

TEST REPORT

Product Name : NICKELODEON PAW PATROL ADVENTURE KIT
Model Number : PW-V339, PW- V339.3Xv8 (PW-V302.11Xv0)

Prepared for : eKids, LLC. / KIDDESIGNS INC.
Address : 1299, Main Street, Rahway, NJ 07065, U.S.A.

Prepared by : EMTEK(Dongguan) CO., LTD.
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Report Number : ED191213056L
Date(s) of Tests : December 17, 2019
Date of issue : December 17, 2019



TEST REPORT

EN 60825-1

Safety of laser products

Part 1: Equipment classification, requirements and user's guide

Report reference No.: ED191213056L

Tested by: Tim Zhou

Approved by: June Luo

Date of issue: December 17, 2019

Contents: 9 pages



Testing laboratory

Name: EMTEK(Dongguan) CO., LTD.

Address: -1&2F., Building 2, Zone A, Zhongda Marine Biotechnology Research and Development Base, No. 9, Xincheng Avenue, Songshanhu High-technology Industrial Development Zone, Dongguan, Guangdong, China

Testing location: Same as above

Client

Applicant name: eKids, LLC. / KIDDESIGNS INC.

Address: 1299, Main Street, Rahway, NJ 07065, U.S.A.

Manufacturer name: eKids, LLC. / KIDDESIGNS INC.

Address: 1299, Main Street, Rahway, NJ 07065, U.S.A.

Factory.....: DONGGUAN WILLIE PLASTIC & METAL CO., LTD.

Address: NO.23, DAWO INDUSTRY ONE ROAD, XIAGONGTAN INDUSTRIAL AREA, FENGGANG TOWN, DONGGUAN CITY, GUANGDONG PROVINCE, CHINA.

Country of Origin: CHINA

Country of Destination.....: EU

Test specification

Reference Standard: EN 60825-1:1994+A2:2001+A1:2002

EN 62115:2005+A12:2015 Annex E

Test item

Product name: NICKELODEON PAW PATROL ADVENTURE KIT

Trademark: NICKELODEON

Model and/or type reference: PW-V339, PW- V339.3Xv8 (PW-V302.11Xv0)

Rating(s): DC1.5V (DC1.5V×1, "AA" size battery)

<p>Test item particulars</p> <p>Equipment mobility: Movable</p>
<p>Classification of laser product</p> <p>LED product class of the equipment: Class 1</p>
<p>Test case verdicts</p> <p>Test case does not apply to the test object: N/A</p> <p>Test item does meet the requirement: P(Pass)</p> <p>Test item does not meet the requirement: F(Fail)</p>
<p>Testing</p> <p>Date of receipt of test item: December 13, 2019</p> <p>Date(s) of performance of test: December 17, 2019</p>
<p>General remarks:</p> <p>This report shall not be reproduced except in full without the written approval of the testing laboratory. The test results presented in this report relate only to the item(s) tested. Throughout this report a point is used as the decimal separator.</p>
<p>General product information:</p> <ol style="list-style-type: none"> 1. In normal use, the toy was operated by 1 piece DC1.5V “AA” size battery. 2. The requirement of EN 62115 (Annex E) for LED product was included in this test report. 3. Above models are identical except for model names and appearance.
<p>Summary of testing:</p> <ol style="list-style-type: none"> 1. The toy was tested according EN 60825-1:1994+A2:2001+A1:2002 and EN 62115:2005+A12:2015 2. The enclosures have been removed before test.
<p>Conclusion:</p> <p>The measured emission level of LED used in the apparatus did not exceed the accessible emission level of class 1.</p>

