

Applicant: VTECH ELECTRONICS LIMITED

23/F BLK 1 TAI PING IND CTR

57 TING KOK RD

TAI PO NT

HK

Attn: R.Y. LI / LEDA YANG

Sample and Information provided by customer

Item Name KIDIZOOM DUO FX, WITH HEADPHONE, BLUE, VTFR

Style No 80-519905/80-519989/80-519901/80-519902/80-519903/80-

519904/80-519900/80-519906/80-519907/80-519918/80-519919/80-519922/80-519923/80-519924/80-519925/80-519939/80-519949/80-519952/80-519953/80-519954/80-519955/80-519957/80-519961/80-519962/80-519963/80-519964/80-519965/80-519966/80-519967/80-

Number:

Date:

HKGH02979272

May 12, 2023

519968/80-519969/80-519970/80-519959/80-5199XX

Quantity 6 sets Labelled Age Group 4-10 Years

Appropriate age grade Ages over 3 years

Packaging Provided Yes

VT23091F Date Code





For and on behalf of: Intertek Testing Services HK Ltd.

Cindy I.K. Chan Vice President







HKGH02979272 Number:

Conclusion:

The submitted sample was tested under the following requirements requested by the applicant, subject to the information stated in the remark and attached page(s) for details:

Requirement Result

The measured emission level of the apparatus did not exceed the accessible emission level of class 1 according to (1) IEC 60825-1: 1993 + A1: 1997 + A2: 2001 and the apparatus was classified as "Class 1 LED Product".

(2) EN 62115 : 2005 + A12 : 2015 Safety of electric toys

Pass (Subjected to remark enclosed)

(3) EN IEC 62115 : 2020 + A11 : 2020 on Safety of electric toys

Pass (Subjected to remark enclosed)

(4)The measured emission level of the apparatus did not exceed the accessible emission limit according to EN IEC 62115: 2020 + A11: 2020, Annex E

AS/NZS 62115 : 2018 + A1 : 2021 Safety of electric toys

Pass (Subjected to remark enclosed)

The measured emission level of the apparatus did not exceed the accessible emission limit according to AS/NZS (6)62115:2018+A1:2021, Annex E

(7) IEC 62115:2017+Cor1:2019 Safety of electric toys

Pass (Subjected to

remark enclosed)

The measured emission level of the apparatus did not exceed the accessible emission limit according to IEC 62115: 2017+Cor1:2019, Annex E

Decision Rule(s):

When a statement of conformity to a specification or standard is provided on test report, the decision rule shall be applied. For details, please refer to Intertek's "Decision Rule Document" and is available on Intertek's website. https://intertekhk.grd.by/decision-rule-doc. If decision rule already inhered in the requested specification or standard, Intertek's "Decision Rule Document" is not applicable and indication of "~"

was shown as above table.







Number: HKGH02979272

(1) Lasers and light-emitting diodes radiation

Test Standard: IEC 60825-1: 1993 + A1: 1997 + A2: 2001 Safety of laser products - Part 1: Equipment classification, requirements and user's guide

Clause	Title/Description	Result
1	Scope and object	_
2	Normative references	_
3	Definitions	_
4	Engineering specifications	Not Applicable
5	Labelling	Not Applicable
6	Other informational requirements	Not Applicable
7	Additional requirements for specific laser products	Not Applicable
8	Classification	Complied
9	Measurement for classification	Complied

Table of measuring data

For White LED
wavelength at first peak
lused in monitor unit
(yellow diffused)

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Measured		Measured	Thermal Hazard			Photochemical Hazard		
Condition	Wavelength	Angular Subtense	Measuring Distance	Measured Power	Limit for Class 1	Measuring Distance	Measured Energy	Limit for Class 1
Normal (without cover)	459nm	4.01mrad	21.1mm	19.2μW	1.0mW	36.5mm	218.0μJ	5.9mJ
Fault (without cover)	459nm	4.01mrad	21.1mm	22.5μW	1.0mW	36.5mm	176.5µJ	5.9mJ







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_	
	For White LED
	wavelength at second
	peak used in monitor unit
	wavelength at second peak used in monitor unit (yellow diffused)

()									
	Measured	Measured Angular Subtense	Thermal Hazard			Photochemical Hazard			
Condition	Wavelength		Measuring Distance	Measured Power	Limit for Class 1	Measuring Distance	Measured Energy	Limit for Class 1	
Normal (without cover)	563nm	4.01mrad	21.1mm	15.5μW	1.0mW	36.5mm	132.4μJ	709.7mJ	
Fault (without cover)	563nm	4.01mrad	21.1mm	18.4μW	1.0mW	36.5mm	163.0μJ	709.7mJ	

For White LED
wavelength at first peak used in flash light (white
used in flash light (white
diffused)
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am acca,								
	Measured Wavelength	Measured Angular Subtense	Thermal Hazard			Photochemical Hazard		
Condition			Measuring Distance	Measured Power	Limit for Class 1	Measuring Distance	Measured Energy	Limit for Class 1
Normal (without cover)	452nm	22.02mrad	47.4mm	290.3μW	5.1mW	100.0mm	404.2μJ	4.3mJ
Fault (without cover)	452nm	22.02mrad	47.4mm	1.3mW	5.1mW	100.0mm	2.2mJ	4.3mJ

For White LED
wavelength at second
peak used in flash light
wavelength at second peak used in flash light (white diffused)

(William alliac	,									
	Measured	Measured	Thermal Hazard			Photochemical Hazard				
Condition Wavelength	Angular Subtense	Measuring Distance	Measured Power	Limit for Class 1	Measuring Distance	Measured Energy	Limit for Class 1			
Normal (without cover)	528nm	22.02mrad	47.4mm	209.4μW	5.1mW	100.0mm	264.6µJ	141.6mJ		
Fault (without cover)	528nm	22.02mrad	47.4mm	915.4μW	5.1mW	100.0mm	1.6mJ	141.6mJ		

Remark:

- 1. When determining the test conclusion, the Measurement Uncertainty of test has been considered. The decision rules are based on IEC Guide 115 with complying the relevant requirements of environment and equipment.
- 2. The apparatus was also complied with standard EN 60825-1: 1994 + A1 + A2 due to similarity between these standard.







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- 3. The requirement of EN 62115 (Annex E) and the French regulation published on 11th Mar 2008 for LED product were included in this test report.
- 4. The test was conducted by operating the apparatus at rated voltage 6.0VDC.
- 5. 3 pcs. SMD yellow diffused White LEDs used in the Monitor unit of apparatus are identical to each
- 6. 1 pc. SMD white diffused White LED is used in the apparatus.

Date sample received: Mar 07, 2023

Testing period :Mar 07, 2023 to Mar 16, 2023







Number: HKGH02979272

(2) Safety of Electric Toys

Test Standard : European Standard EN 62115 : 2005 + A12 : 2015 on Safety of electric toys.

Age group for testing : For Ages Over 3 Years

Power source: 6V, LR6 size x 4 pcs

Included battery: Yes (R6P size x 4 pcs)

Operated function: sound, light and LCD display

<u>Clause</u>	Requirement	<u>Assessment</u>
1	Scope	
2	Normative reference	
3	Definitions	
4	General requirement	
5.13	Battery polarity reversed test	Р
6	Criteria for reduced testing	
7	Marking and instructions	P#1
8 9	Power input	NA
	Heating and abnormal operation	Р
10	Electric strength at operating temperature	Р
11	Moisture resistance	Р
12	Electric strength at room temperature	Р
13	Mechanical strength	Р
14	Construction	Р
15	Protection of cords and wires	Р
16	Components	Р
17	Screws and connections	Р
18	Clearances and creepage distances	Р
19	Resistance to heat and fire	Р
20	Toxicity and similar hazards	#2
	Radiation hazard - Annex E Toys incorporating laser / light-emitting diodes (LED)	#3
	Toys with an integrated field source - Annex ZC Toys generating Electromagnetic Fields (EMF)	NA
Annex A	Experimental sets	NA
Annex B	Needle flame test	NA
Annex C	Automatic controls and switches	NA
Annex D	Sequence of the tests of Clause 19	
Annex ZB	Toys with protective electronic circuit influence from electromagnetic phenomena (EMP).	NA







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Abbreviation: P = Pass NA = Not Applicable

Remark(s):

#1 = Only the English version of the marking and instructions were assessed. According to the standard, instruction sheets and other texts required by the standard shall be written in the official language of the country in which the product is to be sold.

#2 = This report does not include test result of toxicity and similar hazard.

#3 = Referred to test result of IEC 60825-1 class 1 for the lasers / light emitting diodes (LEDs).

Date sample received : Mar 07, 2023 Test Period : Mar 07, 2023 to Mar 29, 2023







Number: HKGH02979272

(3) Safety of Electric Toys

Test Standard : European Standard EN IEC 62115 : 2020 + A11 : 2020 on Safety of electric toys

Age group for testing : For Ages Over 3 Years

Power source: 6V, LR6 size x 4 pcs

Included battery: Yes (R6P size x 4 pcs)

Operated function: sound, light and LCD display

<u>Clause</u>	Requirement	Assessment
1	Scope	
2	Normative reference	
3	Term and definitions	
4	General requirement	
5	General conditions for test	
5.2	Preconditioning	А
5.7.2	Carried out with one or more batteries reversed	Р
6	Criteria for reduced testing	NA
6.1	General	
6.2	Short-circuit resistance	NA
6.3	Low power electric toys	NA
6.4	Battery circuits	NA
7	Marking and instructions	Р
7.1	General	P#1
7.2	Markings on electric toys	P#2
7.3	Instructions and markings on packaging	Р
7.4	Instructions for electric toys that can be connected to class I equipment	NA
7.5	Instructions for ride-on electric toys	NA
7.6	Temperature warnings	NA
8	Power input	NA
9	Heating and abnormal operation	Р
9.1	General	Р
9.2	Testing condition	
9.3	Normal operation	Р
9.4	Normal operation with insulation short-circuited	Р
9.5	Abnormal operation with temperature controls made inoperable	NA
9.6	Electric toys with accessible moving parts locked	NA





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<u>Clause</u>	Requirement	Assessment
9.7	Additional transformers and power supplies	NA
9.8	Abnormal supply to electric toys via a USB connection	NA
9.9	Fault condition in electronic circuits	Р
9.10	Compliance criteria	Р
10	Electric strength	Р
10.1	Electric strength at operating temperature	Р
10.2	Electric strength under humid conditions	Р
11	Electric toys used in water, electric toys used with liquid and electric toys cleaned with liquid	NA
	·	NA
	To be used with liquid and electric toys intended to filled from a tap	
	To be cleaned with liquid	NA
40	To be used in water	NA
12	Mechanical strength	Р
12.1	Enclosures	P
12.2	Attachment strength	NA
13	Construction	Р
13.1	Nominal supply voltage	Р
13.2	Transformers, power supplies and battery chargers	NA
13.3	Thermal cut-outs	NA
13.4	Batteries	Р
13.5	Plug and sockets	NA
13.6	Charging batteries	NA
13.7	Series motors	NA
13.8	Working voltage	NA
13.9	Electric toys connecting to other equipment	Р
13.10	Speed limitation of ride-on electric toys	NA
14	Protection of cords and wires	Р
14.1	Edges and moving parts	Р
14.2	Fixed parts	Р
15	Components	Р
15.1.1	General	Р
15.1.2	Switches and automatic controls	NA
15.1.3	Other components	Р
15.2	Prohibited components	Р
15.3	Transformers and power supplies	NA
15.4	Battery chargers	NA
15.5	Batteries	
	Supplied primary batteries comply with the relevant parts of the IEC 60086 series	NC#3
	Supplied secondary batteries comply with IEC 62133	NA
16	Screws and connections	P





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<u>Clause</u>	Requirement	Assessment
16.1	Fixings	Р
16.2	Connections	NA
17	Clearances and creepage distances	Р
18	Resistance to heat and fire	Р
18.1	Resistance to heat	NA
18.2	Resistance to fire	Р
19	Radiation and similar hazards	
19.1	General	
19.2	Optical radiation (In Annex E)	
19.3	Other electromagnetic radiation (In Annex I)	
Annex A	Experimental sets	NA
Annex B	Needle flame test	NA
Annex C	Automatic controls and switches	NA
C.1	Automatic controls	NA
C.2	Switches	NA
Annex D	Electric toys with protective electronic circuits	NA
D.1	General	NA
D.2	Dangerous malfunction	NA
D.2.1	General	NA
D.2.2	Electrostatic discharges	NA
D.2.3	Radiated fields	NA
D.2.4	Transient bursts	NA
D.2.5	Voltage surges	NA
D.2.6	Injected current	NA
D.2.7	Voltage dips and interruptions	NA
D.2.8	Mains signals	NA
Annex E	Safety of electric toys incorporating optical radiation sources	
	19.E.2 - 19.E.4 Radiation Hazard	#4
	19.E.5 Modulated accessible emission warning	NA
Annex F	Flowcharts showing the assessment of optical radiation safety of LEDs in	
	electric toys	
Annex G	Examples of calculations on LEDs	
Annex H	Explanation of the principles used for the requirements of Annex E	
Annex I	Electric toys generating electromagnetic fields (EMF)	NA
Annex J	Safety of remote controls for electric ride-on toys	NA
Annex K	Flow charts showing the application of Clause 9	







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Abbreviation: P = Pass NA = Not Applicable NC = Not Conducted A = Applicable

Remark(s):

#1 = Only the English version of the marking and instructions were assessed. According to the standard, instruction sheets and other texts required by the standard shall be written in the official language of the country in which the product is to be sold.

#2 = Clause 7.2.1 Below are additional information according to the requirement in Toy Safety Directive 2009/48/EC relating to marking of toys and do not constitute requirements of this European Standard:

The manufacturer's and importer's name, registered trade name or registered trade mark, the address and type, batch, serial or model number or other element allowing their identification shall be indicated on the toy or, where that is not possible, on its packaging or in a document accompanying the toy.

#3 = Clause 15.5 Batteries

Primary batteries supplied with electric toys complied with the relevant parts of the IEC 60086 series.

Received test report: BAT180417N067-R1 and BAT180417N067-1-R1 from the applicant. Intertek HK did not perform actual test for the standard.

#4 = Referred to test result in Annex E Clause 19.E.2-19.E.4.

Date sample received: Mar 07, 2023 Test Period: Mar 07, 2023 to Mar 29, 2023







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Limit

(4) **Optical Radiation**

Test Standard: European Standard EN IEC 62115: 2020 + A11: 2020 on Safety of electric toys, Annex E

Clause	Title/Description	Result
19.E.2	Light-emitting diodes (LEDs)	Pass
19.E.3	Lasers (IEC 60825-1: 2014)	Not Applicable
19.E.4	UV-emitting lamps	Not Applicable

Table of measuring data

peak)

For White LED used in monitor unit (yellow diffused)					
Condition Measured Wavelength		Spectral Emission Bandwidth	Measuring Distance	Measured Radiant Intensity	
•	Normal (first peak)		00.0	000	0.70 14//

Normal (with cover)	563nm (second peak)	20.2nm	200mm	0.73mW/sr	0.13W/sr
Fault (with cover)	459nm (first peak) 563nm (second	20.2nm	200mm	0.76mW/sr	0.13W/sr



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For White LED
used in flash light
(white diffused)

Condition	Measured Wavelength	Spectral Emission Bandwidth	Measuring Distance	Measured Radiant Intensity	Limit
Normal (without cover)	452nm (first peak) 528nm (second peak)	17.6nm	200mm	4.94mW/sr	0.13W/sr
Fault (without cover)	452nm (first peak) 528nm (second peak)	17.6nm	200mm	43.6mW/sr	0.13W/sr

Remark:

- 1. When determining the test conclusion, the Measurement Uncertainty of test has been considered. The decision rules are based on IEC Guide 115 with complying the relevant requirements of environment and equipment.
- 2. The test was conducted by operating the apparatus at rated voltage 6.0VDC.
- 3. 3 pcs. SMD yellow diffused White LEDs used in the Monitor unit of apparatus are identical to each other.
- 4. 1 pc. SMD white diffused White LED is used in the apparatus.
- 5. For white LEDs comprising a blue emitter and a phosphor coating, a peak wavelength of 500 nm shall be used as an approximation of the actual spectrum.

Date sample received: Mar 07, 2023

Testing period :Mar 07, 2023 to Mar 16, 2023





2/F Garment Centre

576 Castle Peak Road Kowloon, Hong Kong



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(5) Safety of Electric Toys

Test Standard : Australian / New Zealand Standard AS/NZS 62115 : 2018 + A1 : 2021 on Safety of

electric toys

Age group for testing : For Ages Over 3 Years

Power source: 6V, LR6 size x 4 pcs

Included battery: Yes (R6P size x 4 pcs)

Operated function: sound, light and LCD display

<u>Clause</u>	Requirement	<u>Assessment</u>
1	Scope	
2	Normative reference	
3	Term and definitions	
4	General requirement	
5	General conditions for test	
5.2	Preconditioning	А
5.7.2	Carried out with one or more batteries reversed	Р
6	Criteria for reduced testing	NA
6.1	General	
6.2	Short-circuit resistance	NA
6.3	Low power electric toys	NA
6.4	Battery circuits	NA
7	Marking and instructions	Р
7.1	General	Р
7.2	Markings on electric toys	Р
7.3	Instructions and markings on packaging	Р
7.4	Instructions for electric toys that can be connected to class I equipment	Р
7.5	Instructions for ride-on electric toys	NA
7.6	Temperature warnings	NA
8	Power input	NA
9	Heating and abnormal operation	Р
9.1	General	Р
9.2	Testing condition	
9.3	Normal operation	Р
9.4	Normal operation with insulation short-circuited	Р
9.5	Abnormal operation with temperature controls made inoperable	NA





