



LIQ
Laboratório
Industrial da
Qualidade
TESTING LABORATORY

TEST REPORT

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Applicant

BISELARTE – Sociedade de Vidros, Lda.
Zona Industrial de Oiã – Apartado 100
3770-908 – OIÃ - PORTUGAL

Date of Entry

2016-01-19

Appliance / Product Tested

Designation: Fixed luminaire - Bathroom mirror.
Manufacturer/Trademark.....: XPCS
Reference.....: GANDIA 800X600
Ratings: 230V; 50Hz; 2 x 5,7W LED; IP44; Class II
Observations: Variant: GANDIA 700X600

Nr of Samples

1

Manufacturer / Representative

BISELARTE – Sociedade de Vidros, Lda.
Zona Industrial de Oiã – Apartado 100
3770-908 – OIÃ - PORTUGAL

Standards / Reference Documents

EN 60598-1 (2015)
EN 60598-2-1 (1989)



Type / Scope of Test

Tests for verification of compliance with the requirements of the referenced standards.

Test Result

The tested sample is in accordance with the standards requirements.

The test results are described in the following pages.

Test Performed by


João Lopes
(Laboratory Technical)

Approved by


Manuel Farias
(Executive Director)

Date 2016-02-17

Date 2016-02-17

IPAC IS A SIGNATORY TO THE EA MLA AND ILAC MRA FOR TESTING, CALIBRATION AND INSPECTION
LE4422 PARTIAL REPRODUCTION IS NOT ACCEPTABLE WITHOUT LIQ WRITTEN AUTHORIZATION - THE TEST RESULTS ONLY REFERS TO THE TESTED SAMPLE



Photographs:

See the remark

General remarks:

Clause numbers between brackets refer to clauses in EN 60598-1.

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

Test case verdicts:

- test case does not apply to the test object : N/A
- test item does meet the requirement : P
- test item does not meet the requirement : F

Marking plate:

See the remark

Summary of the test results:

All applicable tests have been carried out on the tested sample.

The tested sample is a fixed luminaire with built-in convertor and integral non-replaceable LED modules.

The LED modules have been tested as integral components, assembled in the luminaire, and as far as applicable with the requirements of EN 62031.

According a declaration of conformity from LED manufacturer, the LED strip complies with the requirements for photobiological safety given in EN 62471.

The tests have been carried out in the order listed in EN 60589-2-1, in accordance with the IP classification of the tested sample.



(0.5) COMPONENTS

Components	Manufacturer	Model	Ratings	Standard	Conformity
Control gear (Gandia 800x600)	SHANXI TIANLI JINRUN	DSLED/12CV- 15/SF03	220-240V~; 50/60Hz; 12V _{DC} ; 15W; Ta 50°C Tc 80	EN 61347-2-13	CE
LED strip	SHANXI TIANLI JINRUN	5050- 300leds/5m/roll	12Vdc; IP68; 7,2W/m	IEC 62031	CE
Flexible cable	DongGuan Kelin Wire	FEP 6Y11	2x0,3mm ²	DIN VDE 0207 part 6:	<VDE>
Terminal block	EBIR	603/3 2C	250V; 2x1,5mm ² ; IP44	EN 60998-1	CE
Alternative					
Control gear (Gandia 800x600)	SHANXI TIANLI JINRUN	DSLED/12CV- 20/SF03	220-240V~; 50/60Hz; 12V _{DC} ; 20W; Ta 50°C Tc 80	EN 61347-2-13	CE
Control gear (Gandia 800x600)	MEAN WELL	LPH-18-12	100-240V~; 50/60Hz; 12V _{DC} ; 18W; 1,5A Tc 65	EN 61347-2-13	CE
Control gear (Gandia 800x600)	MEAN WELL	LPV-20-12	100-240V~; 50/60Hz; 12V _{DC} ; 20W; 1,67A Tc 65	EN 61347-2-13	CE
Control gear (Gandia 700x600)	SHANXI TIANLI JINRUN	DSLED/12CV- 15/SF03	220-240V~; 50/60Hz; 12V _{DC} ; 15W; Ta 50°C Tc 80	EN 61347-2-13	CE
Control gear (Gandia 700x600)	MEAN WELL	LPV-20-12	100-240V~; 50/60Hz; 12V _{DC} ; 20W; 1,67A Tc 65	EN 61347-2-13	CE

(2) CLASSIFICATION OF LUMINAIRES

Section	Description	Classification
(2.2)	Classification according to type of protection against electric shock	Class I [] Class II [x] Class III []
(2.3)	Classification according to degree of protection against ingress of dust, solid objects and moisture	IP 44
(2.4)	Classification according to material of supporting surface for which the luminaire is designed	Fixed luminaires suitable for normally flammable surfaces Yes [x] No [] Fixed luminaires suitable for non-combustible materials only Yes [] No [x]
(2.5)	Classification according to the	Normal use Yes [x] No []



