



LISTING REPORT/INSPECTION PROCEDURE

291 Fairfield Avenue, Fairfield, NJ 07004 USA (973) 575-5252

File No. E1052012, Section 1

Issued: December 16, 2008

A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the Standard for UL 913, 6th edition. This investigation was authorized by signed application.

Testing Laboratory	F-Squared Laboratories
Address.....	26501 Ridge Rd. Damascus, MD 20872 USA
Applicant's name	Pelican Products Inc.
Address.....	23215 Early Avenue Torrance, CA 90505 USA
Test specification:	
Standard	UL913, Seventh Edition
Manufacturer	Pelican Products Inc. 23215 Early Avenue Torrance, CA 90505 USA Mr.Bruce Tennant, (T) 310-326-4700

This report is issued by SGS U.S. Testing Company Inc. under its General Conditions for Testing Services, as printed on reverse side. SGS U.S. Testing's responsibility under this report is limited to proven negligence and will in no case be more than the amount of the testing fees. Except by special arrangement, samples are not retained by SGS U.S. Testing for more than 30 days. The results shown on this test report refer only to the sample(s) tested unless otherwise stated, under the conditions agreed upon. Anyone relying on this report should understand all of the details of the engagement. Neither the name, seals, marks nor insignia of SGS U.S. Testing may be used in any advertising or promotional materials without the prior written approval of SGS U.S. Testing. The test report cannot be reproduced, except in full, without prior written permission of SGS U.S. Testing Company Inc. SGS US Testing Co. retains all intellectual property rights and other analogous right on any reports; certificates or other documents created or produced by the company in connection with providing the services, save to the extent not permitted by the law of the United States of America.

GENERAL INFORMATION

Components

Components used in the covered products must be those outlined in the latest edition of the Listing Report.

Listing Marking

This Procedure authorizes the above Applicant to use the Listing Marking of SGS Consumer Testing Services only on products covered by this Procedure, in accordance with the Listing and Follow-Up Service Agreement. All Listing Mark descriptions shown above are of the combination type except for bulk labeling which may be of the standard type. Bulk labeling applies to Power Supply Cords, Detachable Power supply cords which can be labeled to match quantity shipped in smallest unit container. Once manufacturer has signed license agreement, authorization to produce the applicable Product Safety marks necessary by the manufacturer may be used.

Production Line Tests

Manufacturing and Production Tests shall be performed as required in this Report.

Responsibility of the Manufacturer

- 1) It is the manufacturers responsibility to restrict the use of markings which reference SGS to those products which are found by the manufacturers own inspection to comply with the product description in this report. This includes reference to SGS directly and/or indirectly.
- 2) During hours in which the factory is in operation the manufacturer shall permit the SGS inspector unlimited access to any portion of the premises where the product and/or parts are being manufactured, processed and to the test area designated for inspectors use. The SGS inspector shall be permitted to inspect and subject to prescribed tests prior to shipment any product bearing or intended to bear marking referencing SGS.
- 3) The manufacturer shall provide all required testing equipment and facilities including trained personnel for conducting all tests that are to be performed at the factory. These shall be available when needed so that the inspection work can proceed without delays.

Follow up Inspections

As part of the SGS Follow-Up inspection, it is required that a member and/or representative periodically visit the manufacturing location and select for testing and/or examination, product of the most recent production of the product covered in association with the Listing Report.

SGS Inspector

- 1) A product which is found by the SGS inspector to have features which make it unacceptable to bear marking referencing SGS shall be corrected if the marking is to be used. The inspector shall carefully check additional production for such features until conditions are considered normal.
- 2) A product which does not comply with the provisions of the follow-up procedure report shall have all reference to SGS removed. If the rejection of the product is questioned by the manufactures representative, it may be put on hold in separate area of location pending appeal. The manufacturer shall satisfy the inspector that all marks referencing SGS are removed from the rejected material or finished product. Manufacturer shall destroy product and or turn over to inspector for destruction.
- 3) All discrepancies between the product and the description in the following procedure shall be immediately stated to the attention of the manufactures representative. This shall be noted in the follow-up inspection report as discrepancy.