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Clause	Requirement	Assessment
9.6	Electric toys with accessible moving parts locked	NA
9.7	Additional transformers and power supplies	NA
9.8	Abnormal supply to electric toys via a USB connection	NA
9.9	Fault condition in electronic circuits	Р
9.10	Compliance criteria	Р
10	Electric strength	Р
10.1	Electric strength at operating temperature	Р
10.2	Electric strength under humid conditions	Р
11	Electric toys used in water, electric toys used with liquid and electric toys cleaned with liquid	NA
	To be used with liquid and electric toys intended to filled from a tap	NA
	To be cleaned with liquid	NA
	To be used in water	NA
12	Mechanical strength	Р
12.1	Enclosures	Р
12.2	Attachment strength	NA
13	Construction	Р
13.1	Nominal supply voltage	Р
13.2	Transformers, power supplies and battery chargers	NA
13.3	Thermal cut-outs	NA
13.4	Batteries	Р
13.5	Plug and sockets	Р
13.6	Charging batteries	Р
13.7	Series motors	NA
13.8	Working voltage	NA
13.9	Electric toys connecting to other equipment	Р
13.10	Speed limitation of ride-on electric toys	NA
14	Protection of cords and wires	Р
14.1	Edges and moving parts	Р
14.2	Fixed parts	Р
15	Components	Р
15.1.1	General	Р
15.1.2	Switches and automatic controls	NA
15.1.3	Other components	Р
15.2	Prohibited components	Р
15.3	Transformers and power supplies	NA
15.4	Battery chargers	NA
15.5	Batteries	
	Supplied primary batteries comply with the relevant parts of the IEC 60086 series	#1
	Supplied secondary batteries comply with IEC 62133	NA