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Section	Description	Classification
	circumstances of use	Rough service Yes ☐ No ☒

(3) MARKING

Section	Description	Observations	Result
(3.2)	Marking on luminaires		P
(3.3)	Additional information		P
(3.4)	Test of marking		P

(4) CONSTRUCTION

Section	Description	Observations	Result
(4.2)	Replaceable components		P
(4.3)	Wireways		P
(4.4)	Lampholders		P
(4.5)	Starter holders		N/A
(4.6)	Terminal blocks		P
(4.7)	Terminals and supply connections		P
(4.8)	Switches		N/A
(4.9)	Insulating lining and sleeves		N/A
(4.10)	Double and reinforced insulation		P
(4.11)	Electrical connections and current-carrying parts		P
(4.12)	Screws and connections (mechanical) and glands	1,2Nm	P
(4.13)	Mechanical strength	0,20Nm; 0,35Nm	P
(4.14)	Suspensions and means of adjustment		P
(4.15)	Flammable materials		N/A
(4.16)	Mounting on normally flammable surfaces		P
(4.17)	Drain holes		N/A
(4.18)	Resistance to corrosion		P
(4.19)	Ignitors		N/A
(4.20)	Rough service luminaires		N/A
(4.21)	Protective shield		N/A



Section	Description	Observations	Result
(4.22)	Attachments to lamps		N/A
(4.23)	Semi-luminaires		N/A
(4.24)	UV radiation	Separately approved diode light	P
(4.25)	Mechanical hazard		P
(4.26)	Short-circuit protection		N/A
(4.27)	Terminal blocks with integrated earthing contacts		N/A
(4.28)	Fixing of thermal sensing control		N/A
(4.29)	Luminaires with non-replaceable light source		N/A
(4.30)	Luminaires with non-user replaceable light source		P
(4.31)	Insulation between circuits		P
(4.32)	Overvoltage protective devices		N/A

(5) EXTERNAL AND INTERNAL WIRING

Section	Description	Observations	Result
(5.2)	Supply connection and external wiring		P
(5.3)	Internal wiring		P

(7) PROVISION FOR EARTHING

Section	Description	Observations	Result
(7.2)	Provision for earthing	Class II	N/A

(8) PROTECTION AGAINST ELECTRIC SHOCK

Section	Description	Observations	Result
	Class of protection	Class II	
(8.2)	Protection against electric shock		P

(9) RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE

Section	Description	Observations	Result
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Section	Description	Observations	Result
	IP Classification	IP 44	
(9.2)	Tests for ingress of dust, solid objects and moisture		P
(9.3)	Humidity test		P

(10) INSULATION RESISTANCE AND ELECTRIC STRENGTH

Section	Description	Observations	Result
(10.2.1)	Insulation resistance		P

MEASURED VALUES:

Measured between parts:	Measured values (MΩ)	Minimum allowed (MΩ)
SELV:		
- Current-carrying parts of different polarity	>199,9	1
- Current-carrying parts and mounting surface	>199,9	1
- Current-carrying parts and metal parts	>199,9	1
Other than SELV:		
- Live parts of different polarity	>999	2
- Live parts and mounting surface	>999	4
- Live parts and metal parts	>999	4
- Outer surface of a cable and metal parts	>999	2

Section	Description	Observations	Result
(10.2.2)	Electric strength		P

MEASURED VALUES:

Tested between parts:	Test voltage (V)	Result
SELV:		
- Current-carrying parts of different polarity	500	P
- Current-carrying parts and mounting surface	500	P
- Current-carrying parts and metal parts	500	P
Other than SELV:		
- Live parts of different polarity	1460	P
- Live parts and mounting surface	2920	P
- Live parts and metal parts	2920	P



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Tested between parts:	Test voltage (V)	Result
- Outer surface of a cable and metal parts	1460	P
- Input and output windings	2920	P

Section	Description	Observations	Result
(10.3)	Touch current		P
(10.3)	Protective conductor current		N/A

MEASURED VALUES:

Tested parts	Measured values	Maximum allowed
Between earth and accessible parts	0,19 mA (peak)	0,7 mA (peak)

(11) CREEPAGE DISTANCES AND CLEARANCES

Section	Description	Observations	Result
(11.2)	Creepage distances and clearances		P
	Minimum distances for sinusoidal or non-sinusoidal pulse voltages		N/A

MEASURED VALUES:

Measurements between	Creepage distances (mm)		Clearances (mm)	
	Measured values	Minimum allowed	Measured values	Minimum allowed
Live parts of different polarity	1,8	1,2	1,5	0,2
Live parts and accessible parts	9,0 / 9,0	5,0 / 1,2	9,0 / 9,0	3,0 / 0,2
Parts which may become live due to the breakdown of basic ins. and metal parts	6,8	2,5	6,8	1,5

