

WATER IMMERSION AND DUST TEST REPORT

Company : GlacialTech Inc.

Address : 9Fl., No.352, Sec.2, Jung Shan Rd., Jung He City, Taipei, Taiwan,
235, R.O.C

Sample Name : LED Driver

Model Name : GP-LS10P-17A

Date Received : JUN 23, 2009

Date Tested : JUN 23, 2009 ~ JUN 26, 2009

TESTING LABORATORY IS ACCREDITED BY:

IEC/IECQ 17025 certificate of independent test laboratory approval

Certificate No. : T1091



ISO 17025 accredited in respect of laboratory is approved by TAF

Certificate No. : L0835-070725

ISO 9001 certificate is approved by TUV CERT certification body of TUV NORD Cert GmbH

WE HEREBY CERTIFY THAT:

The test(s) shown in the attachment were conducted according to the indicating procedures. We assume full responsibility for the accuracy and completeness of these tests and vouch for the qualifications of all personnel performing them.

	Name	Signature	Date
Test Engineer	Elton Hsu		June 29, 2009
Manager	General Lee		June 30, 2009

NOTE :

1. This report will be invalid if reproduced in part or altered in any way.
2. This report refers only to the specimen(s) submitted to test, and is invalid if used otherwise.
3. This report is ONLY valid with the examination seal and signature of this institute.
4. The tested specimen(s) will only be preserved for thirty days from the date issued, if not collected by the applicant.



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1. GENERAL INFORMATION

1.1 DESCRIPTION OF UNIT

MANUFACTURER : GlacialTech Inc.

SAMPLE NAME : LED Driver

MODEL NAME : GP-LS10P-17A

MULTIPLE LIST 1 : GP-LS10P-35A, GP-LS10P-18 and GP-LS10P-36

(Note: From GlacialTech Inc. information on the second of July, the unit design is identical.)

MULTIPLE LIST 2 : GP-LS10P-xyzzzz; xx can be 17 or 18 or 35 or 36; y can be A or blank ; zzz can be any alphanumeric or blank. (Note: From GlacialTech Inc. information on the sixth of July)

SAMPLE QUANTITY : 1 unit

1.2 UNIT TESTING SETUP:

See attachment

1.3 UNIT OPERATING CONDITION:

None

2. WATER IMMERSION TEST

2.1 DESCRIPTION OF TEST EQUIPMENT

Test Equipment
ETL-L180 Water Leakage Test Chamber

2.2 LABORATORY AMBIENCE CONDITION

Temperature : $23\pm 3^{\circ}\text{C}$

Relative humidity : $55\%\pm 3\%$ (RH)

2.3 REFERENCE DOCUMENT

This test is based on IEC 60529 IPX7.

2.4 TEST CONDITION

Unit is non-operating

The water temperature is $+23^{\circ}\text{C}$

The lowest point of unit is set 1000mm below surface of the water.

The duration of test is 30 minutes.

2.5 SUMMARY OF TEST

After testing, visual inspection indicated no water permeated into the unit. No functions check requested from customer.

3. DUST TEST

3.1 DESCRIPTION OF TEST EQUIPMENT

Test Equipment	Serial Number	Calibration Date
Vötsch- VDT 1000A	59566059640010	NOV 09, 2008

3.2 LABORATORY AMBIENCE CONDITION

Temperature : $25 \pm 2^{\circ}\text{C}$

Relative humidity : $55\% \pm 2\%$ (RH)

3.3 REFERENCE DOCUMENT

This test refers to IEC60529 IP6X Dust Test Protected.

3.4 TEST CONDITION

Unit is non-operating

Dust material : Talcum powder (100% dry fine)

Amount of talcum powder : 2 kg/m^3 (chamber volume)

Particle size : $< 5 \mu\text{m}$ (Diameter) $42.31\% \pm 5$

$5 \sim 10 \mu\text{m}$ (Diameter) $35.85\% \pm 5$

$10 \sim 20 \mu\text{m}$ (Diameter) $21.15\% \pm 5$

$20 \sim 40 \mu\text{m}$ (Diameter) $0.69\% \pm 5$

$> 40 \mu\text{m}$ (Diameter) 0%

Dust density : 2.03 g/cm^3

Depression level: 10 mbar

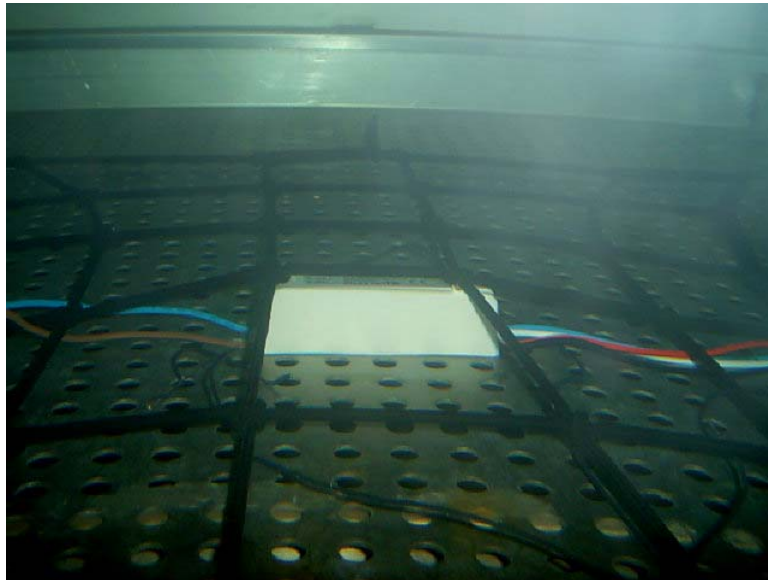
Dust flow direction : Vertically to achieve slowest possible downward settlement