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16.1 Fixings P 16.2 Connections NA 17 Clearances and creepage distances P 18 Resistance to heat and fire P 18.1 Resistance to fire P 19 Radiation and similar hazards 19.1 General 19.2 Optical radiation (In Annex E) 19.3 Other electromagnetic radiation (In Annex I) 4nnex A Experimental sets NA Annex B Needle flame test NA Annex B Needle flame test NA Annex C Automatic controls and switches NA C.1 Automatic controls and switches NA C.1 Automatic controls NA Annex D Electric toys with protective electronic circuits NA D.1 General NA D.2 Switches NA D.2.1 General NA D.2.2 Electrostatic discharges NA D.2.3 <th><u>Clause</u></th> <th>Requirement</th> <th>Assessment</th>	<u>Clause</u>	Requirement	Assessment
16.2 Connections NA 17 Clearances and creepage distances P 18 Resistance to heat and fire P 18.1 Resistance to heat MA 18.2 Resistance to fire P 19 Radiation and similar hazards 19.1 General 19.2 Optical radiation (In Annex E) 19.3 Other electromagnetic radiation (In Annex I) 19.4 Annex A Experimental sets NA 19.5 Annex B Needle flame test NA 19.6 Annex C Automatic controls and switches NA 19.7 Annex C Automatic controls NA 19.8 Switches NA 19.9 Call General NA 19.1 General NA 19.2 Switches NA 19.1 General NA 19.2 Dangerous malfunction NA 19.2 Dangerous malfunction NA 19.2.1 General NA 19.2.2 Electrostatic discharges NA 19.2.3 Radiated fields NA 19.2.4 Transient bursts NA 19.2.5 Voltage surges NA 19.2.6 Injected current NA 19.2.7 Voltage dips and interruptions NA 19.2.8 Mains signals NA 19.2.9 Annex E Safety of electric toys incorporating optical radiation safety of LEDs in electric toys 19.5 MA 19.6 Safety of remote controls used for the requirements of Annex E 19.6 Annex I Electric toys generating electromagnetic fields (EMF) NA 19.6 Annex I Electric toys generating electromagnetic fields (EMF) NA 19.6 Safety of remote controls for electric ride-on toys NA 19.7 Safety of remote controls for electric ride-on toys NA 19.8 Safety of remote controls for electric ride-on toys NA 19.8 Safety of remote controls for electric ride-on toys	16	Screws and connections	Р
177 Clearances and creepage distances P 18 Resistance to heat and fire P 18.1 Resistance to heat NA 18.2 Resistance to heat NA 18.2 Resistance to fire P 19 Radiation and similar hazards 19.1 General 19.2 Optical radiation (In Annex E) 19.3 Other electromagnetic radiation (In Annex I) 19.3 Other electromagnetic radiation (In Annex I) NA Annex B Experimental sets NA Annex B Needle flame test NA Annex C Automatic controls and switches NA Annex C Automatic controls and switches NA C.1 Automatic controls NA C.2 Switches NA Annex D Electric toys with protective electronic circuits NA D.1 General NA D.2.1 General NA D.2.2 Dangerous malfunction NA D.2.1 General NA D.2.3 Radiated fields NA D.2.4 Transient bursts NA D.2.5 Voltage surges NA D.2.6 Injected current NA D.2.7 Voltage dips and interruptions NA D.2.8 Mains signals NA Annex E Safety of electric toys incorporating optical radiation sources 19.E.5 Modulated accessible emission warning NA Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex M Explanation of the principles used for the requirements of Annex E Annex M Explanation of the principles used for the requirements of Annex E Annex M Explanation of the principles used for the requirements of Annex E Annex M Explanation of the principles used for the requirements of Annex E Annex M Explanation of the principles used for the requirements of Annex E Annex M Explanation of the principles used for the requirements of Annex E Annex M Explanation of the principles used for the requirements of Annex E Annex M Explanation of the principles used for the requirements of Annex E Annex M Explanation of the principles used for the requirements of Annex E Annex M Explanation of the principles used for the requirements of Annex E Annex M Explanation of the principles used for the requirements of Annex E Annex M Explanation of the principles used for the requirements of Annex E Annex M Explanation of the princip	16.1	Fixings	Р
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18.1 Resistance to heat 18.2 Resistance to fire 19 Radiation and similar hazards	17	Clearances and creepage distances	Р
18.2 Resistance to fire P 19 Radiation and similar hazards 19.1 General 19.2 Optical radiation (In Annex E) 19.3 Other electromagnetic radiation (In Annex I) 19.3 Other electromagnetic radiation (In Annex I) 19.4 Experimental sets NA 19.5 Needle flame test NA 19.6 Needle flame test NA 19.6 Annex C Automatic controls and switches NA 19.7 Automatic controls NA 19.8 Electric toys with protective electronic circuits NA 19.1 General NA 19.2 Dangerous malfunction NA 19.2.1 General NA 19.2.2 Electrostatic discharges NA 19.2.3 Radiated fields NA 19.2.4 Transient bursts NA 19.2.5 Voltage surges NA 19.2.6 Injected current NA 19.2.7 Voltage dips and interruptions NA 19.2.8 Mains signals NA 19.2.9 Mains signals NA 19.2.9 Injected current NA 19.2.10 Injected current NA 19.2.2 Injected current NA 19.2.3 Radiated fields NA 19.2.4 Fransient bursts NA 19.2.5 Foldage surges NA 19.2.6 Injected current NA 19.2.7 Voltage dips and interruptions NA 19.2.8 Mains signals NA 19.2.9 NA 19.2.9 Radiated fleater NA 19.2.1 Radiation Hazard #2 19.2.2 Radiated fleater NA 19.2.3 Radiated fleater NA 19.2.4 Radiation Hazard #2 19.2.5 Modulated accessible emission warning NA 19.2.6 Rampex Followcharts showing the assessment of optical radiation safety of LEDs in electric toys 19.2.5 Ramples of calculations on LEDs 19.2.6 Rampex Followcharts showing the assessment of optical radiation safety of LEDs in electric toys 19.2.5 Ramples of calculations on LEDs 19.3 Rafety of remote controls for electric ride-on toys 19.4 Rampex Followcharts of Annex E 19.4 Rampex Followcharts of Annex E 19.5 Ramples of calculations on LEDs 19.5 Ramples of calculations on LED	18	Resistance to heat and fire	Р
19 Radiation and similar hazards 19.1 General 19.2 Optical radiation (In Annex E) 19.3 Other electromagnetic radiation (In Annex I) 19.3 Other electromagnetic radiation (In Annex I) Annex A Experimental sets NA Annex B Needle flame test NA Annex C Automatic controls and switches NA C.1 Automatic controls NA C.2 Switches NA Annex D Electric toys with protective electronic circuits NA D.1 General NA D.2 Dangerous malfunction NA D.2.1 General NA D.2.2 Electrostatic discharges NA D.2.3 Radiated fields NA D.2.4 Transient bursts NA D.2.5 Voltage surges NA D.2.6 Injected current NA D.2.7 Voltage dips and interruptions NA D.2.8 Mains signals NA Annex E Safety of electric toys incorporating optical radiation sources 19.E.2 - 19.E.4 Radiation Hazard #2 19.E.5 Modulated accessible emission warning NA Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys electric toys generating electromagnetic fields (EMF) NA Annex I Electric toys generating electromagnetic fields (EMF) NA Annex J Safety of remote controls for electric ride-on toys	18.1	Resistance to heat	NA
19.1 General 19.2 Optical radiation (In Annex E) 19.3 Other electromagnetic radiation (In Annex I) 19.3 Other electromagnetic radiation (In Annex I) 19.3 Needle flame test NA Annex A Needle flame test NA Annex C Automatic controls and switches NA C.1 Automatic controls NA C.2 Switches NA Annex D Electric toys with protective electronic circuits NA D.1 General NA D.2. Dangerous malfunction NA D.2.1 General NA D.2.2 Electrostatic discharges NA D.2.3 Radiated fields NA D.2.4 Transient bursts NA D.2.5 Voltage surges NA D.2.6 Injected current NA D.2.7 Voltage dips and interruptions NA D.2.8 Mains signals NA Annex E Safety of electric toys incorporating optical radiation sources 19.E.2 - 19.E.4 Radiation Hazard #2 Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys electric toys Annex G Examples of calculations on LEDs Annex I Electric toys generating electromagnetic fields (EMF) NA Annex J Safety of remote controls for electric ride-on toys	18.2	Resistance to fire	Р
19.2 Optical radiation (In Annex E) 19.3 Other electromagnetic radiation (In Annex I)	19	Radiation and similar hazards	
19.3 Other electromagnetic radiation (In Annex I)	19.1	General	
Annex A Experimental sets NA Annex B Needle flame test NA Annex C Automatic controls and switches NA C.1 Automatic controls NA C.2 Switches NA Annex D Electric toys with protective electronic circuits NA D.1 General NA D.2. Dangerous malfunction NA D.2.1 General NA D.2.2 Electrostatic discharges NA D.2.3 Radiated fields NA D.2.4 Transient bursts NA D.2.5 Voltage surges NA D.2.6 Injected current NA D.2.7 Voltage dips and interruptions NA D.2.8 Mains signals NA Annex E Safety of electric toys incorporating optical radiation sources 19.E.2 - 19.E.4 Radiation Hazard #2 19.E.5 Modulated accessible emission warning NA Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys electric toys Annex G Examples of calculations on LEDs Annex I Electric toys generating electromagnetic fields (EMF) NA Annex J Safety of remote controls for electric ride-on toys	19.2	Optical radiation (In Annex E)	
