

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

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.

Manual of Tests and Criteria (38.3 Lithium Batteries)		Test Results	Note	Number of test batteries/cells	
No.	Test Item				
T 1	Altitude simulation	Pass		4 small batteries at first cycle, fully charged	4 small batteries after 25 cycles ending fully charged states.
T 2	Thermal test	Pass			
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		
Pack Weight	251 g		
Physical description	Brand & Model: iRobol Denali ABL-D2 (main FET)		
Lithium equivalent content	3.24 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: 2017

Certificate of UN Test for Lithium-ion Battery Pack



Customer Model : iRobot ABL-D2A
Global Code : n/a
Product Name : Lithium Ion Battery Pack

Test Laboratory : Third Party - AnTek Certifications Inc.

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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Sanyo Energy (Suzhou) Co., Ltd.
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Suzhou City, Jiangsu, P.R. China
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We Declare this LI-Ion Battery Pack has passed UN Test.

Manual of Tests and Criteria (38.3 Lithium Batteries)		Test Results	Note	Number of test batteries/cells	
No.	Test Item				
T 1	Altitude simulation	Pass		4 small batteries at first cycle, fully charged	4 small batteries after 25 cycles ending fully charged states.
T 2	Thermal test	Pass			
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 Whr	
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: 2017

Certificate of UN Test for Lithium-ion Battery Pack



Customer Model : iRobot ABL-D2B
 Global Code : n/a
 Product Name : Lithium Ion Battery Pack

Test Laboratory : Third Party - AnTek Certifications Inc.

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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 The Colony, TX 75056
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 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.

Manual of Tests and Criteria (38.3 Lithium Batteries)		Test Results	Note	Number of test batteries/cells	
No.	Test Item				
T 1	Altitude simulation	Pass		4 small batteries at first cycle, fully charged	4 small batteries after 25 cycles ending fully charged states.
T 2	Thermal test	Pass			
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 Whr	
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)
 Effective Date: 2021