Test length : 8 hours

3.5 SUMMARY OF TEST

After test, visual inspection indicated no particle permeated into the unit. No functions check requested from customer.

Attachment 1 : Photo of water immersion test setup

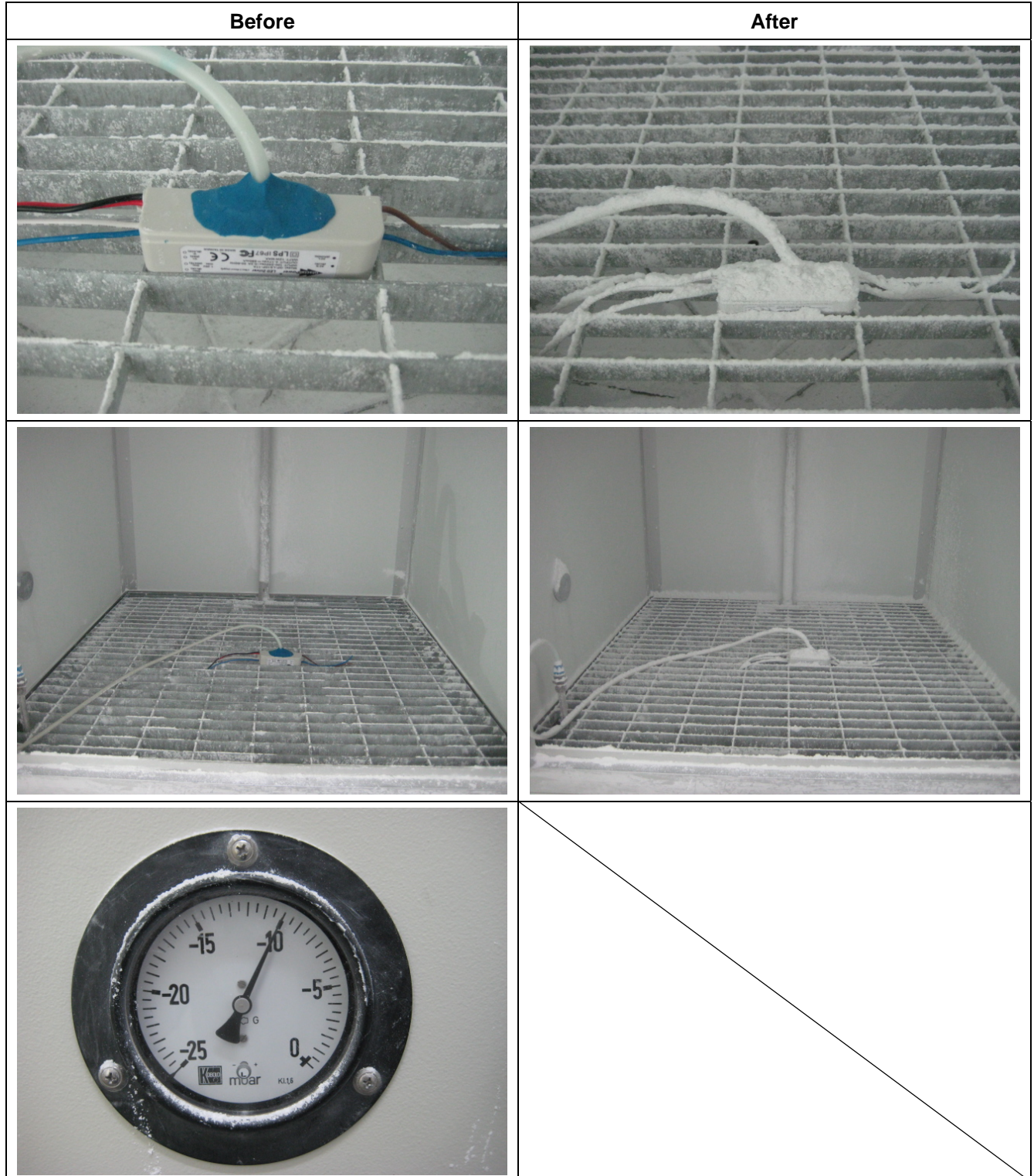


Attachment 2 : Photo of unit after water immersion test

Visual inspection



Attachment 3 : Photo of dust test setup



Attachment 4 : Photo of unit after dust test

Visual inspection