Annex B Needle flame test NA Annex C Automatic controls and switches NA C.1 Automatic controls NA C.2 Switches NA Annex D Electric toys with protective electronic circuits NA D.1 General NA D.2 Dangerous malfunction NA D.2.1 General NA D.2.2 Electrostatic discharges NA D.2.3 Radiated fields NA D.2.4 Transient bursts NA D.2.5 Voltage surges NA D.2.6 Injected current NA D.2.7 Voltage dips and interruptions NA D.2.8 Mains signals NA Annex E Safety of electric toys incorporating optical radiation sources 19.E.2 - 19.E.4 Radiation Hazard #2 19.E.5 Modulated accessible emission warning NA Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) NA Annex J Safety of remote controls for electric ride-on toys	19.3	Other electromagnetic radiation (In Annex I)	
Annex C Automatic controls and switches NA C.1 Automatic controls NA C.2 Switches NA Annex D Electric toys with protective electronic circuits NA D.1 General NA D.2 Dangerous malfunction NA D.2.1 General NA D.2.2 Electrostatic discharges NA D.2.3 Radiated fields NA D.2.4 Transient bursts NA D.2.5 Voltage surges NA D.2.6 Injected current NA D.2.7 Voltage dips and interruptions NA D.2.8 Mains signals NA D.2.9 Safety of electric toys incorporating optical radiation sources #2 19.E.2 - 19.E.4 Radiation Hazard #2 19.E.5 Modulated accessible emission warning NA Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) NA Annex J Safety of remote controls for electric ride-on toys	Annex A	Experimental sets	NA
C.1 Automatic controls NA C.2 Switches NA Annex D Electric toys with protective electronic circuits NA D.1 General NA D.2 Dangerous malfunction NA D.2.1 General NA D.2.2 Electrostatic discharges NA D.2.3 Radiated fields NA D.2.4 Transient bursts NA D.2.5 Voltage surges NA D.2.6 Injected current NA D.2.7 Voltage dips and interruptions NA D.2.8 Mains signals NA Annex E Safety of electric toys incorporating optical radiation sources 19.E.2 - 19.E.4 Radiation Hazard #2 19.E.5 Modulated accessible emission warning NA Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) NA Annex J Safety of remote controls for electric ride-on toys	Annex B	Needle flame test	NA
C.2 Switches NA Annex D Electric toys with protective electronic circuits NA D.1 General NA D.2 Dangerous malfunction NA D.2.1 General NA D.2.2 Electrostatic discharges NA D.2.3 Radiated fields NA D.2.4 Transient bursts NA D.2.5 Voltage surges NA D.2.6 Injected current NA D.2.7 Voltage dips and interruptions NA D.2.8 Mains signals NA Annex E Safety of electric toys incorporating optical radiation sources 19.E.2 - 19.E.4 Radiation Hazard #2 19.E.5 Modulated accessible emission warning NA Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex J Safety of remote controls for electric ride-on toys NA Annex J Safety of remote controls for electric ride-on toys NA	Annex C	Automatic controls and switches	NA
Annex D Electric toys with protective electronic circuits NA D.1 General NA D.2 Dangerous malfunction NA D.2.1 General NA D.2.2 Electrostatic discharges NA D.2.3 Radiated fields NA D.2.4 Transient bursts NA D.2.5 Voltage surges NA D.2.6 Injected current NA D.2.7 Voltage dips and interruptions NA D.2.8 Mains signals NA Annex E Safety of electric toys incorporating optical radiation sources 19.E.2 - 19.E.4 Radiation Hazard #2 19.E.5 Modulated accessible emission warning NA Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) NA Annex J Safety of remote controls for electric ride-on toys	C.1	Automatic controls	NA
D.1 General NA D.2 Dangerous malfunction NA D.2.1 General NA D.2.2 Electrostatic discharges NA D.2.3 Radiated fields NA D.2.4 Transient bursts NA D.2.5 Voltage surges NA D.2.6 Injected current NA D.2.7 Voltage dips and interruptions NA D.2.8 Mains signals NA Annex E Safety of electric toys incorporating optical radiation sources 19.E.2 - 19.E.4 Radiation Hazard #2 19.E.5 Modulated accessible emission warning NA Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) NA Annex J Safety of remote controls for electric ride-on toys NA	C.2	Switches	NA
D.2 Dangerous malfunction D.2.1 General D.2.2 Electrostatic discharges NA D.2.3 Radiated fields D.2.4 Transient bursts D.2.5 Voltage surges NA D.2.6 Injected current NA D.2.7 Voltage dips and interruptions D.2.8 Mains signals Annex E Safety of electric toys incorporating optical radiation sources 19.E.2 - 19.E.4 Radiation Hazard 42 19.E.5 Modulated accessible emission warning Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex J Safety of remote controls for electric ride-on toys NA NA NA NA NA NA NA NA NA N	Annex D	Electric toys with protective electronic circuits	NA
D.2.1 General NA D.2.2 Electrostatic discharges NA D.2.3 Radiated fields NA D.2.4 Transient bursts NA D.2.5 Voltage surges NA D.2.6 Injected current NA D.2.7 Voltage dips and interruptions NA D.2.8 Mains signals NA Annex E Safety of electric toys incorporating optical radiation sources 19.E.2 - 19.E.4 Radiation Hazard #2 19.E.5 Modulated accessible emission warning NA Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) NA Annex J Safety of remote controls for electric ride-on toys	D.1	General	NA
D.2.2 Electrostatic discharges D.2.3 Radiated fields D.2.4 Transient bursts D.2.5 Voltage surges D.2.6 Injected current D.2.7 Voltage dips and interruptions D.2.8 Mains signals Annex E Safety of electric toys incorporating optical radiation sources 19.E.2 - 19.E.4 Radiation Hazard 19.E.5 Modulated accessible emission warning Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex J Safety of remote controls for electric ride-on toys NA NA NA NA NA NA NA NA NA N	D.2	Dangerous malfunction	NA
D.2.3 Radiated fields NA D.2.4 Transient bursts NA D.2.5 Voltage surges NA D.2.6 Injected current NA D.2.7 Voltage dips and interruptions NA D.2.8 Mains signals NA Annex E Safety of electric toys incorporating optical radiation sources 19.E.2 - 19.E.4 Radiation Hazard #2 19.E.5 Modulated accessible emission warning NA Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) NA Annex J Safety of remote controls for electric ride-on toys NA	D.2.1	General	NA
D.2.4 Transient bursts D.2.5 Voltage surges NA D.2.6 Injected current NA D.2.7 Voltage dips and interruptions NA D.2.8 Mains signals NA Annex E Safety of electric toys incorporating optical radiation sources 19.E.2 - 19.E.4 Radiation Hazard #2 19.E.5 Modulated accessible emission warning NA Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) NA Annex J Safety of remote controls for electric ride-on toys NA	D.2.2	Electrostatic discharges	NA
D.2.5 Voltage surges NA D.2.6 Injected current NA D.2.7 Voltage dips and interruptions NA D.2.8 Mains signals NA Annex E Safety of electric toys incorporating optical radiation sources 19.E.2 - 19.E.4 Radiation Hazard #2 19.E.5 Modulated accessible emission warning NA Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) NA Annex J Safety of remote controls for electric ride-on toys	D.2.3	Radiated fields	NA
D.2.6 Injected current D.2.7 Voltage dips and interruptions D.2.8 Mains signals Annex E Safety of electric toys incorporating optical radiation sources 19.E.2 - 19.E.4 Radiation Hazard 19.E.5 Modulated accessible emission warning Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) Annex J Safety of remote controls for electric ride-on toys NA	D.2.4	Transient bursts	NA
D.2.7 Voltage dips and interruptions D.2.8 Mains signals Annex E Safety of electric toys incorporating optical radiation sources 19.E.2 - 19.E.4 Radiation Hazard 19.E.5 Modulated accessible emission warning Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) Annex J Safety of remote controls for electric ride-on toys NA	D.2.5	Voltage surges	NA
D.2.8 Mains signals Annex E Safety of electric toys incorporating optical radiation sources	D.2.6	Injected current	NA
Annex E Safety of electric toys incorporating optical radiation sources 19.E.2 - 19.E.4 Radiation Hazard #2 19.E.5 Modulated accessible emission warning NA Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) NA Annex J Safety of remote controls for electric ride-on toys NA	D.2.7	Voltage dips and interruptions	NA
19.E.2 - 19.E.4 Radiation Hazard #2 19.E.5 Modulated accessible emission warning NA Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) NA Annex J Safety of remote controls for electric ride-on toys NA	D.2.8	Mains signals	NA
19.E.5 Modulated accessible emission warning Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) Annex J Safety of remote controls for electric ride-on toys NA	Annex E	Safety of electric toys incorporating optical radiation sources	
Annex F Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) Annex J Safety of remote controls for electric ride-on toys NA		19.E.2 - 19.E.4 Radiation Hazard	#2
electric toys Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) Annex J Safety of remote controls for electric ride-on toys NA		19.E.5 Modulated accessible emission warning	NA
Annex G Examples of calculations on LEDs Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) NA Annex J Safety of remote controls for electric ride-on toys NA	Annex F	Flowcharts showing the assessment of optical radiation safety of LEDs in	
Annex H Explanation of the principles used for the requirements of Annex E Annex I Electric toys generating electromagnetic fields (EMF) NA Annex J Safety of remote controls for electric ride-on toys NA		,	
Annex I Electric toys generating electromagnetic fields (EMF) Annex J Safety of remote controls for electric ride-on toys NA	Annex G	Examples of calculations on LEDs	
Annex J Safety of remote controls for electric ride-on toys NA	Annex H	Explanation of the principles used for the requirements of Annex E	
•	Annex I		NA
Annex K Flow charts showing the application of Clause 9	Annex J	· · ·	NA
	Annex K	Flow charts showing the application of Clause 9	







