

# Laboratory Test report



226-TEST

NBN EN ISO/IEC 17025 :2017



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Member of Schröder Group

FORM L-54 Edition 01 – Revision 04 – Date : 21/04/2021

## Tightness test

### General information

Subject : IZYLUM LT 1 - 25 LH351C - 900mA 75W driver - Zhaga socket - Before endurance

Asked by : CSIKÓS Balázs

Created on : 23/11/2022

Started on : 24/11/2022

Test number : D221043

Reference norm : IEC/EN 60598-1 Ed9 (2021) +A11 (2022)

Sample(s) : E220618

Folder : P-F22050

### Test conditions

Luminaire : IZYLUM LT 1

Number of LED : 25

LED : Samsung LH351C

Driver current (mA) : 900

Protector Material : Glass Extra Clear wide serigraphy

Protector Shape : Flat

Additional info :

Test realized before endurance D221045

Testing Facility : BER - R-Tech

Operator : KOY Fiston



IMG\_9316

### Conclusion



Success

Conclusion :

Statement of conformity according to section 9.2 of IEC/EN 60598-1 Ed9 (2021) + A11 (2022):

IPx6 passed.

Validated by :

LERHO Xavier

Duplicate to : PELSŐCZI Zoltán, GÖRGÉNYI Emese,  
HORVÁTH Balázs, SZÜGYI János Péter, LÁMFALUSI Ferenc,  
CSIKÓS Balázs, CSENKI Máté

LAB : 28/11/2022

D221043

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## Test(s) details

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### Test(s)

Name	Description	Verdict
IPx6	<ul style="list-style-type: none"><li>- Luminaire switched ON until stable T°</li><li>- Luminaire switched OFF and immediately sprayed with water jet</li><li>- Hose diam. 12,5 mm</li><li>- Water flow: 100 l/min</li><li>- Spraying distance: 3 m</li><li>- Duration of test: 3 minutes</li></ul>	Success

### IPx6

#### Verdict(s)

Pre-conditioning time :

- 110 minutes

Test result :

- Passed : No water entry in the enclosure of the luminaire



IMG\_9319



IMG\_E9347

Test room temperature (°C) :

21.5

Measurement equipment :

Rotating table (A001/2)  
Chronometer (A043/4)  
Thermometer (A039/1)  
Flowmeter (A001/10)  
Lance (A001/12/1)  
IPx6 nozzle (A001/12/3)

Quantities measured :

Verification of water/dust ingress within a luminaire enclosure according to

For IP2X: PT-S-14  
For IP3X/4X: PT-S-15  
For IP5X/6X: PT-S-06  
For IPX3/X4: PT-S-01  
For IPX5/X6: PT-S-08  
For IPX7/X8: PT-S-09  
For IPX9(15°C)/X9(80°C) : PT-S-10

Uncertainties :

Statement of uncertainties (K=2, 95% of confidence level):

Time: 0,35 seconds per 10 minutes

Temperature: 0,6 K

Calipers: 0,005 mm

Measuring tape:  $\pm 1,13$  mm

Dynamometric key :

From 0.5 to 2.5 Nm : 0,15 Nm

From 2.5 to 5 Nm : 0,22 Nm

From 5 to 25 Nm : 0,83 Nm

From 25 to 60 Nm : 2,73 Nm

From 60 to 100 Nm : 3,55 Nm

For solid ingress test:

IP2X:

Probe dimensions:  $\pm 0,6$  mm

Applied force:  $\pm 0,4$  N

IP3X:

Probe dimensions:  $\pm 0,3$  mm

Applied force:  $\pm 0,13$  N

IP4X:

Probe dimensions:  $\pm 0,1$  mm

Applied force:  $\pm 0,11$  N

IP5X/6X

Test duration (talcum suspension time):  $\pm 3$  seconds

Talcum mass: 0,02 %

For liquid ingress test:

IPX3/X4

Table rotation:  $\pm 6$  sec/rotation

Arms Rotation angle:  $\pm 3^\circ$

Water flow:  $\pm 4,5$  %

IPX5/X6

Table rotation:  $\pm 6$  sec/rotation

Water flow:  $\pm 4$  %

Test Distance: +0 / -50 cm

**IPX7/X8**

Test depth: +10 cm / -0 cm

**IPX9**

Water temperature: 1.25 K

Test distance: 1.59 mm (for 175mm)

Test duration: 2.49 s (for 3min)

Water pressure: 0.37 N

**Decision rules :**

**Pass/fail criteria for individual test statement of conformity (Verdict):**

**For solid ingress test:**

**IP2X:**

If contact possible with live parts: fail

Otherwise: success

**IP3X/4X:**

For luminaires without draining holes, nor ventilation slots for forced cooling, penetration of the test probe in the enclosure: fail

For luminaires with draining holes, or ventilation slots for forced cooling, if contact possible with live part: fail

Otherwise: success

**IP5X/6X**

By visual inspection:

If possible hazard due to presence of conductive dust: fail

For IP5X: If no possible hazard due to the presence of conductive dust: success

For IP6X: No presence of talcum: success

**For liquid ingress test:**

**IPX3/X4/X5/X6/IPX9(15°C)/X9(80°C):**

By visual inspection:

If possible hazard due to presence of water: fail

If no possible hazard due to the presence of water and no efficient way to evacuate the water: fail

If no possible hazard due to the presence of water and an efficient way to evacuate the water: success

No presence of water: success

**IPX7/X8:**

By visual inspection:

Presence of water: fail

No presence of water: success

**Pass/fail criteria for the test report statement of conformity (Conclusion):**

**At least one of the individual test statements of conformity (Verdict) is failed: failed**

**Otherwise: success**

**End of accredited report :**

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