



# RF EXPOSURE REPORT

**REPORT NO.:** SA130403E01

**MODEL NO.:** RL-11650

**FCC ID:** S39RL11650

**RECEIVED:** Apr. 03, 2013

**TESTED:** May 24, 2013

**ISSUED:** May 31, 2013

**APPLICANT:** RELIGHT TECHNOLOGY COPRORATION

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**ISSUED BY:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory

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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA130403E01	Original release	May 31, 2013



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## 1. CERTIFICATION

**PRODUCT:** Bluetooth® Low Energy Module

**BRAND NAME:** RELight

**MODEL NO.:** RL-11650

**TEST SAMPLE:** ENGINEERING SAMPLE

**APPLICANT:** RELIGHT TECHNOLOGY CORPORATION

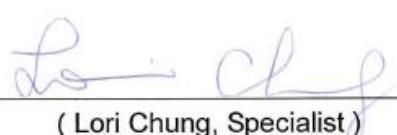
**TESTED DATE:** Apr. 03, 2013

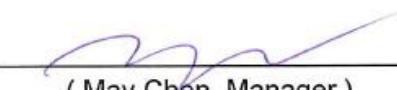
**STANDARDS:** FCC Part 2 (Section 2.1091)

FCC OET Bulletin 65, Supplement C (01-01)

IEEE C95.1

The above equipment (Model: RL-11650) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**PREPARED BY** :  , **DATE:** May 31, 2013  
( Lori Chung, Specialist )

**APPROVED BY** :  , **DATE:** May 31, 2013  
( May Chen, Manager )

## 2. EVALUATION RESULT

### Following FCC KDB 447498 D01 “General SAR test exclusion guidance”

The corresponding SAR Exclusion Threshold condition, listed below:

- 1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:  
$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$
  - Ø  $f(\text{GHz})$  is the RF channel transmit frequency in GHz
  - Ø Power and distance are rounded to the nearest mW and mm before calculation
  - Ø The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.
- 2) At 100 MHz to 6 GHz and for test separation distances  $> 50$  mm, the SAR test exclusion threshold is determined according to the following:
  - a)  $[\text{Threshold at } 50 \text{ mm in step 1} + (\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)] \text{ mW}$ , at 100MHz to 1500 MHz
  - b)  $[\text{Threshold at } 50 \text{ mm in step 1} + (\text{test separation distance} - 50 \text{ mm}) \cdot 10] \text{ mW}$  at  $> 1500 \text{ MHz and } \leq 6 \text{ GHz}$
- 3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion.
  - a) The threshold at the corresponding test separation distance at 100 MHz in step 2 is multiplied by  $[1 + \log(100/f(\text{MHz}))]$  for test separation distances  $> 50$  mm and  $< 200$  mm.
  - b) The threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by  $\frac{1}{2}$  for test separation distances  $\leq 50$  mm.
  - c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.



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### 3. SAR TEST EXCLUSION THRESHOLDS

Maximum measured transmitter power:

Frequency (GHz)	Max. Power (mW)	Min. test separation distance (mm)	SAR test exclusion calculation value <sup>(NOTE 2)</sup>	1g SAR test exclusion thresholds	Result
2.402 ~ 2.480	2.173	5	0.684	3	Pass

**NOTE:** 1. The antenna type is c antenna with 0.5dBi gain.

2. Calculate SAR test exclusion thresholds from condition "1" formulas.

### 4. CONCLUSION

Since Source-base time average power is below SAR test exclusion power thresholds, the SAR evaluation is not required.

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