1.1 LED Radiant Power Test Result (Cl.3 & Cl.8 & Cl.9) for White LED
I) TESTS DURING OPERATION

Step	Specified / measured / calculated	unit
Typical wavelength of LED	First peak wavelength =434.0 Second peak wavelength =539.0	nm
Multiple or single wavelengths	Multiple wavelengths	/
Operation mode	CW	/
Time basis	t = 100s for class 1	s
Size of apparent source	1.11	mm
Angular subtense	11.1	mrاد
Limiting angular subtense	$\alpha_{\min} = 1.5; \alpha_{\max} = 100$	mrاد
Angle of acceptance	11	mrاد
Diameter of aperture stop	d=7.0	mm
Distance of aperture stop to source	For thermal r = 34.0mm Note: $r = (100 \text{ mm}) \sqrt{\frac{\alpha + 0,46 \text{ mrad}}{\alpha_{\max}}}$, When $\alpha_{\min} < \alpha \leq \alpha_{\max}$.	/
	For photochemical r =100.9mm Note: r = 100mm × ($\alpha/11$) when t ≤ 100 s and $\alpha_{\min} < \alpha \leq 11 \text{ mard}$	
Used formula	Class 1: Retinal thermal hazard limit $\alpha > 1.5 \text{ mrad}: 7 \times 10^{-4} C_6 T_2^{-0.25} \text{W}$, when t > T ₂ Retinal photochemical hazard limit: $3.9 \times 10^{-5} C_3$	/
Used correction factors (400nm < λ < 1400nm)	$C_6 = \alpha / \alpha_{\min} = 7.4$, for $\alpha_{\min} < \alpha \leq \alpha_{\max}$ $T_2 = 10 \times 10^{[(\alpha - \alpha_{\min}) / 98.5]} = 12.516 \text{ s}$ $C_3 = 10^{0.02(\lambda - 450)} = /$	/

Retinal thermal hazard (RTH):

Accessible emission limit of Class 1 (mW)	Measured maximum emission power / energy (mW)	Verdict
2.75E+00	1.41E+00	Pass

Retinal photochemical hazard (RPH):				
Wavelength	Accessible emission limit of Class 1 (mW)	Measured maximum emission power (mW)	ϕ /AEL	Verdict
400-440nm	3.90E-02	8.16E-03	2.09E-01	Pass
440-460nm	3.90E-02	2.82E-03	7.24E-02	
460-480nm	1.55E-01	3.23E-04	2.08E-03	
480-500nm	3.90E-01	2.93E-04	7.51E-04	
500-520nm	9.80E-01	9.06E-04	9.25E-04	
520-540nm	2.46E+00	1.33E-03	5.42E-04	
540-560nm	6.18E+00	1.35E-03	2.18E-04	
560-580nm	1.55E+01	1.24E-03	7.97E-05	
580-600nm	4.10E+00	1.06E-03	2.57E-04	
SUM (ϕ /AEL)=0.287 < 1				

II) TESTS WITH PARTS SUCH AS LENSES, REFLECTORS OR FILTERS THAT COULD AFFECT FOCUSING REMOVED

Step	Specified / measured / calculated	unit
Typical wavelength of LED	First peak wavelength =434.0 Second peak wavelength =539.0	nm
Multiple or single wavelengths	Multiple wavelengths	/
Operation mode	CW	/
Time basis	t = 100s for class 1	s
Size of apparent source	1.11	mm
Angular subtense	11.1	mrad
Limiting angular subtense	$\alpha_{\min} = 1.5; \alpha_{\max} = 100$	mrad
Angle of acceptance	11	mrad
Diameter of aperture stop	d=7.0	mm
Distance of aperture stop to source	For thermal r = 34.0mm Note: $r = (100 \text{ mm}) \sqrt{\frac{\alpha + 0,46 \text{ mrad}}{\alpha_{\max}}}$, When $\alpha_{\min} < \alpha \leq \alpha_{\max}$.	/
	For photochemical r =100.9mm Note: r = 100mm × (α/11) when t ≤ 100 s and $\alpha_{\min} < \alpha \leq 11 \text{ mard}$	
Used formula	Class 1: Retinal thermal hazard limit $\alpha > 1.5 \text{ mrad}: 7 \times 10^{-4} C_6 T_2^{-0.25} \text{ W}$, when $t > T_2$ Retinal photochemical hazard limit: $3.9 \times 10^{-5} C_3$	/
Used correction factors (400nm < λ < 1400nm)	$C_6 = \alpha / \alpha_{\min} = 7.4$, for $\alpha_{\min} < \alpha \leq \alpha_{\max}$ $T_2 = 10 \times 10^{[(\alpha - \alpha_{\min}) / 98.5]} = 12.516 \text{ s}$ $C_3 = 10^{0.02(\lambda - 450)} = /$	/

