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TEST REPORT

"Report Number	170700101SEL-TEL5(R1)
Applicant Name / Address	Carl Zeiss Vision GmbH
	Turnstrasse 27, D-73430 Aalen, Germany
Test Sample Description	
- Product name	UV/Blue light demonstration tool
- Model and/or Brand name	Light Protect Solution Demonstrator
- FCC ID and/or IC ID	2ANDV-BL134VIT86 and/or 23075-BL134VIT86
- Manufacturer Name	Carl Zeiss Vision GmbH
- Manufacturer Address	Turnstrasse 27, D-73430 Aalen, Germany
- Variant model Name	N/A
Date of receipt of sample(s)	26, Jul. 2017
Date of Test	27, Jul. 2017 - 05, Sep. 2017
Test standard(s)	CFR 47 Part 2.1091
Test Results & uncertainty	See Summary
Issue date	10, Oct. 2017

Note 1. The results shown in this test report refer only to the sample(s) tested.

Note 2: This report shall not be reproduced except in full, without the written approval of Intertek.

Tested by

Name : David.Jang
RF Engineer

Approved by

Name : Kangmin.Rhee
RF Technical Manager

Intertek ETL SEMKO Korea Ltd.

SECTION 1 CONTENTS

SECTION 2 GENERAL DESCRIPTION

1. Laboratory Information

Name	Intertek ETL SEMKO Korea Ltd.
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2. Applicant Information

Name	Carl Zeiss Vision GmbH
Address	Turnstrasse 27, D-73430 Aalen, Germany
Contact Person	Marcel Gerstenlauer
Phone No.	+49 7361 591 666

3. Factory Information

Name	VIEWITECH CO., LTD.
Address	Tower B 505, No 383, Simindae-ro, Dongan-Gu, Anyang-Si, Gyeonggi-do, Korea
Country	Republic of Korea

4. Description of EUT

Product name	UV/Blue light demonstration tool
Model name	Light Protect Solution Demonstrator
Serial No.	N/A
Manufacturer	Carl Zeiss Vision GmbH
Country of Manufacture	Republic of Korea
Rated Voltage	DC 3.7 V
Frequency Range	2 402 MHz ~ 2 480 MHz
Modulation Technique	GFSK
Number of Channel	40
Antenna Type	Chip Antenna
Antenna Gain	1.9 dBi
Transmit Power	-0.45 dBm
H/W Version	V1.0
S/W Version	V1.0.0
RF Power Setting Parameter	4 dBm

5. Test Instrument

Control No.	Equipment	Manufacturer	Model	Serial No.	Cal. Due.
ES1006	SIGNAL & SPECTRUM ANAYZER	Rohde & Schwarz	FSW43	103893	23, Sep. 2017
ES949	EMI Test Receiver	Rohde & Schwarz	ESU40	100478	7, Mar. 2018
ES950	EMI Test Receiver	Rohde & Schwarz	ESU26	100590	24, Jan. 2018
ES951	Open Switch and Control Platform	Rohde & Schwarz	OSP130	101467	N/A
ES957	Loop Antenna	Rohde & Schwarz	HFH2-Z2	100465	20, Jan. 2019
ES972	Biconilog (Type7)	ETS-Lindgren	3142E	00203547	23, Jan. 2019
ES974	Biconilog (Type7)	ETS-Lindgren	3142E	00201450	23, Jan. 2019
ES975	DRG Horn (Medium)	ETS-Lindgren	3117	00201915	20, Jan. 2019
ES976	DRG Horn (Medium)	ETS-Lindgren	3117	00203763	20, Jan. 2019
ES977	Standard Gain Horn	ETS-Lindgren	3160-09	LM9738	3, May 2018
ES978	Standard Gain Horn	ETS-Lindgren	3160-09	LM9860	25, Aug 2018
ES1027	AMP	Rohde & Schwarz	SCU-08	100737	23, Jan. 2018
ES1028	AMP	Rohde & Schwarz	SCU-08	100738	24, Jan. 2018
ES1029	AMP	Rohde & Schwarz	SCU-18D	1952128	20, Jul. 2018
ES1030	AMP	Rohde & Schwarz	SCU-18D	1952129	28, Jul. 2018
ES1031	AMP	Rohde & Schwarz	SCU-26D	1879069	18, Jul. 2018
ES1032	AMP	Rohde & Schwarz	SCU-26D	1879070	18, Jul. 2018
ES1004	VECTOR SIGNAL GENERATOR	Rohde & Schwarz	SMBV100A	261569	23, Sep. 2017
ES1005	SIGNAL GENERATOR	Rohde & Schwarz	SMB100A	178493	24, Jan. 2018
ES1038	ATTENUATOR	WEINSCHEL	10dB	TEMPNO.4824	22, Sep. 2017
ES1036	ATTENUATOR	WEINSCHEL	54A-10	69679	22, Sep. 2017
ES1074	Notch Rf filter	Micro-Tronics	BRM50702-02	G043	18, Jul. 2018
ES1154	RF Meter	ANRITSU	MA2411B	1648099	4, Apr. 2018
ES1155	RF Sensor	ANRITSU	ML2495A	1531208	23, Dec. 2017
ES1152	System DC Power Supply	KEYSIGHT	N5747A	US16D4132P	27, Dec. 2017
ES955	Two-Line V-Network	Rohde & Schwarz	ENV216	101982	24, Jan. 2018
ES952	EMI Test Receiver	Rohde & Schwarz	ESR7	101560	23, Jan. 2018
ES1109	Digital multi meter	FLUKE	381	34980197WS	20, Mar. 2018
41	Software	Rohde & Schwarz	EMC32	Ver9.21.00	-

