

JAPAN BUSINESS LOGISTICS
PACKAGING TEST REPORT

TEST PURPOSE : ISTA 7D
Evaluation test for the thermal packaging

CLIENT : Panasonic Corporation

TEST SPECIMEN : VIXELL

TEST LABORATORY : Japan Business Logistics Co., Ltd.

TEST DATE : Aug. 31, 2019 through Sep. 7, 2019

ISSUE DATE : Sep. 13, 2019

OPERATOR : Terumi Ishii


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Member ID: ST-9785

1.0 TEST DESCRIPTION

TEST PURPOSE	To evaluate the effects of external temperature exposure for the transit tested thermal package.	
TEST SPECIMEN	VIXELL	
	Package Type : Thermal Package	<p data-bbox="1054 607 1273 636" style="text-align: center;">TEST SPECIMEN</p> 
	Packaged Size: 510L x 370W x 410H mm	
	Packaged-Weight : 12.63 kg	
	Number of Test Specimen : 1 pc	
TEST SEQUENCE	TEST STANDARD : ISTA 7D	
	1、 Preconditioning (Temperature)	
	2、 24 hour domestic small package express freight transport (Air) SUMMER PROFILE (Hot Shipping & Hot Receiving) x 5 times	



2.0 TEST SEQUENCE

1.0 Preconditioning (Temperature)	
Temperature & Duration	Thermal outer case : 5°C, 24 hours *The cover was being opened.
	Thermal Unit (Body, Lid, Tray) w/logger : 3°C, 48 hours *The lid was being removed from the body.
Test date	Thermal outer case : Sep.1, 2019 ~ Sep.2, 2019
	Thermal unit : Aug. 31, 2019 ~ Sep. 2, 2019
Equipment	Thermal outer case : ESPEC Chamber model 05 PL-4J
	Thermal Unit : ESPEC Chamber model 02 PL-4KP
Calibration date	Model 05 PL-4J: Jun.21, 2019 (Calibration due: Jun.21, 2020)
	Model 02 PL-4KP: Jun.21, 2019 (Calibration due: Jun.21, 2020)

2.0 24 hour domestic small package express freight transport (Air)																													
SUMMER PROFILE Hot Shipping & Hot Receiving	<p>24 hour domestic small package express freight transport (Air):</p> <table border="1"> <thead> <tr> <th colspan="4">SUMMER PROFILE</th> </tr> <tr> <th colspan="4">Hot Shipping & Hot Receiving</th> </tr> <tr> <th>Temperature</th> <th>Cycle Period</th> <th>Cycle Period Hours</th> <th>Total Time Hours</th> </tr> </thead> <tbody> <tr> <td>22°C (72°F)</td> <td>1</td> <td>4</td> <td>4</td> </tr> <tr> <td>35°C (95°F)</td> <td>2</td> <td>2</td> <td>6</td> </tr> <tr> <td>30°C (86°F)</td> <td>3</td> <td>12</td> <td>18</td> </tr> <tr> <td>35°C (95°F)</td> <td>4</td> <td>6</td> <td>24</td> </tr> </tbody> </table>	SUMMER PROFILE				Hot Shipping & Hot Receiving				Temperature	Cycle Period	Cycle Period Hours	Total Time Hours	22°C (72°F)	1	4	4	35°C (95°F)	2	2	6	30°C (86°F)	3	12	18	35°C (95°F)	4	6	24
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	*Conduct the above cyclic test profile five times continuously.																												
Test Date	Sep.2, 2019 ~ Sep.7, 2019																												
Equipment	ESPEC Chamber model 04 PL-4KP																												
Calibration date	Jun.21, 2019 (Calibration due: Jun.21, 2020)																												

