



TEST REPORT


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

0-0257B/3/21

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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 : 0-0089/21

Regulations and standards : EN 60598-1:2015 + A1:2018 cl. 4.20

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 *Balák*

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

1. Introduction

LED luminaires for road and street lighting type MARUT G2 was delivered for testing. Applicant requires to perform vibration test according to standard EN 60598 - 1: 2015 + A1: 2018 cl.4.20. Applicant requires to perform test on the luminaires type MARUT G2 (see photo documentation).

2. Classification of luminaire

Luminaires is classified according to the type of protection against electric shock as class I and according to degree of protection against ingress of dust, solid objects and moisture as IP 66, mechanical strength code IK09.

3. Test

Vibrations test was performed according to standard EN 60598 - 1: 2015 + A1: 2018 cl.4.20. Test was perform on the luminaires type MARUT G2 (see photo documentation).

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:

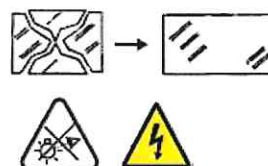
MARUT XL G2

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	





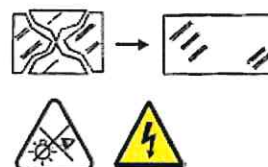
MARUT L G2

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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EN 60598-1			
Clause	Requirement + Test	Result - Remark	Verdict

4	CONSTRUCTION		
4.20	Rough service vibration	Direction of vibration was according to mounting instruction - on a post top Duration : 30 min Amplitude: 0,35 mm Frequency range: 10 Hz, 55 Hz, 10 Hz Sweep rate approximately one octave per minute	P

Final valuation.

Delivered samples LED luminaires for road and street lighting type MARUT G2 (Modified types: see Annex 1) vibration test according to standard EN 60598 - 1: 2015 + A1: 2018 cl.4.20.

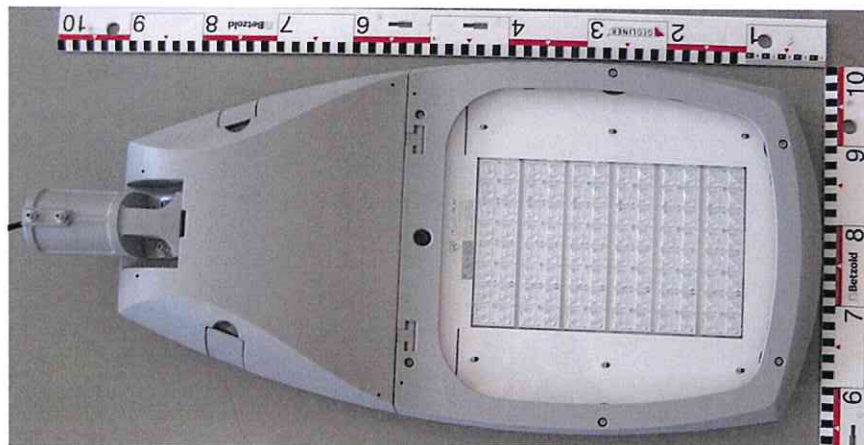
Passed

PHOTODOCUMENTATION

Testing appliance / luminaire MARUT XL G2 mounted on the vibration table



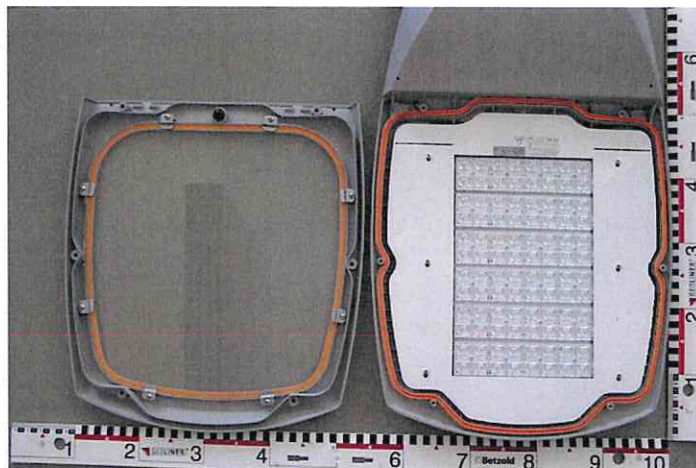
Luminaire for road and street lighting: type MARUT XL G2 - after test