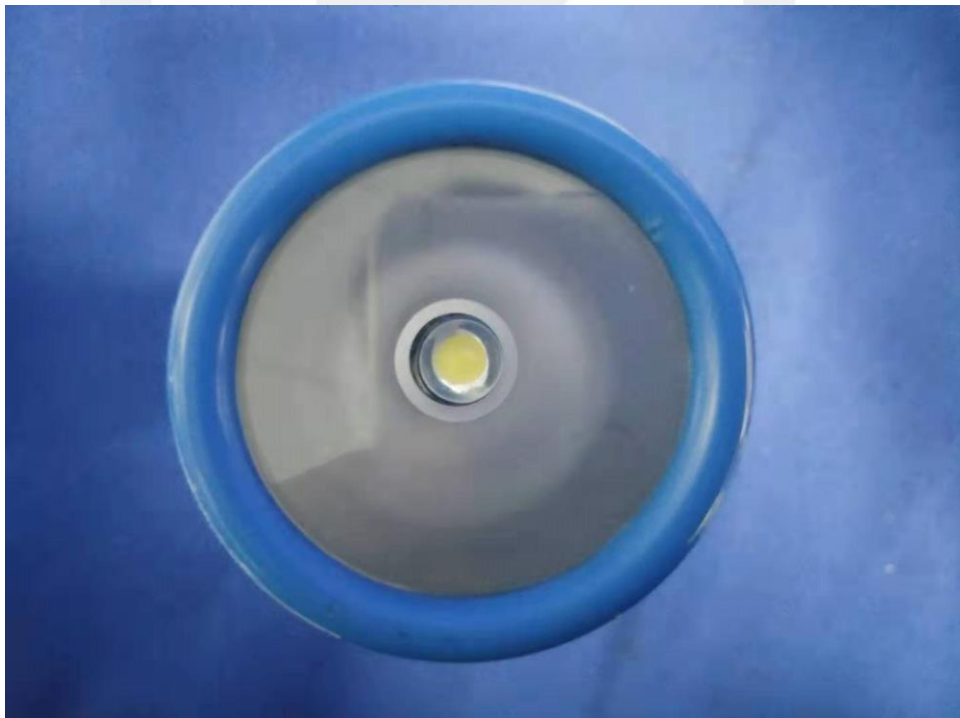
Retinal thermal hazard (RTH):		
Accessible emission limit of Class 1 (mW)	Measured maximum emission power / energy (mW)	Verdict
2.75E+00	1.27E+00	Pass

Retinal photochemical hazard (RPH):				
Wavelength	Accessible emission limit of Class 1 (mW)	Measured maximum emission power (mW)	ϕ /AEL	Verdict
400-440nm	3.90E-02	7.33E-03	1.88E-01	Pass
440-460nm	3.90E-02	2.54E-03	6.50E-02	
460-480nm	1.55E-01	2.90E-04	1.87E-03	
480-500nm	3.90E-01	2.63E-04	6.74E-04	
500-520nm	9.80E-01	8.14E-04	8.31E-04	
520-540nm	2.46E+00	1.20E-03	4.87E-04	
540-560nm	6.18E+00	1.21E-03	1.96E-04	
560-580nm	1.55E+01	1.11E-03	7.15E-05	
580-600nm	4.10E+00	9.49E-04	2.31E-04	
SUM (ϕ /AEL)=0.257 < 1				

Photo:



Overview



Part view

*** End of Report ***

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