SGS-USTC

File No. E1052012, Section 1
Pelican Products, Inc

Page 3 of 12

Issued: December 16, 2008

REVISION TABLE

The following changes have been made to this Report:

<u>Date</u>	<u>Project #</u>	<u>Person making changes</u>	<u>Page</u>	<u>Description of Change</u>	<u>Approval</u>
-------------	------------------	--------------------------------------	-------------	------------------------------	-----------------

SGS-USTC

File No. E1052012, Section 1
Pelican Products, Inc.

Page 4 of 12

Issued: December 16, 2008

Test item description	: Headtorch/Flashlight
Model Number	: 2690
Model Differences	: None
Testing location / address	: F-Squared Laboratories, 26501 Ridge Road, Damascus, MD 20872 USA
Date of receipt of test item	: June 2008 to December 2008
Date(s) of performance of tests.....:	: July 2008 to December 2008
Trade Mark.....	:
Ratings.....	: Class I, II, III, Division 1, Groups A-G Temperature Classification: T4
Conditions of Acceptability..... :	<ol style="list-style-type: none">1. This equipment may only be used with three cells of the following:<ol style="list-style-type: none">a. Philips, PN LR03 (powerlife) orb. Panasonic, PN LR03 (Xtreme Power)c. Duracell, PN MN2400d. Energizer, PN E922. Old batteries and new batteries shall not be mixed.3. Battery compartment must only be opened in an area known to be non-hazardous and batteries may only be changed in a non-hazardous area.4. The battery compartment must be secured by both screws.

GENERAL CONSTRUCTIONAL REQUIREMENTS

Construction Details - For specific construction and component details, reference should be made to the photographs and component descriptions found later in this report.

1. Spacings - In primary circuits, minimum spacing are maintained through air and over surfaces of insulating material between current-carrying parts of opposite polarity and between current-carrying parts and dead-metal parts.

The minimum required spacing between all critical traces must be at least 1.5mm. The critical spacings on the PCB are highlighted in green below.



2. Mechanical Assembly - Components are securely mounted and are fully encapsulated to prevent reduction in spacings.
3. Corrosion- All bare metal parts are protected against corrosion by painting, plating or other means specifically identified in the specific construction details.
4. Accessibility of Live Parts - All uninsulated live parts in primary circuitry are housed within a plastic enclosure constructed with no openings other than those specifically described in the construction details.
5. Installation, Operating and Safety Instructions - Instructions for installation and use of this product are provided by the manufacturer as required by the standard.

ALTERATIONS: N/A

ROUTINE TESTS FOR MANUFACTURING AND PRODUCTION

The manufacturer shall perform the following Manufacturing and Production Tests on 100% of equipment produced which has both hazardous live parts and accessible conductive parts

Required Tests

None

Headtorch/flashlight, Model 2690

PHOTOS

Exterior Views of the light



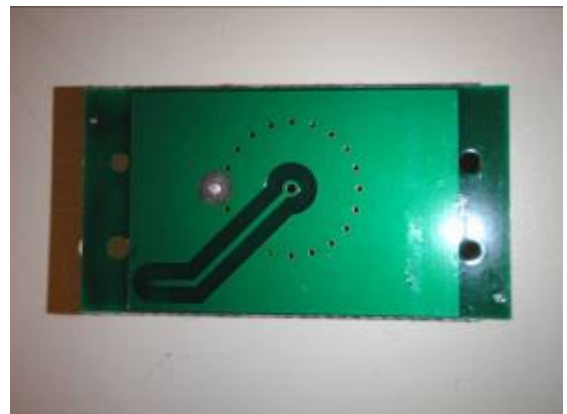
Light with Battery Cover removed



LED Driver Board



Main PCB



Headtorch/Flashlight, Model 2690

Critical Protective Components

Component Designation	Manufacturer	Model	Ratings
Fuse (F1)	Littelfuse	0466.375NR	375mA, 125 volts, 0.350 Ohms, 50.0 amp Interrupt rating
Resistor (R1/R2)	Vishay/Dale	CRCW2512R30JN EG	1.3 Ohms, 5%, 1.0 Watts

Other Critical Components

Component	Manufacturer	Mfg Part Number	Technical Description/ Comments	Electrical Ratings	Marks of Conformity
LED	Cree Xlamp	XR-E		Vf = 3.7 Volts, If = 1000mA, Thermal Resistance:8°C/W	Accepted
Enclosure Material	Chi Mei	Polypac PA-757	General Purpose ABS. Used for all enclosure parts except for the lens.	Rated UL94-HB, 105°C,	UL Recognized
Lens Material	SABIC	Lexan 143R PC	Polycarbonate	Rated UL94-HB, 130°C,	UL Recognized
Fuse Encapsulant	MG Chemicals	832HT	High Temperature Epoxy. Used to encapsulate fuse (F1). Must extend at least 1mm in all directions around the fuse.	Rated 275°C,0.210 W/m°K Thermal conductivity, 1138volts/mil	Accepted

