Certificate of UN Test for Lithium-ion Battery Pack

Customer Model : iRobol Denali ABL-D2 (main FET)

Global Code : F12433011

Product Name : Lithium Ion Battery Pack

Test Laboratory : Manufacturer

Panasonic Energy Mexico S.A. de C.V. Av. Santa Barbara No. 601 Ex-Ejido San Nicolas

Escobedo, NL, Mexico, CP 66050 Telephone: 469-362-5600

email: RBG-Regulatory@us.panasonic.com URL: https://na.industrial.panasonic.com

Dang Down

Gary Drew, Compliance Specialist III

Panasonic Industrial Devices Sales Company of

America

3461 Plano Parkway The Colony, TX 75056 Telephone: 469-362-5600

email: RBG-Regulatory@us.panasonic.com URL: https://na.industrial.panasonic.com

[Manufacturer] SUZ

Sanyo Energy (Suzhou) Co., Ltd.

No.86, Sunwu Road, Xukou Town, Wuzhong

District,

Suzhou City, Jiangsu, P.R. China

Telephone: 469-362-5600

email: RBG-Regulatory@us.panasonic.com URL: https://na.industrial.panasonic.com

We Declare this LI-Ion Battery Pack has passed UN Test.

Report Number: 104040292DET-001

Manual of Tests and Criteria (38.3 Lithium Batteries) No. Test Item	Test Results	Note	Number of test batteries/cells	
T 1 Altitude simulation	Pass			
T 2 Thermal test	Pass		4 small batteries at first cycle, fully charged	4 small batteries after 25 cycles ending fully charged states.
T 3 Vibration	Pass			
T 4 Shock	Pass			
T 5 External short circuit	Pass			
T 6 Crush	Pass	N/A		
T 7 Overcharge	Pass		First cycle, fully charged 4 batteries	After 25 cycles, fully charged 4 batteries.
T 8 Forced discharge	Pass	N/A		

*The test data may contain additional test result other than above table.

Lithium Ion Battery Pack

Item	Nominal value	Notes
Watt-hour rating	32 Wh	Robot + TA
Pack Weight	251 g	The state of the s
Physical description	Brand & Model: iRobol Denali ABL-D2 (main FET)	SCHOOL STATE OF STATE
Lithium equivalent content	3.24 g	BO MANAGEMENT

Above test procedures are compliant to the following manual: (Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Amend 1) Effective Date: 2017

Report Numbers: TW2012116-001, TW2012117-001

Certificate of UN Test for Lithium-ion Battery Pack

Customer Model iRobot ABL-D2A

Global Code

Product Name Lithium Ion Battery Pack

Third Party - AnTek Certifications Inc. Test Laboratory

> AnTek Certification Inc. 7F, No. 351, Yangguang Street

Nei-Hu District

Taipei City 11491, Taiwan, R.O.C. Tel: +886-2-8752-3779

Email: atc@atclab.com.tw

URL: http://www.atclab.com.tw/en/

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2/3/2021

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3461 Plano Parkway The Colony, TX 75056 Telephone: 469-362-5600

email: RBG-Regulatory@us.panasonic.com URL: https://na.industrial.panasonic.com

[Manufacturer] SUZ

Sanyo Energy (Suzhou) Co., Ltd.

No.86, Sunwu Road, Xukou Town, Wuzhong

District,

Suzhou City, Jiangsu, P.R. China

Telephone: 469-362-5600

email: RBG-Regulatory@us.panasonic.com URL: https://na.industrial.panasonic.com

We Declare this LI-lon Battery Pack has passed UN Test.

(38	nual of Tests and Criteria .3 Lithium Batteries) . Test Item	Test Results	Note	Number of test batteries/cells	
Τ.	1 Altitude simulation	Pass			
Τ 2	2 Thermal test	Pass		4 small batteries at first cycle, fully charged	4 small batteries after 25 cycles ending fully charged states.
Т (3 Vibration	Pass			
Τ	1 Shock	Pass			
T 5	External short circuit	Pass			
T 6	6 Crush	Pass	N/A		
т :	7 Overcharge	Pass		First cycle, fully charged 4 batteries	After 25 cycles, fully charged 4 batteries.
T 8	B Forced discharge	Pass	N/A		

*The test data may contain additional test result other than above table.

Lithium Ion Battery Pack

Item	Nominal value	Notes
Watt-hour rating	32 Whr	with the same of t
Pack Weight	244.5 g	
Physical description	Brand & Model: iRobot ABL-D2A	
Lithium equivalent content	2.94 g	

Above test procedures are compliant to the following manual: (Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Amend 1)

Effective Date:

Report Numbers: TW2106113-001, TW2106114-001

Certificate of UN Test for Lithium-ion Battery Pack

Customer Model iRobot ABL-D2B

Global Code

Product Name Lithium Ion Battery Pack

Third Party - AnTek Certifications Inc. Test Laboratory

> AnTek Certification Inc. 7F, No. 351, Yangguang Street

Nei-Hu District

Taipei City 11491, Taiwan, R.O.C.

Tel: +886-2-8752-3779 Email: atc@atclab.com.tw

URL: http://www.atclab.com.tw/en/

Gary Drew, Compliance Specialist III

Panasonic Industrial Devices Sales Company of

7/19/2021

America

3461 Plano Parkway The Colony, TX 75056 Telephone: 469-362-5600

email: RBG-Regulatory@us.panasonic.com URL: https://na.industrial.panasonic.com

[Manufacturer] SUZ

Sanyo Energy (Suzhou) Co., Ltd.

No.86, Sunwu Road, Xukou Town, Wuzhong

District,

Suzhou City, Jiangsu, P.R. China

Telephone: 469-362-5600

email: RBG-Regulatory@us.panasonic.com URL: https://na.industrial.panasonic.com

We Declare this LI-lon Battery Pack has passed UN Test.

(38	nual of Tests and Criteria .3 Lithium Batteries) . Test Item	Test Results	Note	Number of test batteries/cells	
T -	1 Altitude simulation	Pass			
T 2	2 Thermal test	Pass		4 small batteries at first cycle, fully charged	4 small batteries after 25 cycles ending fully charged states.
Т 3	3 Vibration	Pass			
ΤZ	1 Shock	Pass			
T 5	External short circuit	Pass			
T 6	Crush	Pass	N/A		
Т 7	7 Overcharge	Pass		First cycle, fully charged 4 batteries	After 25 cycles, fully charged 4 batteries.
T 8	Forced discharge	Pass	N/A		

*The test data may contain additional test result other than above table.

Lithium Ion Battery Pack

Item	Nominal value	Notes	
Watt-hour rating	32 Whr	1.000	
Pack Weight	246 g		
Physical description	Brand & Model: iRobot ABL-D2B		
Lithium equivalent content	2.94 g		

Above test procedures are compliant to the following manual:

(Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7)

2021 Effective Date: