

Applicant : Ningbo Vasa Intelligent Technology Co., Ltd
Object / Type : LED beacon / C12 MAG

Test Report

Durability confirmation of a magnetic LED beacon for high-speed and emergency braking tests.



Automotive part : LED Beacon

Type : Battery charged beacon with magnetic base

Brand name : 911 Signal

Manufacturer : 911 Signal

Applicant : Ningbo Vasa Intelligent Technology Co., Ltd
FLOOR 2,BLD 4
MAOJIACAO INDUSTRIAL AREA QIANZHOU
SHOUNAN SUB-DISTRICT
YINZHOU
NINGBO

Year of manufacture : 2018 (tested samples)

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I **Scope**

Testing the durability of a Battery charged beacon with magnetic base brand name "911 Signal". In cooperation with the applicant the durability was tested by a high speed of (230 kph) and emergency braking test.

Preliminary remark

The test included the data acquisition for masses and dimensions, the dynamic high-speed and braking tests.

The test comprised no checkup for the electronic components.

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II **Technical Details of the appraised beacon**

Technical documents (mounting informations) : n.a.

Automotive part : LED Beacon

Type : Battery charged beacon with magnetic base

Serial-No. : 13443

Weight : 870 g

Dimensions

Diameter (outside) : 128 mm

Width : n.a.

Height (overall) : 90 mm

Height (plastic foot) : 49 mm

Number of magnetic feet : 1 (consisting of 12 individual small circularly arranged magnets)

Diameter magnetic feet : 87 mm

Height magnetic feet : 9 mm

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Manufacturer magnets : BestMagnets (Model: D88)
Remark : The magnetic foot is directly mounted on the plastic body with 1 central screw.
The beacon works with rechargeable batteries!

III Test protocol

1 Test conditions

1.1 Test vehicle

- 1.1.1 Name of manufacturer : Skoda
- 1.1.2 Type / Engine code : 2,0l – TSI, 180 kW
- 1.1.3 Trade name : Octavia RS
- 1.1.4 Vehicle class : M1
- 1.1.5 Modell Year : 2018
- 1.2 Measuring and testing equipment : Measuring and evaluation system
Speed sensor
Deceleration sensor
Scale
Measuring tape
- 1.3 Further requirements
- 1.3.1 Weather conditions : Sunny
- 1.3.2 Air temperature (°C) : 32
- 1.3.3 Wind velocity (m/s) : < 3,0
- 1.3.4 Date of test : 23./29.08.2018
- 1.3.5 Test area : DEKRA Test Oval, 01998 Klettwitz, Germany

2 Mounting and preparation

The LED beacon type "911 Signal" was mounted at a dry and clean roof of the test vehicle. Easy installation with magnetic foot. Afterwards was checked if the complete magnetic surface is in contact with the roof.

3 High-speed test (In consultation with the customer 230 kph)

Test run	Tested speed [km/h]	Position LED Beacon
1	232	OK
2	231	OK
3	231	OK

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4 Braking test

The Braking test was made from different test speeds with an emergency brake!

Test run	Test speed [km/h]	Measured brake performance [m/s ²]	Brake pedal force applied to control [N]	Position LED Beacon
1	80	10,29	< 500	OK
2	100	10,24		OK
3	160	10,17		OK

5 Remarks

Not applicable

IV Statement

The result of the test is, that the durability of the LED beacon "911 Signal" can be confirmed. The beacon was tested up to a top speed of 230 kph and a deceleration rate of more than 10,00 m/s² (this is equivalent to an emergency brake). There was no movement of the beacon on the roof after the tests recognizable.

For the customers is an instruction manuel necessary! With mounting instructions of the beacon, that is has to be fixed by dry and clean conditions on a magnetic roof. Further the connection between the magnetic foot and the roof has to be checked continously.

The Test Report comprises the pages 1 to 8. (including annex)

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Klettwitz, 08.10.2018



Dipl.-Ing.(FH) René Kölling
Specialist

Test Report:
201843780

Annex: Foto Documentation



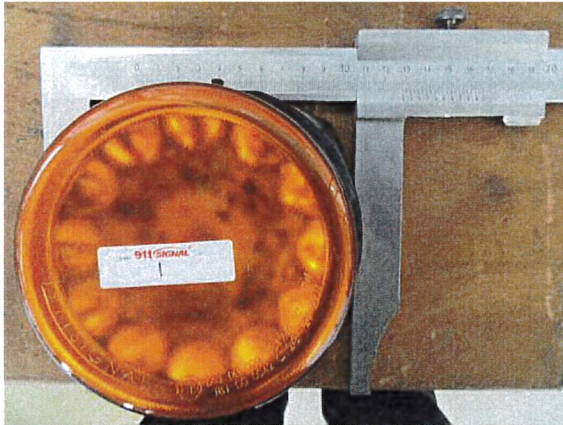
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911 Signal - LED Beacon (front , top & bottom view)