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



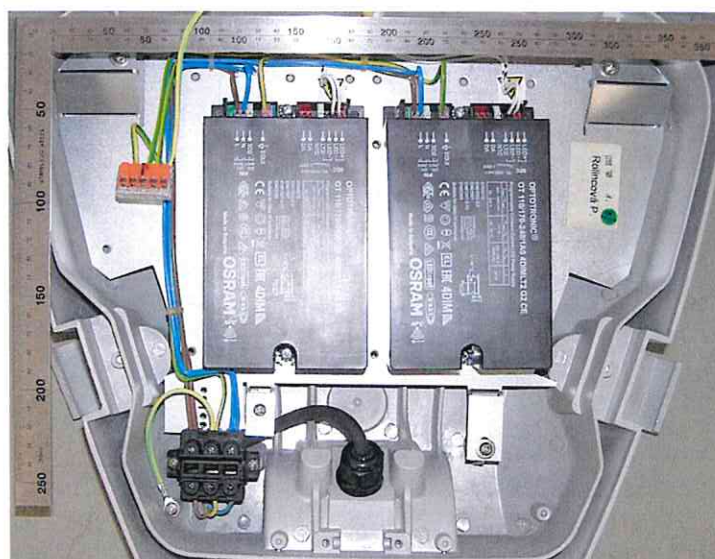
Open luminaire MARUT XL G2 - after test



Open luminaire MARUT XL G2 - after test



Open luminaire MARUT XL G2 - after test



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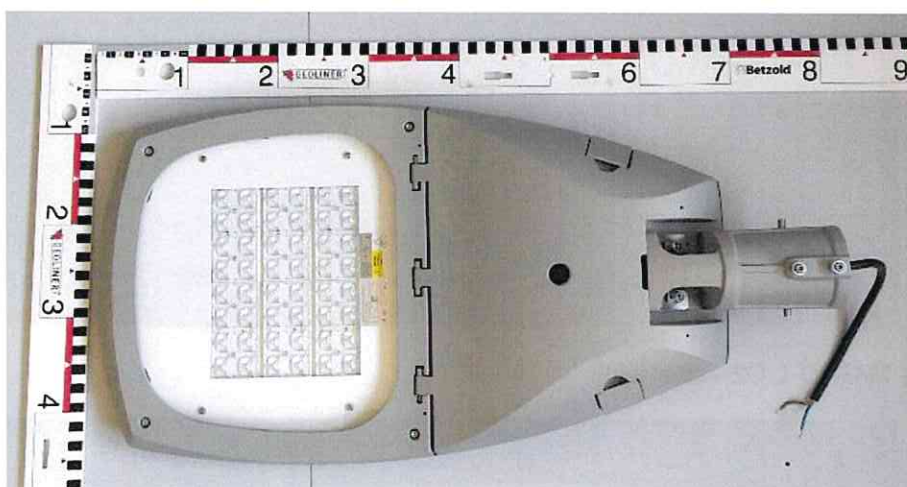
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Testing appliance / luminaire MARUT L G2 mounted on the vibration table



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



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



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Open luminaire MARUT L G2 - after test



Open luminaire MARUT L G2 - after test



Testing appliance / luminaire MARUT M G2 mounted on the vibration table



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



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



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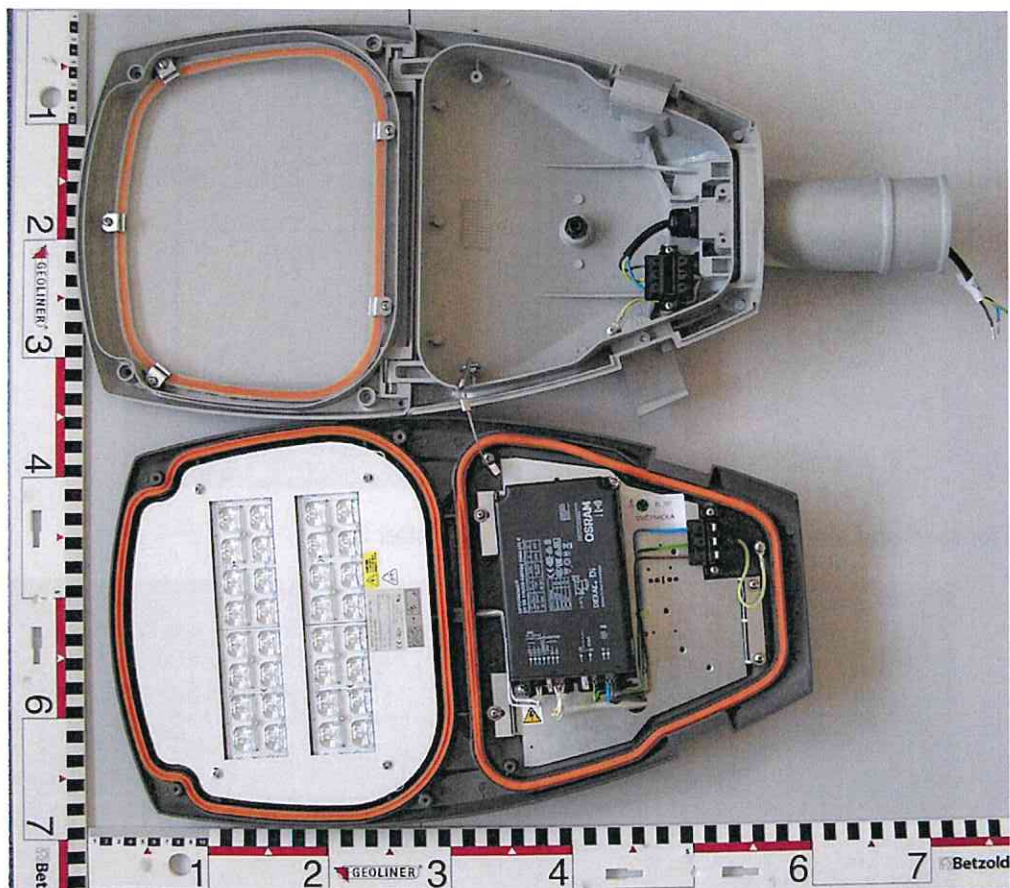
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Open luminaire MARUT M G2 - after test



