

**GUANGZHOU TRIPCRAFT INDUSTRY CO. , LTD****TEST REPORT**

Prepared For:	GUANGZHOU TRIPCRAFT INDUSTRY CO. , LTD 706 b YongFu Center YongFu Road YueXiu District GuangZhou
Product Name:	LED WORK LIGHT BAR
Model :	TC-6012A, TC-10010C, TC-18060, TC-12078B, TC-28880B, TC-6524A, TC-6372A, TC-BCS1140, TC-D2200, TC-018, TC-029, TC-2709S, TC-5117, TC-4816A, TC-0918, TC-4568A, TC-0911
Prepared By :	Shenzhen BST Technology Co., Ltd
	Building No.23-24, Zhiheng Industrial Park, Guankouer Road, Nantou,Nanshan District,Shenzhen,Guangdong,China
Test Date:	Dec. 02, 2013 – Dec. 16, 2013
Date of Report :	Dec. 18, 2013
Report No.:	BST13120275Y-1SR-2



IP CODE Report	
EN 60529	
Degrees of protection provided by enclosures	
Testing Laboratory Name	Shenzhen BST Technology Co.,Ltd.
Address	Building No.23-24, Zhiheng Industrial Park, Guankouer Road, Nantou, Nanshan District,Shenzhen,Guangdong,China
Testing location	Shenzhen BST Technology Co.,Ltd.
Applicant's Name	GUANGZHOU TRIPCRAFT INDUSTRY CO. , LTD
Address	706 b YongFu Center YongFu Road YueXiu District GuangZhou
Manufacturer	GUANGZHOU TRIPCRAFT ELECTRONIC TECHNOLOGY CO. , LTD
Address	1-3 Floor ChangLian Industrial Park,HuangPu District GuangZhou China
Test specification	
Standard.....	EN60529: 1991+A1:2000
Procedure deviation	IP67
Non-standard test method	N/A
Test item description	LED WORK LIGHT BAR
Trade Name	N/A
Model and/or type reference	TC-6012A, TC-10010C, TC-18060, TC-12078B, TC-28880B, TC-6524A, TC-6372A, TC-BCS1140, TC-D2200, TC-018, TC-029, TC-2709S, TC-5117, TC-4816A, TC-0918, TC-4568A, TC-0911
Test case verdicts	
Test case does not apply to the test object ...:	N/A
Test item does meet the requirement	P(ass)
Test item does not meet the requirement	F(ail)



General remarks:

This report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item(s) tested.

"(see remark #)" refers to a remark appended to the report.

"(see Annex #)" refers to an annex appended to the report.

Clause numbers between brackets refer to clauses in EN 60529

Throughout this report a comma is used as the decimal separator.

General product information:

(Note: the series products have the same circuit diagram, pcb layout and functionality. The differences are the model name, so, we select TC-6012A to test.)

Prepared by :

Engineer

Reviewer :

Supervisor

Approved & Authorized Signer :

Christina / Manager



EN 60529			
Cl.	Requirement – Test	Result	Verdict
5	Degrees of protection against access to hazardous parts and against solid foreign objects indicated by the first characteristic numeral		P
5.1	Protection against access to hazardous parts		P
	First characteristic numeral is 4 --Protected against access to hazardous parts with a wire. The access probe of 1,0 mm shall not penetrate		N
5.2	Protection against access solid foreign objects		N
	First characteristic numeral is 6 --Dust-tight No ingress of dust	IP67 No ingress of dust	P
6	Degrees of protection against ingress of water indicated by the second characteristic numeral		P
	Second characteristic numeral is 7 --Water projected in powerful jets against the enclosure from any direction shall have no harmful effects.	IP67 direction shall have no harmful effects.	P
10	Marking		N
	The requirements for marking shall be specified in the relevant product standard. Where appropriate, such a standard should also specify the method of marking which is to be used when - one part of an enclosure has a different degree of protection to that of another part of the same enclosure; - the mounting position has an influence on the degree of protection; -the maximum immersion depth and time are indicated.	No marking	N



