

Test Report No.: IT17/2011 - 00
Applicant: PROPLAST Fahrzeugbeleuchtung GmbH
DE - 61191 Rosbach
Type: PRO-BLINK-Modul



TEST REPORT

No. IT17/2011 Vers. 00

issued by

FAKT S.r.l.

Via Lithos, 53 IT - 25086 Rezzato (BS)

concerning the execution of environmental tests as detailed at pt. 2. of this Test Report.

Structure (Index) of the Test Report

1. : General
2. : Test sequence and description of parameters
3. : Test results
4. : Enclosures

1. General

1.0. Purpose of test : Development
 Qualification
 Other

1.1. Specimen under test : Blink-Modul for side marker lights
Note: for further documentation please refer also to enclosed photo documentation.

Manufacturing plant : not declared

Serial Number : not available

Photo marking : not available

HW Release : 50 142-B3

SW Release : PRO-BLINK 1.2

Applicant P/N : not available

Customer P/N : not available

Nominal voltage [V_{DC}] : 10-32

Rated power [W] : not available

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Via Lithos, 53
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(Vorlage Umweltsimulationsprüfungen:
Rev. 05, Ausgabe 06/17)

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- 1.2. Type designation of specimen : PRO-BLINK-Modul
- 1.3. Identification and date of receipt of test specimen(s) : C-17/0289 (5, 6) → 28.08.2017
- 1.3.1. Correlation to applicant's identification : Not applicable Available:
- 1.4. Applicant's name and address : PROPLAST Fahrzeugbeleuchtung GmbH
Dieselstraße, 17
DE - 61191 Rosbach
- 1.5. Applicant represented during the test by : Not applicable Available:
- 1.6. Remarks : Not applicable Available:

2. Test sequence and description of parameters

2.1. Mode of operation of test specimen:

During the tests, the specimen was tested according to pt. 2.3. using the following configurations shown in the table below:

ID	Configuration	Test voltage [V _{DC}]	Description (operation mode)
α	Not powered	--	No voltage supplied.

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2.2. Classification of test results/evaluation of effects noticed:

Not applicable: no classification was required by the applicant.

Available:

The criteria for the classification of the test results and evaluations of any effects noticed adopted during the tests, as defined with the applicant and as indicated in the relevant test specification indicated at pt. 2.3., are as follows:

Criterion No.	Description of the criterion
1	Dust shall not penetrate inside the enclosure.
2	The water test shall not have any harmful effects or impair performance of the specimen.

2.3. Standard(s) and applied deviation(s), if any:

The following standard(s) for the performed tests have been applied:

A: ISO 20653:2013

The tests were carried out according to the requirements mentioned in the above standard(s), applying, where required the following deviations and classifications:

Test No.	Standard reference (as indicated above) and relevant clause(s)	Description of test	Specimen(s) used	Deviation(s) (ID as below table)	Criterion No. (pt. 2.2.)
		Mode of operation (pt. 2.1.)			
1	A	Dust test (IP6KX)	C-17/0289 (6)	Not applicable	1
		Mode of operation ID: α			
2	A	Water high pressure test (IPX9K)	C-17/0289 (5)	Not applicable	2
		Mode of operation ID: α			

Deviation ID	Description of deviation
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3. Test results

Test No.	Standard reference (as indicated above) and relevant clause(s)	Description of test	Specimen(s) used	Detailed Test protocol	Test result
		Mode of operation (pt. 2.1.)			
1	A	Dust test (IP6KX)	C-17/0289 (6)	Enclosure 1	Passed
		Mode of operation ID: α			
2	A	Water high pressure test (IPX9K)	C-17/0289 (5)	Enclosure 2	Passed
		Mode of operation ID: α			

4. Enclosures:

REV	List of modifications	IT17/2011 - 00	1 page
1	Test protocol	IT17/2011 - 00	2 page(s)
2	Test protocol	IT17/2011 - 00	2 page(s)
FOT	Photo documentation	IT17/2011 - 00	2 page(s)

The tests have been carried out, considering the relevant requirements of ISO/IEC 17025:2005.

This Test Report has been distributed as a pdf-copy to the applicant.


This Test Report includes pages 1 to 4.

Rezzato, 02.11.2017
 st/sb

No. of practice:



PR-17/0289


 Ing. S. Baruffolo
 Responsible for the tests

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List of modifications

Enclosure REV

Rev.	Date	Description
IT17/2011 - 00	02.11.2017	First Issue
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Test protocol

Enclosure 1

Specimen(s) No.: C-17/0289 (6)

Mode of operation: ID: α (Description see pt. 2.1. of Test Report No. IT17/2011 - 00)

Specification of test / standard

reference clause(s): No.: 1 (Description see pt. 2.3. of Test Report No. IT17/2011 - 00)

The test specimen was placed, as indicated by the applicant, in the test cabinet and subjected to the following test procedure:

State of specimen(s) during test:	<input type="checkbox"/> Storage or transportation condition. <input checked="" type="checkbox"/> In normal operating condition, without specific rack <input type="checkbox"/> In normal operating condition, with supplied fixture <input type="checkbox"/> --
Preconditioning:	<input checked="" type="checkbox"/> Not applicable <input type="checkbox"/> Available:
Test dust:	ISO 12103-1 A2 (Arizona dust)
Dust suspension method:	Circulation pump (vertical direction flow)
Test cycle:	<input checked="" type="checkbox"/> 6 s of circulation after 15 min of rest <input type="checkbox"/> 6 s of circulation every 20 min
No. of cycles:	<input checked="" type="checkbox"/> 20 <input type="checkbox"/> --
Test duration:	<input checked="" type="checkbox"/> 5 h 2 min <input type="checkbox"/> 6h 40 min

Photo test set-up:



<i>Used equipment</i>	<i>ID</i>	<i>Last calibration date:</i>	<i>Next calibration due date:</i>
<input checked="" type="checkbox"/> IP Dust Chamber ACS SD1000 F	(ITST06028)	01/2017	01/2019

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Test protocol

Enclosure 1

Laboratory ambient conditions: Temperature: (23 ± 5)°C
Relative humidity: (45 ± 25) %
Air pressure: (990 ± 100) mbar

Reference test procedure: VA187 Ed.0 Rev.0

Initial measurements / checks: Not applicable Available:
An external visual inspection was performed before the test.