Headtorch/Flashlight, Model 2690





Controlled Drawings and Documents

Number	Rev	Pages	Date	Description
2690-030-021	PR	2	01 Dec 08	LED Driver Assembly, 2690
2690-030-006	C	1	24 Nov 08	PCB, 2690 Driver
2693-340-001	A	1	27 Oct 08	PCB, CREE LED 2690
2690-030-CLR	PR	2	11 Dec 08	2690 Headsup Lite Assembly, Pelican
2690-030-037	PR	1	29 Sep 08	Shroud + Lens Assembly
2690-030-036	PR	1	03 Jul 08	Oring .0711Dx.04W
2690-030-030	PR	1	03 Jul 08	Battery Contact Spring, 2690
2690-030-026	A	1	25 Aug 08	LED Module Assembly, 2690
2690-030-018	PR	1	03 Jul 08	O-Ring, Battery Cover, 2690
2690-030-017	PR	1	03 Jul 08	O-Ring, Shroud 2690
2690-030-013	PR	1	03 Jul 08	Battery Contact Dual, 2690
2690-030-012	PR	1	03 Jul 08	Battery Contact Spring, 2690
2690-030-011	PR	1	03 Jul 08	Battery Contact Dual, 2690
2690-030-010	A	1	01 Dec 08	Contact Spring, LED Driver, 2690
2690-030-009	A	1	01 Dec 08	Contact Spring, LED Module, 2690
2690-030-008	A	1	01 Dec 08	Reflector 17mm, 2690
2690-030-005	A	2	01 Dec 08	Battery Tray, 2690
2690-030-004	PR	2	29 Sep 08	Shroud Overmold Lens, 2690
2690-030-003	A	2	25 Aug 08	Bracket, 2690
2690-030-002	PR	2	29 Sep 08	Cover, Battery 2690
2690-030-001	PR	2	01 Dec 08	Housing, 2690
2693-340-000	PR	1	14 Aug 08	PCB + LED Assembly, 2690
2690-030-CLRE	PR	1	11 Dec 08	2690 Headsup Lite Assembly Peli
2690-001	PR	1	26 Nov 08	2690 Approval Insert
2693-319-502-PR	*	*	Dec 08	Manual

Headtorch/Flashlight, Model 2690

MARKINGS

The following markings are required:

		AEx ia IIC T4 - CL I, II, III, DIV 1 GROUPS A, B, C, D, E, F, G CL I, ZONE 0; GROUPS IIA, IIB, IIC INTRINSICALLY SAFE
E1052012-UL913		
		II 1 D/G Ex ia IIC T4 Ex iaD 20 IP65 T65°C CERT#: TRL 08ATEX11184X
Warning: Use only Duracell MN2400 LR03, Energizer E92 LR03, Philips, PN LR03 (Powerlife) or Panasonic, PN LR03 (Xtreme Power) AAA Alkaline Batteries. Do Not Change Batteries in Hazardous locations.		



Headtorch/Flashlight, Model 2690

SUMMARY OF TEST RESULTS

A representative sample of the product was tested in accordance with the Standard for Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III, Division 1, Hazardous (Classified) Locations UL 913, 7th edition

The following tests were performed:

Test Description

Battery Short Circuit Test
Temperature Tests
Small Component Ignition Test
Dielectric Withstand
Drop Test
Encapsulation Force Test
Partition Force Test
Enclosure Capacitance Test
Dust Blanket Temperature Test

Results of the tests indicate the specimens conform to the test criteria that was found to be applicable.

CONCLUSION

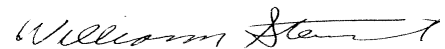
A representative product, sampled by the client, of the model/s outlined in this test report has been found to comply with the applicable requirements of the Standard for Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III, Division 1, Hazardous (Classified) Locations UL 913, 7th edition.

Report prepared by:



Robert Pellizze
Engineer

Report reviewed by:



William Stewart
SGS US Testing Company, Inc.