EN 60529			
Cl.	Requirement – Test	Result	Verdict
11	General requirements for tests		P
11.1	Atmospheric conditions for water or dust Tests: Temperature range: Relative humidity: 25% to 75% Air pressure: 15 °C to 35 °C 86 kPa to 106 kPa (860 mbar to 1 060 mbar).	Relative humidity: 25% to 75% Air pressure: 15 °C to 35 °C	P
11.2	Test samples The tests specified in this standard are type tests.	Type tests.	P

12	Tests for protection against access to hazardous parts indicated by the first characteristic numeral		N
12.1	Access probes The test wire of 1,0 mm Ø shall not penetrate and adequate clearance shall be kept		N
12.2	Test conditions For tests on low-voltage equipment, a low-voltage supply (of not less than 40 V and not more than 50 V) in series with a suitable lamp should be connected between the probe and the hazardous parts inside the enclosure. Hazardous live parts covered only with varnish or paint, or protected by oxidation or by a similar process, are covered by a metal foil electrically connected to those parts which are normally live in operation. The signal-circuit method should also be applied to the hazardous moving parts of high-voltage equipment. Internal moving parts may be operated slowly, where this is possible.		N
12.3	Acceptance conditions :The protection is satisfactory if adequate clearance is kept between the access probe and hazardous parts.		N

13	Tests for protection against solid foreign objects indicated by the first characteristic numeral		P
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EN 60529			
Cl.	Requirement – Test	Result	Verdict
13	Tests for protection against solid foreign objects indicated by the first characteristic numeral		P
13.1& 13.2	Test means & Test conditions Test means and the main test conditions are given in Table VII		N
13.3	Acceptance conditions for first characteristic numerals 1,2,3,4 The protection is satisfactory if the full diameter of the probe specified in Table VII does not pass through any opening.		N
13.4	Dust test for first characteristic numerals 5 and 6 The test is made using a dust chamber incorporating the basic principles shown in figure 2 whereby the powder circulation pump may be replaced by other means suitable to maintain the talcum powder in suspension in a closed test chamber.the talcum powder used shall be able to pass through a square-meshed sieve the nominal wire diameter of which is 50 um and the nominal width of a gap between wires 75um.the amount of talcum powder to be used is 2 kg per cubic metre of the test chamber volume. It shall not have been used for more than 20 tests.	The amount of talcum powder to be used is 2 kg per cubic metre of the test chamber volume. It shall not have been used for more than 20 tests.	P

14	Tests for protection against water indicated by the second characteristic numeral		P
14.1	Test means & Test conditions Test means and the main test conditions are given in Table VIII		P
14.2.7	water no entered lamp The test sample is completely soaked in water samples from the surface height of not less than 20mm, bottom of the sample from the bottom height of at least 1m. Experimental test sample was taken after 30 minutes	IP67 The test sample is completely soaked in water samples from the surface height of not less than 20mm, bottom of the sample from the bottom height of at	P



14.3	<p>Acceptance conditions After testing in accordance with the appropriate requirements of 14.2.1 to 14.2.8 the enclosure shall be inspected for ingress of water. It is the responsibility of the relevant Technical Committee to specify the amount of water which may be allowed to enter the enclosure and the details of a dielectric strength test, if any. In general, if any water has entered, it shall not: -be sufficient to interfere with the correct operation of the equipment or impair safety; - deposit on insulation parts where it could lead to tracking along the creepage distances; - reach live parts or windings not designed to operate when wet;- accumulate near the cable end or enter the cable if any.If the enclosure is provided with drain-holes, it should be proved by inspection that any water which enters does not accumulate and that it drains away without doing any harm to the equipment.For enclosures without drain-holes, the relevant product standard shall specify the acceptance conditions if water can accumulate to reach live parts.</p>	least 1m No broken water no entered Test sample inside Dielectric strength test normal	P
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ANNEX A:

Photo-documentation



Photo 1 IP 6X test Over View



Photo 2 After IP 6X test Over View



Photo 3 IPX7 test Over View



Photo 4 IPX7 test Over View