(12) ENDURANCE TEST AND THERMAL TEST

Section	Description	Observations	Result
(12.2)	Selection of lamps and ballasts		P
(12.3)	Endurance test		P
(12.4)	Thermal test (normal operation)		P
(12.5)	Thermal test (abnormal operation)		P



MEASURED VALUES:

Measured parts	Normal operation (°C)		Abnormal operation (°C)	
	Measured values	Maximum allowed	Measured values	Measured values
Convertors	58	tc80	---	---
LED strip	55	tc70	---	---
Terminal block	32	105	---	---
Flexible cable	42	90	---	---
Fixed wiring	30	90	---	---
Mounting surface	28	90	35	130

Section	Description	Observations	Result
(12.6)	Thermal test (failed lamp controlgear conditions)		N/A
(12.7)	Thermal test (failed lamp controlgear in plastic luminaires of electronic devices)		N/A

(13) RESISTANCE TO HEAT, FIRE AND TRACKING

Section	Description	Observations	Result
(13.2)	Resistance to heat	Separately approved components	P
(13.3.1)	Resistance to flame	Separately approved components	P
(13.3.2)	Resistance to ignition	Separately approved components	P
(13.4)	Resistance to tracking	Separately approved components	P

(14) SCREW TERMINALS

Section	Description	Observations	Result
(14.2)	Definitions		N/A
(14.3)	General requirements and basic principles		N/A
(14.4)	Mechanical tests		N/A

(15) SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS

Section	Description	Observations	Result
(15.2)	Definitions		N/A
(15.3)	General requirements		N/A

Section	Description	Observations	Result
(15.4)	General instructions on tests		N/A

TERMINALS AND CONNECTIONS FOR INTERNAL WIRING

(15.5)	Mechanical tests		N/A
(15.6)	Electrical tests		N/A

TERMINALS AND CONNECTIONS FOR EXTERNAL WIRING

(15.7)	Conductors		N/A
(15.8)	Mechanical tests		N/A
(15.9)	Electrical tests		N/A

NOTES

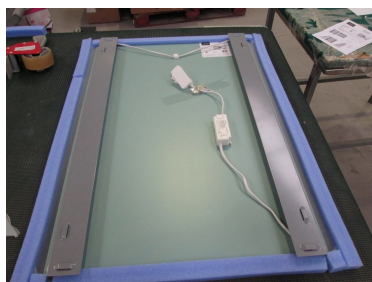
Mirrors of the same family with the same components

GANDIA 800X600 (230V; 50Hz; 2x5,7W LED; IP44; CL II)

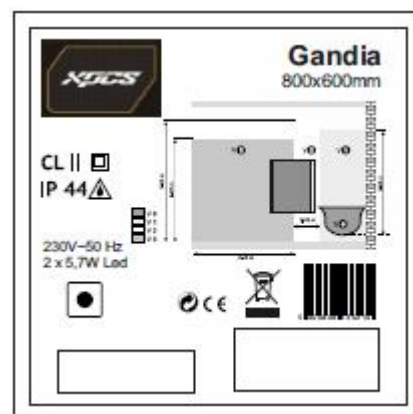
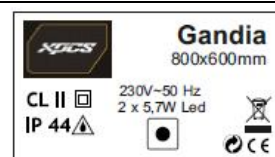
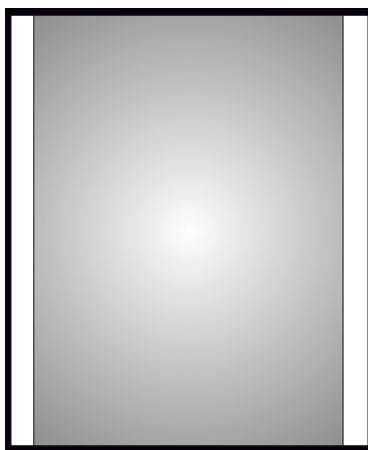
GANDIA 700X600 (230V; 50Hz; 2x5W LED; IP44; CL II)

REMARK

Marking plate:



GANDIA 800X600





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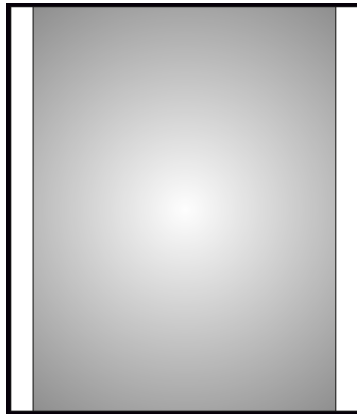
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