



TEST REPORT

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

0-0257F/21

Page No. : 1
Pages : 9
Attachments : -

Object of test : Luminaire

Name of product : Luminaire for road and street lighting

Trade mark : -

Type : MARUT G2

Derivate variants : MARUT S G2, MARUT M G2, MARUT L G2, MARUT XL G2
see in page number: 4

Power supply, ratings : 220-240V/50-60Hz, class I, IP66, LED module

Applicant : ELEKTRO-LUMEN, s.r.o.
Hranická 505, Hranice IV - Drahotuše 75361,
Česká republika

Manufacturer : ELEKTRO-LUMEN, s.r.o.
Hranická 505, Hranice IV - Drahotuše 75361,
Česká republika

Place of production : ELEKTRO-LUMEN, s.r.o.
Hranická 505, Hranice IV - Drahotuše 75361,
Česká republika

Testing location : Trencianska 19, 018 51 Nova Dubnica, Slovak Republic

Contract : 0-0090/21

Regulations and standards : STN EN 62493: 2015

Tested by : Ing. Peter Ványi, test technician *Ványi*

Checked by : Jaroslav Bušo, test technician *Bušo*

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

Date of specimen acceptance : 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 was received. This report can only be reproduced on the whole, articulately only with a written permission of Testing laboratories.

TEST REPORT	0-0257F/21
Testing laboratories	Page No. : 2
EVPÚ a.s.,	Pages : 9
Trenčianska 19, 018 51 Nová Dubnica	Attachments : 0

CONTENT

1. Summary
2. Description of equipment under test
3. Environmental conditions
4. Measurement uncertainty
5. Test procedures
6. Used test equipments
7. Test results
8. Photo documentation

TEST REPORT	0-0257F/21
Testing laboratories	Page No. : 3
EVPÚ a.s.,	Pages : 9
Trenčianska 19, 018 51 Nová Dubnica	Attachments : 0

1. Summary

Tests were performed according to following standards:

1.1 Emissions

1	STN EN 62493: 2015	
	Assessment of lighting equipment related to human exposure to electromagnetic fields	PASS

TEST REPORT	0-0257F/21
Testing laboratories	Page No. : 4
EVPÚ a.s.,	Pages : 9
Trenčianska 19, 018 51 Nová Dubnica	Attachments : 0

2. Description of equipment under test

Luminaire for road and street lighting MARUT G2 - general information:

MARUT S G2 :

- technical parameters:
 - AC 220V – 240V, 50 – 60 Hz
 - Class I , IP66
 - 5,8W – 66W
 - -40°C/+55°C
 - 1 000 lm – 9 000 lm
- derivate variants: MARUT S G2 1K0 – 9K0 (The variants differ only in the LED modules used)

MARUT M G2 :

- technical parameters:
 - AC 220V – 240V, 50 – 60 Hz
 - Class I , IP66
 - 12,5W – 84,9W
 - -40°C/+55°C
 - 2 000 lm – 12 000 lm
- derivate variants: MARUT M G2 2K0 – 12K0 (The variants differ only in the LED modules used)

MARUT L G2 :

- technical parameters:
 - AC 220V – 240V, 50 – 60 Hz
 - Class I , IP66
 - 36,9W – 101,7W
 - -40°C/+55°C
 - 7 000 lm – 15 000 lm
- derivate variants: MARUT L G2 7K0 – 15K0 (The variants differ only in the LED modules used)

MARUT XL G2 :

- technical parameters:
 - AC 220V – 240V, 50 – 60 Hz
 - Class I , IP66
 - 72,4W – 203,4W
 - -40°C/+55°C
 - 14 000 lm – 30 000 lm
- derivate variants: MARUT L G2 14K0 – 30K0 (The variants differ only in the LED m

TEST REPORT	0-0257F/21
Testing laboratories	Page No. : 5
EVPÚ a.s.,	Pages : 9
Trenčianska 19, 018 51 Nová Dubnica	Attachments : 0

3. Environmental conditions

Tests were performed in Laboratory - EMC under following environmental conditions:

- temperature: 23 - 23,5 °C
- relative humidity: 29 – 48,5 %
- atmospheric pressure: 88,8 – 99,5 kPa

4. Measurement uncertainty

Expanded measurement uncertainty according to parameters as follows:

Disturbance voltage	$\pm 3,15 \text{ dB(mV) [9-150KHz]}$ $\pm 2,73 \text{ dB(mV) [0,15-30MHz]}$
Disturbance power	$\pm 3,43 \text{ dB(pW)}$
Electromagnetic field intensity	$\pm 4,13 \text{ dB(mV/m)}$
Current – basic harmonic	$\pm 1,4 \cdot 10^{-2} I_{\text{inp}}$
Current – 2 nd – 40 th harmonic	$\pm (1,18 \cdot 10^{-2} I_{\text{inp}} + 5,0 \cdot 10^{-2} I_{\text{n LIM}})$
Voltage	$\pm 0,97 \%$
Van der Hoofden – TDMI	$\pm 1,88 \text{ dB}$

I_{inp} – mean effective value of measured equipment input current

$I_{\text{n LIM}}$ – calculated limit of nth –harmonic of measured equipment input current

5. Test procedures

5.1 Emissions

STN EN 62493: 2015

Testing of lighting equipment related to human exposure to electromagnetic fields:

The equipment under test was placed on a fix stand 200 cm high in semi-anechoic chamber. The equipment under test was operated under a normal operating conditions. Emissions measurement was performed in the frequency range from 20 kHz MHz to 10 MHz , was use measurement accessory Van der Hoofden – DTMI for testing EUT.

TEST REPORT	0-0257F/21
Testing laboratories	Page No. : 6
EVPÚ a.s.,	Pages : 9
Trenčianska 19, 018 51 Nová Dubnica	Attachments : 0

6. Used test equipments

Type	Range	Manufacturer	Date of calibration/verification	Cycle of calibration/verification	Registration number
Real-time TDMI	9 KHz - 1 GHz	Gauss Instruments	03.06.2023	3 roky	0812001
Test Head VDH-01	20KHz – 10MHz	Narda	25.06.2024	5 rokov	000WX30510

TEST REPORT	0-0257F/21
Testing laboratories	Page No. : 7
EVPÚ a.s.,	Pages : 9
Trenčianska 19, 018 51 Nová Dubnica	Attachments : 0

7. Test results

Equipment under test:	Measurement distance	Measurement value (F)	Limit (F)	Results
MARUT G2 / MARUT S G2	200 cm	0,0040	1	PASS
MARUT G2 / MARUT M G2	200 cm	0,0039	1	PASS
MARUT G2 / MARUT L G2	200 cm	0,0039	1	PASS
MARUT G2 / MARUT XL G2	200 cm	0,0040	1	PASS

TEST REPORT	0-0257F/21
Testing laboratories	Page No. : 8
EVPÚ a.s.,	Pages : 9
Trenčianska 19, 018 51 Nová Dubnica	Attachments : 0

8. Photo documentation

**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

QC PASSED

CE  27 ELEKTRO-LUMEN, s. r. o.
753 61 Hranice
made in EU 

**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

CE  27 ELEKTRO-LUMEN, s. r. o.
753 61 Hranice
made in EU 

**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

CE  27 ELEKTRO-LUMEN, s. r. o.
753 61 Hranice
made in EU 

**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

CE  27 ELEKTRO-LUMEN, s. r. o.
753 61 Hranice
made in EU 

Label of EUT



TEST REPORT

Testing laboratories

EVPÚ a.s.,

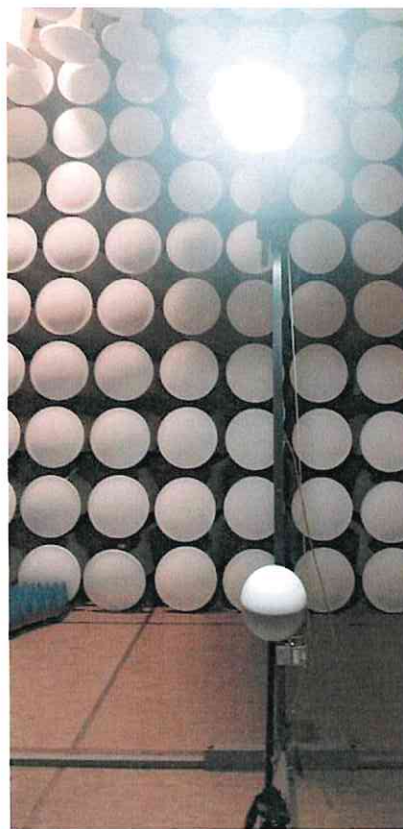
Trenčianska 19, 018 51 Nová Dubnica

0-0257F/21

Page No. : 9

Pages : 9

Attachments : 0



Test EMF

- The end of the test report -