Intermediate measurements / checks: Not applicable Available:

Final measurements / checks: Not applicable Available:
An internal and external visual inspection was performed after the test.

Result of functional tests: Not applicable Available:
After the test, the specimen was functioning as before.

External inspection: No externally visible damage was noticed after the test.

Internal inspection: Not applicable Available:
No visible dust presence was observed inside the enclosure after the opening of the specimen.

Performance criteria: Not applicable Available:
Criterion No.: 1
(Classification of test results/evaluation of effects noticed as of pt. 2.2. of Test Report No. IT17/2011 - 00).

Remarks: Not applicable Available:

Classification of test: Passed Failed Not evaluated

Date of test: 05.10.2017

Place of test: FAKT S.r.l.; IT-25086 Rezzato (BS)
 FAKT S.r.l.; IT-25011 Calcinato – Loc. PSM (BS)

Test technician: S. Tuana

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Test protocol

Enclosure 2

Specimen(s) No.: C-17/0289 (5)
Mode of operation: ID: α (Description see pt. 2.1. of Test Report No. IT17/2011 - 00)

Specification of test / standard

reference clause(s): No.: 2 (Description see pt. 2.3. of Test Report No. IT17/2011 - 00)

The test specimen was fixed on the turntable as indicated by the applicant and subjected to the test with the following test parameters:

State of specimen(s) during test:	<input type="checkbox"/> Storage or transportation condition. <input checked="" type="checkbox"/> In normal operating condition, without specific rack <input type="checkbox"/> In normal operating condition, with supplied fixture <input type="checkbox"/> --
Preconditioning:	<input checked="" type="checkbox"/> Not applicable <input type="checkbox"/> Available:
Water temperature:	(80 ± 5)°C
Water flow rate:	(15 ± 1) l/min
Water pressure:	(90 ± 10) bar
Fan jet distance:	(125 ± 25) mm
Fan jet position:	0°, 30°, 60°, 90°
Specimen speed rotation:	(5 ± 1) rpm
Duration:	30 s (for each jet position)

Photo test set-up:



Used equipment	ID	Last calibration date:	Next calibration due date:
<input checked="" type="checkbox"/> IPX9K test system	(ITAP08041)	--	--
<input checked="" type="checkbox"/> Pressure gauge CEWAI 0-250bar	(ITST08054)	01/2017	01/2019
<input checked="" type="checkbox"/> Temp. gauge DeltaOHM HD2108.1	(ITST06021)	01/2017	01/2019
<input checked="" type="checkbox"/> Meter SOLA Protect 3M	(ITST15229)	06/2017	06/2018
<input checked="" type="checkbox"/> Digital chronometer Stopstar 2	(ITST09056)	06/2015	06/2018

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Test protocol

Enclosure 2

Laboratory ambient conditions: Temperature: (23 ± 5)°C
Relative humidity: (45 ± 25) %
Air pressure: (990 ± 100) mbar

Initial measurements / checks: Not applicable Available:
An external visual inspection was performed before the test.

Intermediate measurements / checks: Not applicable Available:

Final measurements / checks: Not applicable Available:
An internal and external visual inspection was performed after the test.

Result of functional tests: Not applicable Available:
After the test, the specimen was functioning as before.

External inspection: Visible slight superficial alteration of the plastic sealing, see photo documentation. No further externally visible damage was noticed after the test.

Internal inspection: Not applicable Available:
No water presence was observed inside the enclosure after the opening of the specimen.

Performance criteria: Not applicable Available:
Criterion No.: 2
(Classification of test results/evaluation of effects noticed as of pt. 2.2. of Test Report No. IT17/2011 - 00).

Remarks: Not applicable Available:

Classification of test: Passed Failed Not evaluated

Date of test: 04.10.2017

Place of test: FAKT S.r.l.; IT-25086 Rezzato (BS)
 FAKT S.r.l.; IT-25011 Calcinato – Loc. PSM (BS)

Test technician: S. Tuana

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Photo documentation

Enclosure FOT

Photo(s) of test specimen No. C-17/0289 (6) after the test No. 1.



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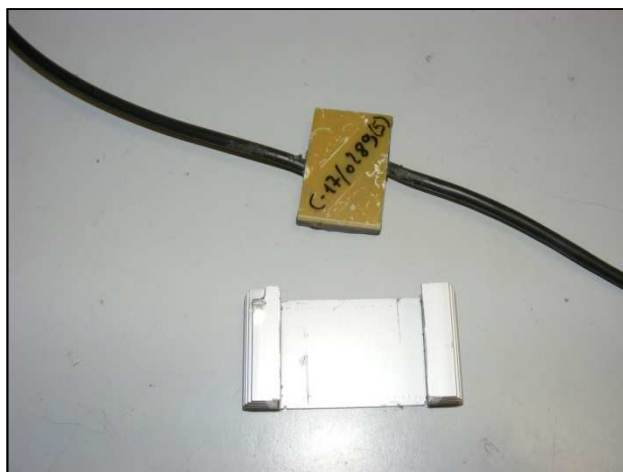
Type: PRO-BLINK-Modul



Photo documentation

Enclosure FOT

Photo(s) of test specimen No. C-17/0289 (5) after the test No. 2.



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