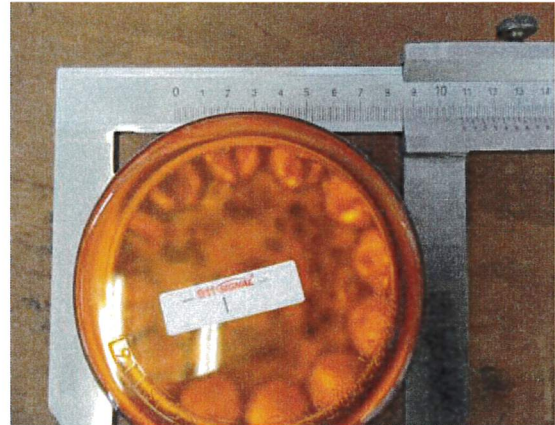


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Details



Measuring diameter (outside, plastic foot)



Measuring diameter orange cab (108 mm)



Measuring height (complete)



Measuring height (plastic foot)



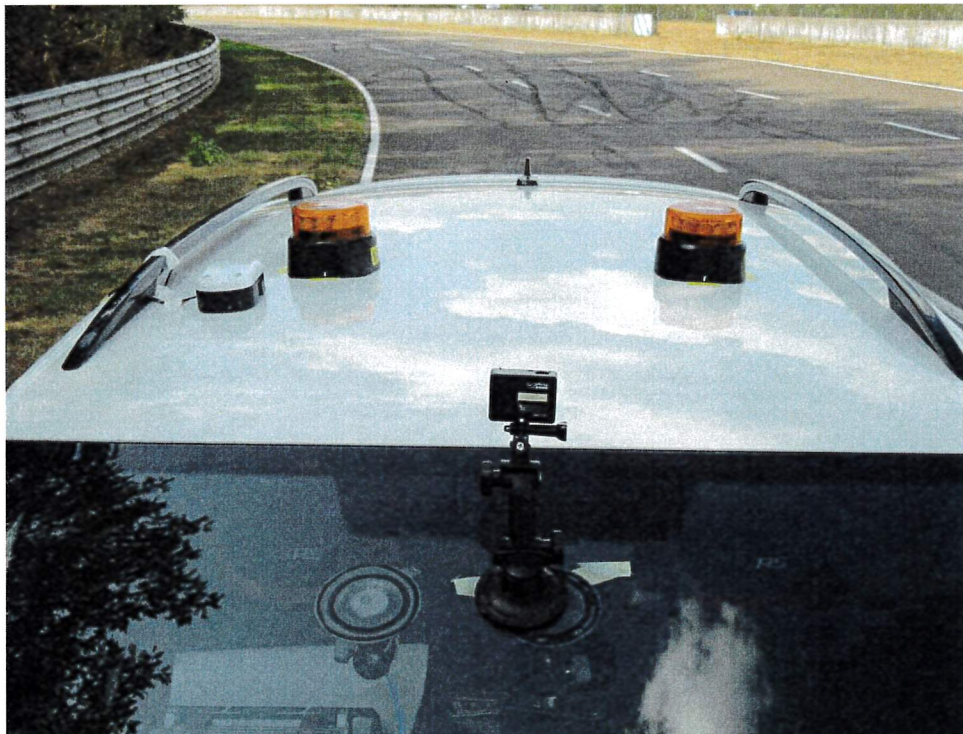
Measuring mass

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Test Vehicle



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Measuring and testing equipment



Measuring device



GPS Mouse, Go Pro

Positioning test samples

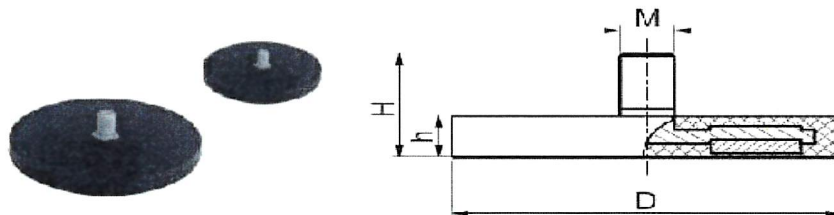


Position before testing



Position after testing

Model 型号	D	M	h	H	自重 Weight (g)	吸力 Attraction (Kg)
D22	22	4	6	12.5	11	5
D43	43	6	6	21	32	8
D66	66	8	8	23	107	20
D88	88	8	8.5	24.5	193	42



Specification magnet, used Model: D88