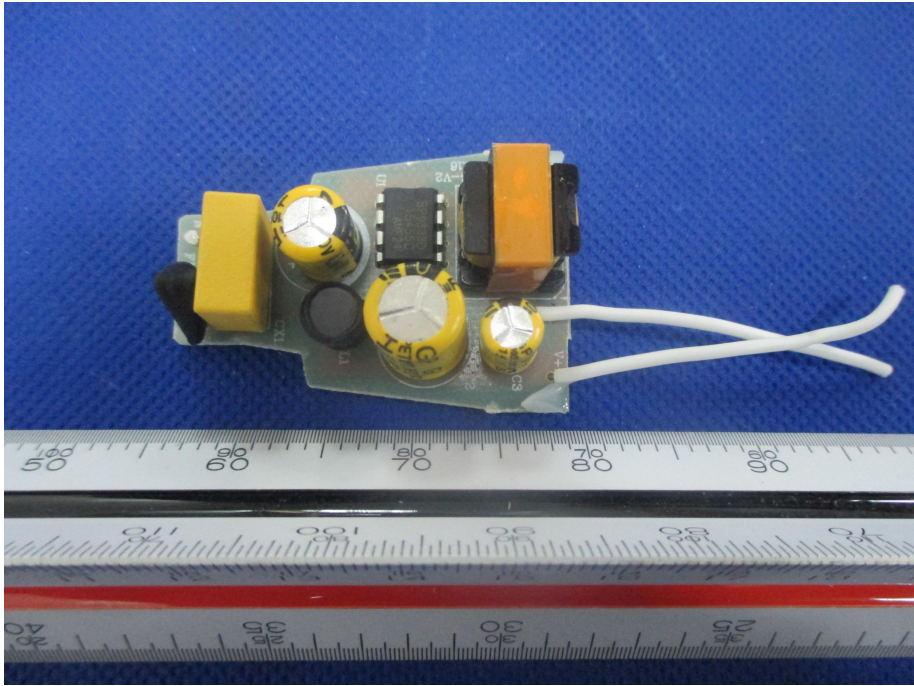
**Appendix 1**

Photo documentation

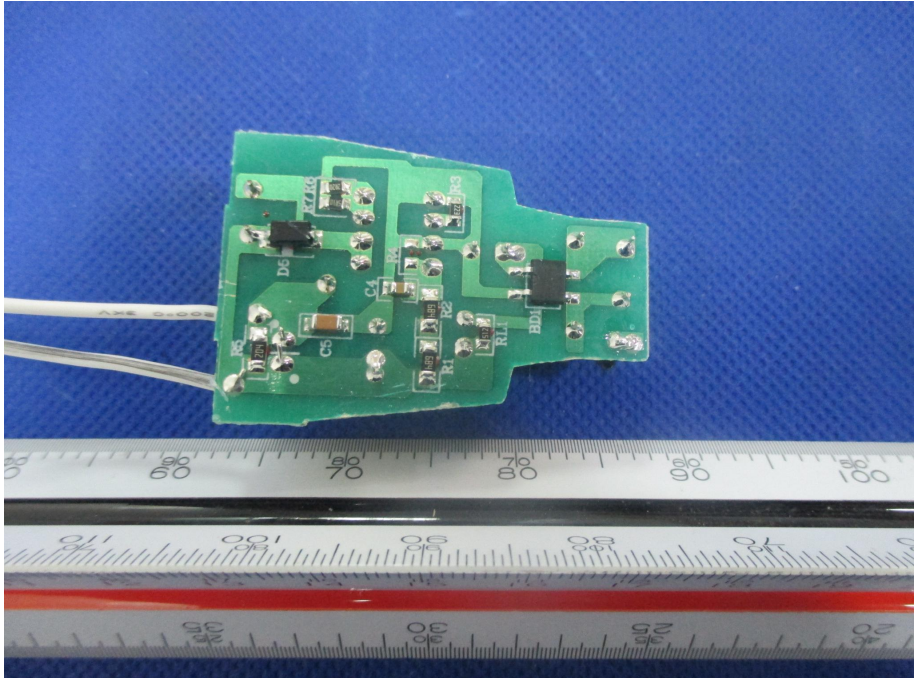
<p>Photo 1</p> <p>View:</p> <p><input checked="" type="checkbox"/> Front</p> <p><input type="checkbox"/> Rear</p> <p><input type="checkbox"/> Right side</p> <p><input type="checkbox"/> Left side</p> <p><input type="checkbox"/> Top</p> <p><input type="checkbox"/> Bottom</p> <p><input type="checkbox"/> Internal</p>	
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<p>Photo 2</p> <p>View:</p> <p><input type="checkbox"/> Front</p> <p><input type="checkbox"/> Rear</p> <p><input checked="" type="checkbox"/> Right side</p> <p><input type="checkbox"/> Left side</p> <p><input type="checkbox"/> Top</p> <p><input type="checkbox"/> Bottom</p> <p><input type="checkbox"/> Internal</p>	
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<p>Photo 3</p> <p>View:</p> <p><input type="checkbox"/> Front</p> <p><input type="checkbox"/> Rear</p> <p><input type="checkbox"/> Right side</p> <p><input type="checkbox"/> Left side</p> <p><input type="checkbox"/> Top</p> <p><input type="checkbox"/> Bottom</p> <p><input checked="" type="checkbox"/> Internal</p>	
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<p>Photo 4</p> <p>View:</p> <p><input type="checkbox"/> Front</p> <p><input type="checkbox"/> Rear</p> <p><input type="checkbox"/> Right side</p> <p><input type="checkbox"/> Left side</p> <p><input type="checkbox"/> Top</p> <p><input type="checkbox"/> Bottom</p> <p><input checked="" type="checkbox"/> Internal</p>	
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<p>Photo 5</p> <p>View:</p> <p><input type="checkbox"/> Front</p> <p><input type="checkbox"/> Rear</p> <p><input type="checkbox"/> Right side</p> <p><input type="checkbox"/> Left side</p> <p><input type="checkbox"/> Top</p> <p><input type="checkbox"/> Bottom</p> <p><input checked="" type="checkbox"/> Internal</p>	 <p>The image shows the internal view of a green printed circuit board (PCB) with various electronic components. The components include several integrated circuits (ICs), resistors, and capacitors. Two white cables are connected to the board. A ruler is placed below the board for scale, showing measurements in millimeters. The background is a blue textured surface.</p>
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