

# Hangzhou Great Star Industrial Co., Ltd.

# **SAR COMPLIANCE REPORT**

### **Report Type:**

FCC SAR assessment report

#### Model:

1004379716,1004379901 1004380451,1004380571 18FL0834

#### **REPORT NUMBER:**

190301210SHA-002

#### **ISSUE DATE:**

April 14, 2019

#### **DOCUMENT CONTROL NUMBER:**

TTRFFCCSAR-01\_V1 © 2018 Intertek





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Report no.: 190301210SHA-002

Applicant: Hangzhou Great Star Industrial Co., Ltd.

No. 35, Jluhuan Road, Jianggan District, Hangzhou, Zhejiang, China.

Manufacturer: Zhejiang Great Star Industrial Co., Ltd.

No.1 Building, No.11, Qihui Road, Changan, Haining, Zhejiang, China.

Manufacturing site: Zhejiang Great Star Industrial Co., Ltd.

No.1 Building, No.11, Qihui Road, Changan, Haining, Zhejiang, China.

**FCC ID:** 2AMI2Y2019M4D15

#### **SUMMARY:**

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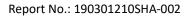
The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06 FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

| PREPARED DI.     | REVIEWED DI. |  |  |  |  |  |  |
|------------------|--------------|--|--|--|--|--|--|
| Tric li          | Doinil       |  |  |  |  |  |  |
| Project Engineer | Reviewer     |  |  |  |  |  |  |
| Eric Li          | Daniel Zhao  |  |  |  |  |  |  |

DEVIEWED BY

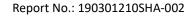
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# **Revision History**

| Report No.       | Version | Description             | Issued Date    |
|------------------|---------|-------------------------|----------------|
| 190301210SHA-002 | Rev. 01 | Initial issue of report | April 14, 2019 |
|                  |         |                         |                |
|                  |         |                         |                |





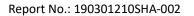
### **1 GENERAL INFORMATION**

# 1.1 Description of Equipment Under Test (EUT)

| Product name:         | Defiant Colorful Rechargeable Touch Light with Bluetooth Speaker   |
|-----------------------|--|
| Type/Model:           | 1004379716, 1004379901, 1004380451, 1004380571, 18FL0834   |
|                       | EUT is a Defiant Colorful Rechargeable Touch Light with Bluetooth Speaker with Bluetooth function, and has five models, all of them have the same circuit, the only difference is color and model name, so we test the white color sample of them and list the worst results in this |
| Description of EUT:   | report.  |
| Rating:               | INPUT 5V 2A MAX  |
| Category of EUT:      | Class B  |
| EUT type:             | ☐ Table top ☐ Floor standing   |
| Software Version:     | /  |
| Hardware Version:     | /  |
| Sample received date: | April 8, 2019  |
| Date of test:         | April 8, 2019 ~ April 10, 2019   |

# 1.2 Technical Specification

| Frequency Band:       | 2400MHz ~ 2483.5MHz                      |
|-----------------------|--|
| Support Standards:    | Bluetooth BR+EDR                         |
| Operating Frequency:  | 2402MHz to 2480MHz                       |
| Modulation Technique: | Frequency Hopping Spread Spectrum (FHSS) |
| Type of Modulation:   | GFSK, π/4-DQPSK                          |
| Channel Number:       | 79 (0 - 78)                              |
| Channel Separation:   | 1 MHz                                    |
| Antenna:              | PCB Antenna, 0dBi                        |

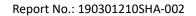




# 1.3 Description of Test Facility

| Name:      | Intertek Testing Services Shanghai                                     |
|------------|--|
| Address:   | Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China |
| Telephone: | 86 21 61278200   |
| Telefax:   | 86 21 54262353   |

| The test facility is recognized,                 | CNAS Accreditation Lab<br>Registration No. CNAS L0139                    |
|--|--|
| certified, or accredited by these organizations: | FCC Accredited Lab Designation Number: CN1175                            |
| organizations.                                   | IC Registration Lab Registration code No.: 2042B-1                       |
|  | VCCI Registration Lab<br>Registration No.: R-4243, G-845, C-4723, T-2252 |
|  | NVLAP Accreditation Lab<br>NVLAP LAB CODE: 200849-0                      |
|  | A2LA Accreditation Lab<br>Certificate Number: 3309.02                    |