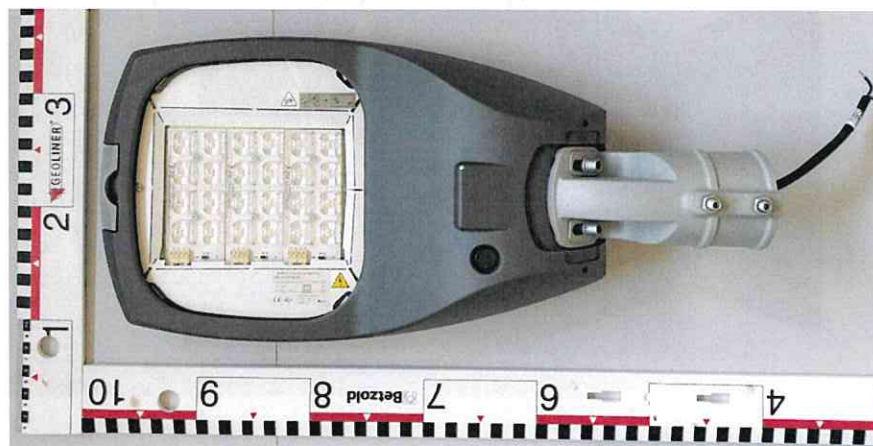
Open luminaire MARUT M G2 - after test



Testing appliance / luminaire MARUT S G2 mounted on the vibration table



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



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



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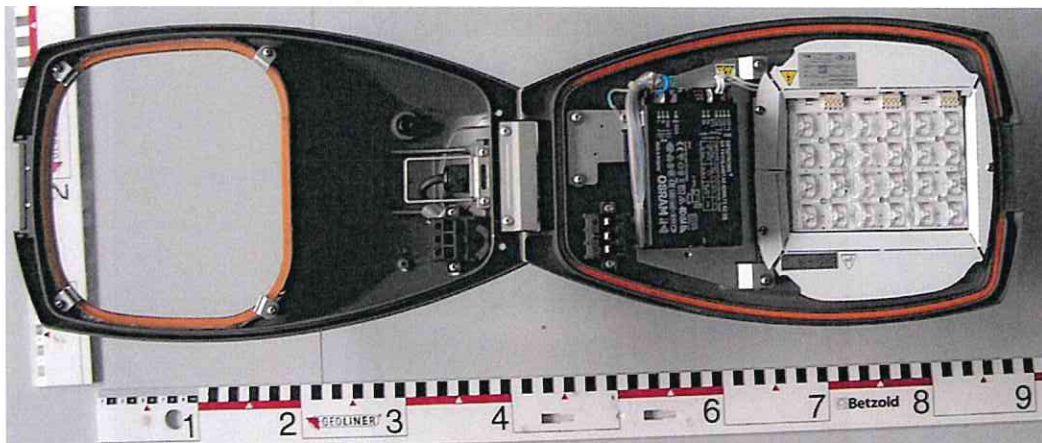
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Open luminaire MARUT S G2 - after test



Open luminaire MARUT S G2 - after test



Open luminaire MARUT S G2 - after test



The end of the test report.