Number: HKGH02979272

P = Pass NA = Not Applicable A = ApplicableAbbreviation:

Remark(s):

Clause 15.5 Batteries Primary batteries supplied with electric toys complied with the relevant parts of the IEC 60086 series.

Received test report: BAT180417N067-R1 and BAT180417N067-1-R1 from the applicant.

Intertek HK did not perform actual test for the standard.

Referred to test result in Annex E Clause 19.E.2-19.E.4. #2

Date sample received: Mar 07, 2023 Test Period: Mar 07, 2023 to Mar 29, 2023







Number: HKGH02979272

(6) **Optical Radiation**

Australian/New Zealand Standard AS/NZS 62115:2018+A1:2021 Safety of electric toys, Test Standard: Annex E

Clause	Title/Description	Result
19.E.2	Light-emitting diodes (LEDs)	Pass
19.E.3	Lasers (IEC 60825-1: 2014)	Not Applicable
19.E.4	UV-emitting lamps	Not Applicable

Table of measuring data

For White LED

used in mor (yellow diffu					
Condition	Measured Wavelength	Spectral Emission Bandwidth	Measuring Distance	Measured Radiant Intensity	Limit
Normal (with cover)	459nm (first peak) 563nm (second peak)	20.2nm	200mm	0.73mW/sr	0.13W/sr
Fault (with cover)	459nm (first peak) 563nm (second peak)	20.2nm	200mm	0.76mW/sr	0.13W/sr







Number: HKGH02979272

For White LED
used in flash light
(white diffused)

Condition	Measured Wavelength	Spectral Emission Bandwidth	Measuring Distance	Measured Radiant Intensity	Limit
Normal (without cover)	452nm (first peak) 528nm (second peak)	17.6nm	200mm	4.94mW/sr	0.13W/sr
Fault (without cover)	452nm (first peak) 528nm (second peak)	17.6nm	200mm	43.6mW/sr	0.13W/sr

Remark:

- 1. When determining the test conclusion, the Measurement Uncertainty of test has been considered. The decision rules are based on IEC Guide 115 with complying the relevant requirements of environment and equipment.
- 2. The test was conducted by operating the apparatus at rated voltage 6.0VDC.
- 3. 3 pcs. SMD yellow diffused White LEDs used in the Monitor unit of apparatus are identical to each other.
- 4. 1 pc. SMD white diffused White LED is used in the apparatus.
- 5. For white LEDs comprising a blue emitter and a phosphor coating, a peak wavelength of 500 nm shall be used as an approximation of the actual spectrum.

Date sample received: Mar 07, 2023

Testing period :Mar 07, 2023 to Mar 16, 2023





2/F Garment Centre

576 Castle Peak Road Kowloon, Hong Kong



Number: HKGH02979272

(7) Safety of Electric Toys

Test Standard : International Standard IEC 62115:2017+Cor1:2019 on Safety of electric toys

Age group for testing : For Ages Over 3 Years

Power source: 6V, LR6 size x 4 pcs

Included battery: Yes (R6P size x 4 pcs)

Operated function: sound, light and LCD display

<u>Clause</u>	Requirement	Assessment
1	Scope	
2	Normative reference	
3	Term and definitions	
4	General requirement	
5	General conditions for test	
5.2	Preconditioning	A
5.7.2	Carried out with one or more batteries reversed	Р
6	Criteria for reduced testing	NA
6.1	General	
6.2	Short-circuit resistance	NA
6.3	Low power electric toys	NA
6.4	Battery circuits	NA
7	Marking and instructions	Р
7.1	General	P#1
7.2	Markings on electric toys	Р
7.3	Instructions and markings on packaging	Р
7.4	Instructions for electric toys that can be connected to class I equipment	Р
7.5	Instructions for ride-on electric toys	NA
7.6	Temperature warnings	NA
8	Power input	NA
9	Heating and abnormal operation	Р
9.1	General	Р
9.2	Testing condition	
9.3	Normal operation	Р
9.4	Normal operation with insulation short-circuited	Р
9.5	Abnormal operation with temperature controls made inoperable	NA
9.6	Electric toys with accessible moving parts locked	NA





