



TEST REPORT


Testing laboratories
EVPU, a. s.
Trencianska 19, 018 51 Nova Dubnica
Slovak Republic

0-0257B/4/21

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Attachments : 0

Object of test : Luminaires

Name of product : Luminaire for road and street lighting

Trade mark : 

Type : MARUT G2

Derivate variants : Modified types: see Annex 1

Power supply, ratings : 220-240V; 50-60Hz; class I; IP 66; IK 09

Applicant : ELEKTRO-LUMEN, s.r.o.
Hranická 505, 753 61 Hranice IV, Czech Republic

Manufakturer : ELEKTRO-LUMEN, s.r.o.
Hranická 505, 753 61 Hranice IV, Czech Republic

Testing location : Trenčianska 19, 018 51 Nová Dubnica, Slovak Republic

Contract : 0-0090/21

Regulations and standards : STN EN 62262: 2001 +A1: 2001

Tested by : Ing. Marek Baláž, test technician *Balaz*

Checked by : Ing. Peter Ványi, test technician *Vanyi*

Approved by : Mgr. Michal Balák, Head of Testing laboratories *Balak*

Date of performance of tests : 01st June 2021

Date of performance of tests : 01st June 2021 – 26th October 2021

Date of test report issue : 29th October 2021



Results of the test, stated in this report are apply to the tested item only as it received. This report can only be reproduced on the whole, articulately only with a written permission of Testing laboratories..

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ANNEX 1: Modification of luminaires type: MARUT G2

Type	Luminous flux	CRI	Colour temperature	Power	Voltage	Frequency	IP	IK	Class
MARUT S G2	1k0 – 9k0	70 80	AMBER 2200 K 2700 K 3000 K 4000 K 5000 K 6500 K	5,8 W - 55,5 W	220 - 240 V	50 - 60 Hz	66	09	I
MARUT M G2	2k0 – 12k0			12,5 W – 74 W					I
MARUT L G2	7k0 – 15k0			36,9 W – 101,7 W					I
MARUT XL G2	14k0 – 30K0			72,4 W – 177,6 W					I

Possible test case verdicts:

- test case does not apply to the test object.....: N/A
- test object does meet the requirement: P (Pass)
- test object does not meet the requirement: F (Fail)



Copy of marking plate:

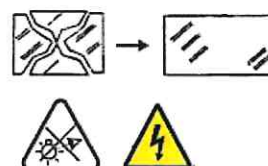
MARUT XL G2

MARUT XL G2 M03 30k0 740	
B141 4 H3S ENEC	
Un: 220-240V/50-60 Hz	VP100 - 7402
Pn: 177.6W	IP66
Ta: -40 ... +55°C	LED
  ELEKTRO-LUMEN, s. r. o. 753 61 Hranice made in EU	



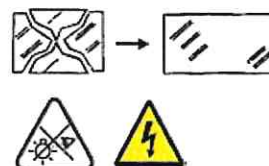
MARUT L G2

MARUT L G2 L03 15k0 740 T521	
45 S H3S ENEC	
Un: 220-240V/50-60 Hz	VP100 - 7675
Pn: 79.7W	IP66
Ta: -40 ... +55°C	LED
  ELEKTRO-LUMEN, s. r. o. 753 61 Hranice made in EU	



MARUT M G2

MARUT M G2 M03 12k0 740	
B141 DZ WO ENEC	
Un: 220-240V/50-60 Hz	VP100 - 7399
Pn: 74W	IP66
Ta: -40 ... +55°C	LED
  ELEKTRO-LUMEN, s. r. o. 753 61 Hranice made in EU	



MARUT S G2

MARUT S G2 M03 9k0 740 B144	
DZ2 G H3S ENEC	
Un: 220-240V/50-60 Hz	VP100 - 7397
Pn: 55.5W	IP66
Ta: -40 ... +55°C	LED
   ELEKTRO-LUMEN, s. r. o. 753 61 Hranice made in EU	



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STN EN 62262			
Clause	Requirement + Test	Result - Remark	Verdict

1	SCOPE		
	IK product available by the applicable product standard:	No IK 09 classification available by the luminaire standard.	—
	Applicable product standard(s):	Luminaire standards EN 60598-1, EN 60598-2-3	—

4	CLASSIFICATION		
4.2	IK code:	IK 09	P
4.3	Complete enclosure protected:	Test performed at complete enclosure.	P
	IK classification required by the applicable product standard:	No IK 09 classification required by the luminaire standard.	N/A
	Applicable product standard(s):		N/A
4.4	Marking:		P
	Marking required by the applicable product standard:	No IK 09 marking required by the luminaire standard.	N/A
	Marking on different parts:	No IK 09 marking required by the luminaire standard.	N/A
	Mounting position considered/denoted		P