3.0 PHOTO

Preconditioning : Thermal outer case



項目	設定値	表示値
温度	5.0°C	5.0°C
湿度	OFF	100%RH

Preconditioning : Thermal Unit (Body, Lid, Tray) w/logger



項目	設定値	表示値
槽内温度	+3.0°C	+3.0°C
槽内湿度	OFF	98%RH

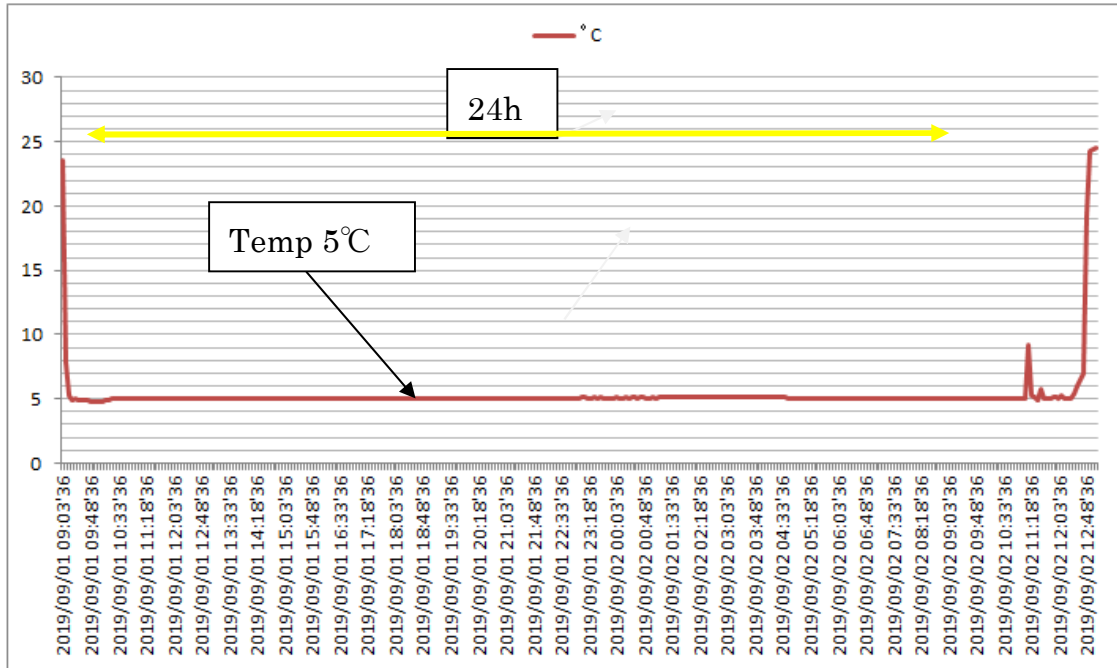
24 hour domestic small package express freight transport (Air)
SUMMER PROFILE
Hot Shipping & Hot Receiving



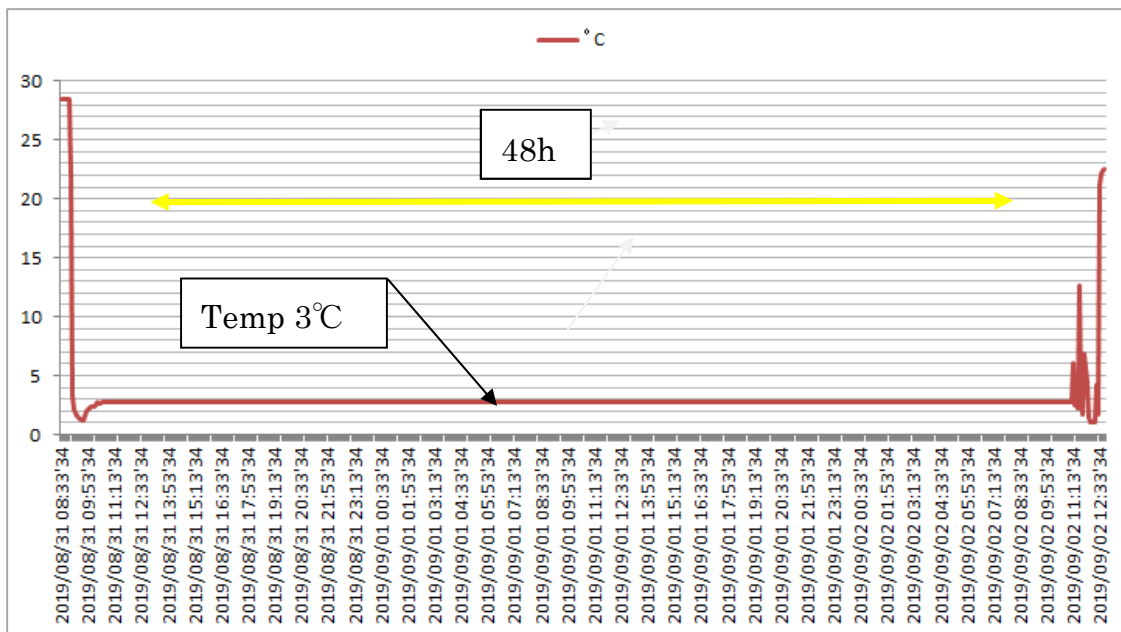
項目	設定値	表示値
槽内温度	+35.0°C	+35.0°C
槽内湿度	OFF	100%RH

4.0 TEST DATA

Preconditioning : Thermal outer case



Preconditioning : Thermal Unit (Body, Lid, Tray)



SUMMER PROFILE : Hot Shipping & Hot Receiving