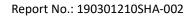
### 2 SAR Assessment

Test result: Pass

### 2.1 SAR Test Exclusion Limit

100 MHz - 6 GHz and  $\leq$  50 mm

| MHz  | 5   | 10  | 15  | 20  | 25  | mm                    |  |  |  |  |
|------|-----|-----|-----|-----|-----|-----------------------|--|--|--|--|
| 150  | 39  | 77  | 116 | 155 | 194 |                       |  |  |  |  |
| 300  | 27  | 55  | 82  | 110 | 137 |                       |  |  |  |  |
| 450  | 22  | 45  | 67  | 89  | 112 |                       |  |  |  |  |
| 835  | 16  | 33  | 49  | 66  | 82  |                       |  |  |  |  |
| 900  | 16  | 32  | 47  | 63  | 79  |                       |  |  |  |  |
| 1500 | 12  | 24  | 37  | 49  | 61  | SAR Test<br>Exclusion |  |  |  |  |
| 1900 | 11  | 22  | 33  | 44  | 54  | Threshold (mW)        |  |  |  |  |
| 2450 | 10  | 19  | 29  | 38  | 48  | 2111 0011010 (11111)  |  |  |  |  |
| 3600 | 8   | 16  | 24  | 32  | 40  |                       |  |  |  |  |
| 5200 | 7   | 13  | 20  | 26  | 33  |                       |  |  |  |  |
| 5400 | 6   | 13  | 19  | 26  | 32  |                       |  |  |  |  |
| 5800 | 6   | 12  | 19  | 25  | 31  |                       |  |  |  |  |
|      |     |     |     |     |     |                       |  |  |  |  |
| MHz  | 30  | 35  | 40  | 45  | 50  | mm                    |  |  |  |  |
| 150  | 232 | 271 | 310 | 349 | 387 |                       |  |  |  |  |
| 300  | 164 | 192 | 219 | 246 | 274 |                       |  |  |  |  |
| 450  | 134 | 157 | 179 | 201 | 224 |                       |  |  |  |  |
| 835  | 98  | 115 | 131 | 148 | 164 |                       |  |  |  |  |
| 900  | 95  | 111 | 126 | 142 | 158 | GAD Took              |  |  |  |  |
| 1500 | 73  | 86  | 98  | 110 | 122 | SAR Test<br>Exclusion |  |  |  |  |
| 1900 | 65  | 76  | 87  | 98  | 109 | Threshold (mW)        |  |  |  |  |
| 2450 | 57  | 67  | 77  | 86  | 96  | , ,                   |  |  |  |  |
| 3600 | 47  | 55  | 63  | 71  | 79  |                       |  |  |  |  |
| 5200 | 39  | 46  | 53  | 59  | 66  |                       |  |  |  |  |
| 5400 | 39  | 45  | 52  | 58  | 65  |                       |  |  |  |  |
| 5800 | 37  | 44  | 50  | 56  | 62  |                       |  |  |  |  |