6. Channel List

Channel No.	Frequency(MHz)	Channel No.	Frequency(MHz)
0	2 402	20	2 442
1	2 404	21	2 444
2	2 406	22	2 446
3	2 408	23	2 448
4	2 410	24	2 450
5	2 412	25	2 452
6	2 414	26	2 454
7	2 416	27	2 456
8	2 418	28	2 458
9	2 420	29	2 460
10	2 422	30	2 462
11	2 424	31	2 464
12	2 426	32	2 466
13	2 428	33	2 468
14	2 430	34	2 470
15	2 432	35	2 472
16	2 434	36	2 474
17	2 436	37	2 476
18	2 438	38	2 478
19	2 440	39	2 480

7. Test Condition

Mode	Test Frequency(MHz)		
	Lowest	Middle	Highest
BT LE	2 402	2 440	2 480

SECTION 3 SUMMARY

1. Summary of test results

Requirements	FCC Rule	IC Rule	Compliance
RF Exposure evaluation	1.1310 2.1091	RSS-102 Issue5	Complied

2. Measurement Uncertainty

Parameters	Uncertainty (k = 2)	
Maximum Peak Conducted Output Power	1.66 dB	
Power Spectral Density	1.32 dB	
Channel Bandwidth	4.69 kHz	
Spurious Emissions (Conducted)	1.32 dB	
Spurious Emissions (Radiated)	9 kHz to 30 MHz	4.2 dB
	30 MHz to 1 GHz	3.9 dB
	1 GHz to 6 GHz	5.9 dB
	6 GHz to 18 GHz	5.1 dB
	18 GHz to 26 GHz	4.5 dB

SECTION 4 TEST RESULT

1. MPE Evaluation of Mobile Device

1.1 Rule

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in 1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure		
300-1,500	f/300	6
1,500-100,000	5	6
(B) Limits for General Population/Uncontrolled Exposure		
300-1,500	f/1500	30
1,500-100,000	1.0	30

Note) f = Frequency in MHz

IC RSS-102 Issue5 Limit

Frequency range (MHz)	Power density (W/m^2)	Averaging time (minutes)
RF Field Strength Limits for Controlled Use Devices (Controlled Environment)		
100-6000	$0.6455f^{0.5}$	6
6000-15000	50	6
RF Field Strength Limits for Devices Used by the General Public (Uncontrolled Environment)		
300-6000	$0.02619f^{0.6834}$	6
6000-15000	10	6

Note) f = Frequency in MHz

Friis Formula

Friis transmission formula: $Pd = (Pout*G)/(4*pi*r^2)$

Where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

Pd id the limit of MPE, 1 mW/cm^2. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

1.2 Test Results - Complied

-FCC

Frequency Band (MHz)	Maximum Power (mW)	Antenna Gain (mW)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2 402 ~ 2 480	1.26	1.55	20	0.000 388	1

Note: Target Power = 0 dBm, Tolerance = ± 1 dB, Maximum Power = 1 dBm.
Antenna Gain = 1.9 dBi.

-IC

Frequency Band (MHz)	Maximum Power (mW)	Antenna Gain (mW)	Distance (cm)	Power Density (W/m^2)	Limit (W/m^2)
2 402 ~ 2 480	1.26	1.55	20	0.003 879	5.408 511

Note: Target Power = 0 dBm, Tolerance = ± 1 dB, Maximum Power = 1 dBm.
Antenna Gain = 1.9 dBi.

SECTION 5 REVISION HISTORY

REVISION HISTORY			
Revision	Report No.	Issue Date	Description
0	170700101SEL-TEL5	21, Sep. 2017	Initial
1	170700101SEL-TEL5-1	10, Oct. 2017	Add RSS-102 Limit & Power Density

- End -