5	GENERAL REQUIREMENTS FOR TESTS		
5.1	Atmospheric conditions		N/A
	Condition described by applicable product standard:	No special condition required.	N/A
	Ambient temperature during test:	22°C	P
	Air pressure during test:	99,3 kPa	P
	Altitude of test location:	≈230m	P
5.2	Condition of enclosure under test		P
	New:	New, taken out of regular production.	P
	Clean:	Clean, no traces of dirt, dust, moisture or similar.	P
	Complete:	Complete luminaire.	P
	Separate parts:	No separate parts.	N/A
	Assembled:	Assembly carried out according to manufacturer instructions.	P
	Mounting:		P
	Conditions described by the applicable product standard:	No relevant conditions required by the luminaire standard.	N/A
5.3	Specification given by the applicable product standard:		P
	Definitions:		N/A
	Test equipment:	Free fall hammer	P
	Sample quantity:	One	P
	Mounting conditions:	Placed on flat and rigid concrete plate	P
	Pre-conditioning:	No pre-conditioning required	N/A
	Sample operating under test (energized):	No	N/A
	Moving parts in motion:		N/A

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STN EN 62262			
Clause	Requirement + Test	Result - Remark	Verdict

	Tests: Number and position of impacts: Note: All impacts are applied to one sample only.	a) 3 impacts in middle of plastic diffuser; b) 3 impacts at the top c) 3 impacts on the ZHAGA connector No deformation, no loosening or minor cracking	P
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6	TEST CONDITION AND EVALUATION		
6.3	Mounting condition:	Test performed while the luminaire was mounted on a rigid support.	P
6.4	Number and position of impacts:	Three impacts at every exposed surface.	P
6.5	Test evaluation:	See also table 1	P
	-admissible damage:	Provisional criteria are taken from EN 60598-1 clause 4.13.1	P
	-criteria for safety and reliability:	Provisional criteria are taken from EN 60598-1 clause 4.13.1	P
7	TEST APPARATUS		P
	Test apparatus complies with IEC 60068-2-75:		P
	-alt. test apparatus:		N/A
	Spring hammer; Impact energy (joules), IK class;		N/A
	Pendulum hammer; Impact energy (joules); mass (kg); IK class;		N/A
	Free fall hammer; Impact energy; mass(kg); IK class;	10J; 5kg; IK 09	P

Table 1: Samples under test:		
Model name	Condition	Test verdict / comment
MARUT G2	Luminaire mounted according to mounting condition cl.6.3	PASS

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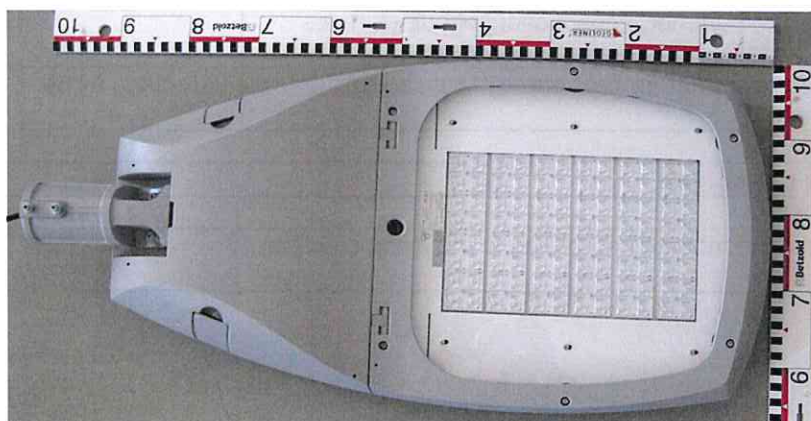
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PHOTODOCUMENTATION

Testing appliance / luminaire MARUT XL G2



Luminaire for road and street lighting: type MARUT XL G2 - after test



Luminaire for road and street lighting: type MARUT XL G2 - after test



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Testing appliance / luminaire MARUT L G2



Testing appliance / luminaire MARUT L G2



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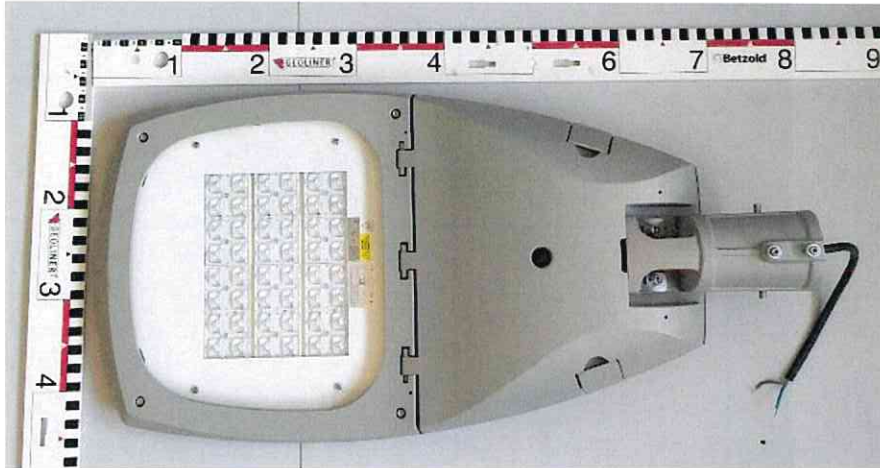
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Luminaire for road and street lighting: type MARUT L G2 - after test



Luminaire for road and street lighting: type MARUT L G2 - after test



The end of the test report.