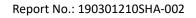
#### **TEST REPORT**

### 100 MHz - 6 GHz and > 50 mm

| MHz  | 50  | 60  | 70  | 80  | 90  | 100 | 110 | 120 | 130 | 140  | 150  | 160  | 170  | 180  | 190  | mm |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|----|
| 100  | 474 | 481 | 487 | 494 | 501 | 507 | 514 | 521 | 527 | 534  | 541  | 547  | 554  | 561  | 567  |    |
| 150  | 387 | 397 | 407 | 417 | 427 | 437 | 447 | 457 | 467 | 477  | 487  | 497  | 507  | 517  | 527  |    |
| 300  | 274 | 294 | 314 | 334 | 354 | 374 | 394 | 414 | 434 | 454  | 474  | 494  | 514  | 534  | 554  |    |
| 450  | 224 | 254 | 284 | 314 | 344 | 374 | 404 | 434 | 464 | 494  | 524  | 554  | 584  | 614  | 644  |    |
| 835  | 164 | 220 | 275 | 331 | 387 | 442 | 498 | 554 | 609 | 665  | 721  | 776  | 832  | 888  | 943  |    |
| 900  | 158 | 218 | 278 | 338 | 398 | 458 | 518 | 578 | 638 | 698  | 758  | 818  | 878  | 938  | 998  |    |
| 1500 | 122 | 222 | 322 | 422 | 522 | 622 | 722 | 822 | 922 | 1022 | 1122 | 1222 | 1322 | 1422 | 1522 | mW |
| 1900 | 109 | 209 | 309 | 409 | 509 | 609 | 709 | 809 | 909 | 1009 | 1109 | 1209 | 1309 | 1409 | 1509 |    |
| 2450 | 96  | 196 | 296 | 396 | 496 | 596 | 696 | 796 | 896 | 996  | 1096 | 1196 | 1296 | 1396 | 1496 |    |
| 3600 | 79  | 179 | 279 | 379 | 479 | 579 | 679 | 779 | 879 | 979  | 1079 | 1179 | 1279 | 1379 | 1479 |    |
| 5200 | 66  | 166 | 266 | 366 | 466 | 566 | 666 | 766 | 866 | 966  | 1066 | 1166 | 1266 | 1366 | 1466 |    |
| 5400 | 65  | 165 | 265 | 365 | 465 | 565 | 665 | 765 | 865 | 965  | 1065 | 1165 | 1265 | 1365 | 1465 |    |
| 5800 | 62  | 162 | 262 | 362 | 462 | 562 | 662 | 762 | 862 | 962  | 1062 | 1162 | 1262 | 1362 | 1462 |    |

### < 100 MHz and < 200 mm

| MHz  | < 50 | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  | 130  | 140  | 150  | 160  | 170  | 180  | 190  | mm |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|
| 100  | 237  | 474  | 481  | 487  | 494  | 501  | 507  | 514  | 521  | 527  | 534  | 541  | 547  | 554  | 561  | 567  |    |
| 50   | 308  | 617  | 625  | 634  | 643  | 651  | 660  | 669  | 677  | 686  | 695  | 703  | 712  | 721  | 729  | 738  |    |
| 10   | 474  | 948  | 961  | 975  | 988  | 1001 | 1015 | 1028 | 1041 | 1055 | 1068 | 1081 | 1095 | 1108 | 1121 | 1135 |    |
| 1    | 711  | 1422 | 1442 | 1462 | 1482 | 1502 | 1522 | 1542 | 1562 | 1582 | 1602 | 1622 | 1642 | 1662 | 1682 | 1702 | mW |
| 0.1  | 948  | 1896 | 1923 | 1949 | 1976 | 2003 | 2029 | 2056 | 2083 | 2109 | 2136 | 2163 | 2189 | 2216 | 2243 | 2269 |    |
| 0.05 | 1019 | 2039 | 2067 | 2096 | 2125 | 2153 | 2182 | 2211 | 2239 | 2268 | 2297 | 2325 | 2354 | 2383 | 2411 | 2440 |    |
| 0.01 | 1185 | 2370 | 2403 | 2437 | 2470 | 2503 | 2537 | 2570 | 2603 | 2637 | 2670 | 2703 | 2737 | 2770 | 2803 | 2837 |    |
|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |    |





## 2.2 Assessment Results

| The highest EIRP adjusted with tune-up tolerance is 4.0 dBm =                  |
|--|
| 2.5mW < 10mW (Test Exclusion Thresholds of 2450MHz at 5mm). Therefore, the SAR |
| requirement is deemed to be satisfied without test.                            |
|  |
|  |
|  |
|  |
| **************************************   |