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Clause	Requirement .	Assessment
9.7	Additional transformers and power supplies	NA
9.8	Abnormal supply to electric toys via a USB connection	NA
9.9	Fault condition in electronic circuits	Р
9.10	Compliance criteria	Р
10	Electric strength	Р
10.1	Electric strength at operating temperature	Р
10.2	Electric strength under humid conditions	Р
11	Electric toys used in water, electric toys used with liquid and electric toys	NA
	cleaned with liquid	
	To be used with liquid and electric toys intended to filled from a tap	NA
	To be cleaned with liquid	NA
	To be used in water	NA
12	Mechanical strength	Р
12.1	Enclosures	Р
12.2	Attachment strength	NA
13	Construction	Р
13.1	Nominal supply voltage	Р
13.2	Transformers, power supplies and battery chargers	NA
13.3	Thermal cut-outs	NA
13.4	Batteries	Р
13.5	Plug and sockets	Р
13.6	Charging batteries	Р
13.7	Series motors	NA
13.8	Working voltage	NA
13.9	Electric toys connecting to other equipment	Р
13.10	Speed limitation of ride-on electric toys	NA
14	Protection of cords and wires	Р
14.1	Edges and moving parts	Р
14.2	Fixed parts	Р
15	Components	Р
15.1.1	General	Р
15.1.2	Switches and automatic controls	NA
15.1.3	Other components	Р
15.2	Prohibited components	Р
15.3	Transformers and power supplies	NA
15.4	Battery chargers	NA
15.5	Batteries	
	Supplied primary batteries comply with the relevant parts of the IEC 60086 series	#2
	Supplied secondary batteries comply with IEC 62133	NA
16	Screws and connections	Р







Number: HKGH02979272

<u>Clause</u>	Requirement	Assessment
16.1	Fixings	Р
16.2	Connections	NA
17	Clearances and creepage distances	Р
18	Resistance to heat and fire	Р
18.1	Resistance to heat	NA
18.2	Resistance to fire	Р
19	Radiation and similar hazards	
19.1	General	
19.2	Optical radiation (In Annex E)	
19.3	Other electromagnetic radiation (In Annex I)	
Annex A	Experimental sets	NA
Annex B	Needle flame test	NA
Annex C	Automatic controls and switches	NA
C.1	Automatic controls	NA
C.2	Switches	NA
Annex D	Electric toys with protective electronic circuits	NA
D.1	General	NA
D.2	Dangerous malfunction	NA
D.2.1	General	NA
D.2.2	Electrostatic discharges	NA
D.2.3	Radiated fields	NA
D.2.4	Transient bursts	NA
D.2.5	Voltage surges	NA
D.2.6	Injected current	NA
D.2.7	Voltage dips and interruptions	NA
D.2.8	Mains signals	NA
Annex E	Safety of electric toys incorporating optical radiation sources	
	19.E.2 - 19.E.4 Radiation Hazard	#3
	19.E.5 Modulated accessible emission warning	
Annex F	Flowcharts showing the assessment of optical radiation safety of LEDs in	
	electric toys	
Annex G	Examples of calculations on LEDs	
Annex H	Explanation of the principles used for the requirements of Annex E	
Annex I	Electric toys generating electromagnetic fields (EMF)	NA
Annex J	Safety of remote controls for electric ride-on toys	NA
Annex K	Flow charts showing the application of Clause 9	







Number: HKGH02979272

Abbreviation: P = Pass NA = Not Applicable A = Applicable

Remark(s):

#1 = Only the English version of the marking and instructions were assessed. According to the standard, instruction sheets and other texts required by the standard shall be written in the official language of the country in which the product is to be sold.

#2 = Clause 15.5 Batteries Primary batteries supplied with electric toys complied with the relevant parts of the IEC 60086 series.

Received test report: BAT180417N067-R1 and BAT180417N067-1-R1 from the applicant. Intertek HK did not perform actual test for the standard.

#3 = Referred to test result in Annex E Clause 19.E.2-19.E.4.

Date sample received: Mar 07, 2023 Test Period: Mar 07, 2023 to Mar 29, 2023





Number: HKGH02979272

(8) Optical Radiation

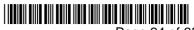
Test Standard: International Standard IEC 62115:2017+Cor1:2019 Safety of electric toys, Annex E

Clause	Title/Description	Result
19.E.2	Light-emitting diodes (LEDs)	Pass
19.E.3	Lasers (IEC 60825-1: 2014)	Not Applicable
19.E.4	UV-emitting lamps	Not Applicable

Table of measuring data

For White LED

used in mor (yellow diffu	nitor unit				
Condition	Measured Wavelength	Spectral Emission Bandwidth	Measuring Distance	Measured Radiant Intensity	Limit
Normal (with cover)	459nm (first peak) 563nm (second peak)	20.2nm	200mm	0.73mW/sr	0.13W/sr
Fault (with cover)	459nm (first peak) 563nm (second peak)	20.2nm	200mm	0.76mW/sr	0.13W/sr







Number: HKGH02979272

For White LED				
used in flash light				
(white diffused)				

(
Condition	Measured Wavelength	Spectral Emission Bandwidth	Measuring Distance	Measured Radiant Intensity	Limit
Normal (without cover)	452nm (first peak) 528nm (second peak)	17.6nm	200mm	4.94mW/sr	0.13W/sr
Fault (without cover)	452nm (first peak) 528nm (second peak)	17.6nm	200mm	43.6mW/sr	0.13W/sr

Remark:

- 1. When determining the test conclusion, the Measurement Uncertainty of test has been considered. The decision rules are based on IEC Guide 115 with complying the relevant requirements of environment and equipment.
- 2. The test was conducted by operating the apparatus at rated voltage 6.0VDC.
- 3. 3 pcs. SMD yellow diffused White LEDs used in the Monitor unit of apparatus are identical to each other.
- 4. 1 pc. SMD white diffused White LED is used in the apparatus.
- 5. For white LEDs comprising a blue emitter and a phosphor coating, a peak wavelength of 500 nm shall be used as an approximation of the actual spectrum.

Date sample received: Mar 07, 2023

Testing period :Mar 07, 2023 to Mar 16, 2023

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