

TEST REPORT

1. **Report Number** KR16-YYP0022
2. **Applicant**
 - Name Hanwha Techwin Co., Ltd
 - Address 1204, Changwon-daero, Seongsan-gu, Changwon-si, Gyeongsangnam-do, Korea
 - Date of Receipt July 13, 2016
3. **Manufacturer**
 - Name Hanwha Techwin Co., Ltd
 - Address 1204, Changwon-daero, Seongsan-gu, Changwon-si, Gyeongsangnam-do, Korea
4. **Use of Report** For Quality management
5. **Test item description**
 - Product Name Network Camera
 - Model Name QNV-7080R* (*N: NTSC / P: PAL)
6. **Test method used** IEC 62262 and IEC 60068-2-75 (IK10)
7. **Date of Test** July 29, 2016
8. **Environment**
 - Temperature (15~35) °C
 - Relative Humidity (25~75) % R.H
 - Air pressure (86~106) kPa
9. **Test Results** No abnormal was found

※ This test results apply only to the test sample supplied by applicant and do not guarantee the whole product quality. This test report shall not be reproduced except in full, without the written approval by the KCTL Inc.

Affirmation	Tested by	Technical Manager
	Name : Young min, Jang (Signature)	Name : Do hong, Choi (Signature)

August. 01. 2016

KCTL INC.

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1. Test Laboratory

1.1 General

Name of Test Laboratory	KCTL INC.
Address	52-20, Sinjeong-ro 41 beon-gil, Giheung-gu, Yongin-si, Gyeonggi-do 446-599, Korea
TEL	82 31-326-6700
FAX	82 505-299-8311
Home page	www.kctl.co.kr

1.2 Certificate of Designated Testing Laboratory

Mark.	Registration No.
NRRA	KR0040
KOLAS	No. KT231
IEC(CB-Scheme)	TL512
TUV-SUD	CARAT 15 08 93040 001
VCCI Council	R-3327, C-3706, T-1849, G-198
DSP Research, Inc.	G039
FCC	Test Firm Registration No. 687132
INDUSTRY CANADA	Company Address Code: 8035A

2. Test equipment

2.1 Specification

Division	Specification
Product Name	Network Camera
Model Name	QNV-7080R* (*N: NTSC / P: PAL)
Etc.	-

- Basic model: QNV-7080R*
- Serise model: QNV-6070R*
- The basic model and series models are identical Hardware
- The model QNV-7080R* was conducted tests representatively.

2.2 Product Photograph



[Sample]

3. Test Method and Result

3.1 IK10 Impacts Test

3.1.1 Test Equipment

Number	Instrument description	Model Number	Manufacturer	Due Cal
1	20J IMPACT ELEMENT	N/A	CERTIS	2016-12-05
2	Measuring Tape	3.5 m	Komelon	2018-07-07
3	ELECTRONIC BALANCE	DB-150	CAS	2016-10-02
4	Pendulum Hammer	N/A	N/A	N/A

3.1.2 Reference Documents

IEC 62262 and IEC 60068-2-75

Degrees of protection provided by enclosure for electrical equipment against external mechanical impacts (IK code)

3.1.3 Test Performed

Degree of protection provided by enclosure for external impacts IK10

3.1.4 Test Conditions

According to standard IEC 62262 and IEC 60068-2-75

The verification of IK10 has been done positioning the enclosure on a rigid support.

5 impacts have been applied on each surface in sight with the enclosure.

For the test used Pendulum Hammer

IK10 (Characteristics of impact test):

Energy: 20 Joule

Mass: 5.0 kg

High Δh : 400 mm

3.1.5 Test Criteria

Visual inspection after impact test.

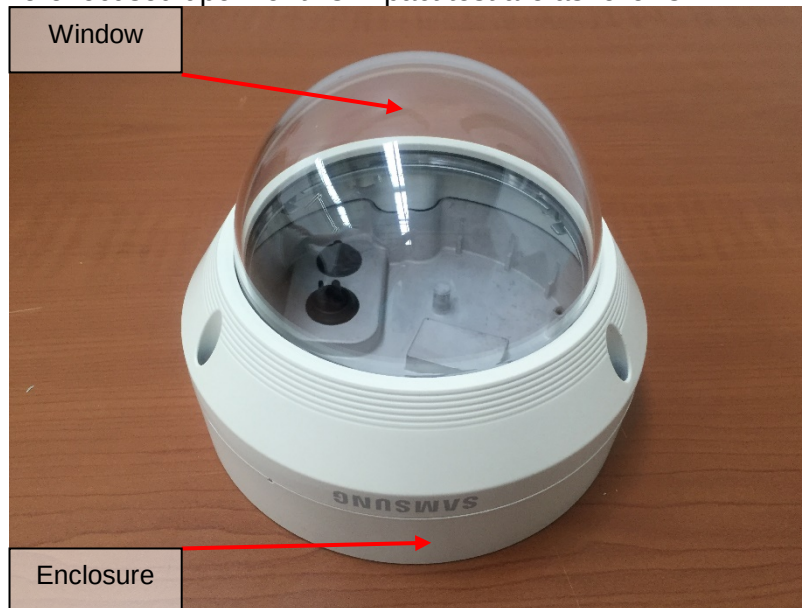
Check if breakage, Crack, separation occur.

Protection against direct contact

Allow extent of damage: Allow the damage of enclosure some crack

3.1.6 Drop Zones:

The areas that were focused upon for this impact test are as follows:

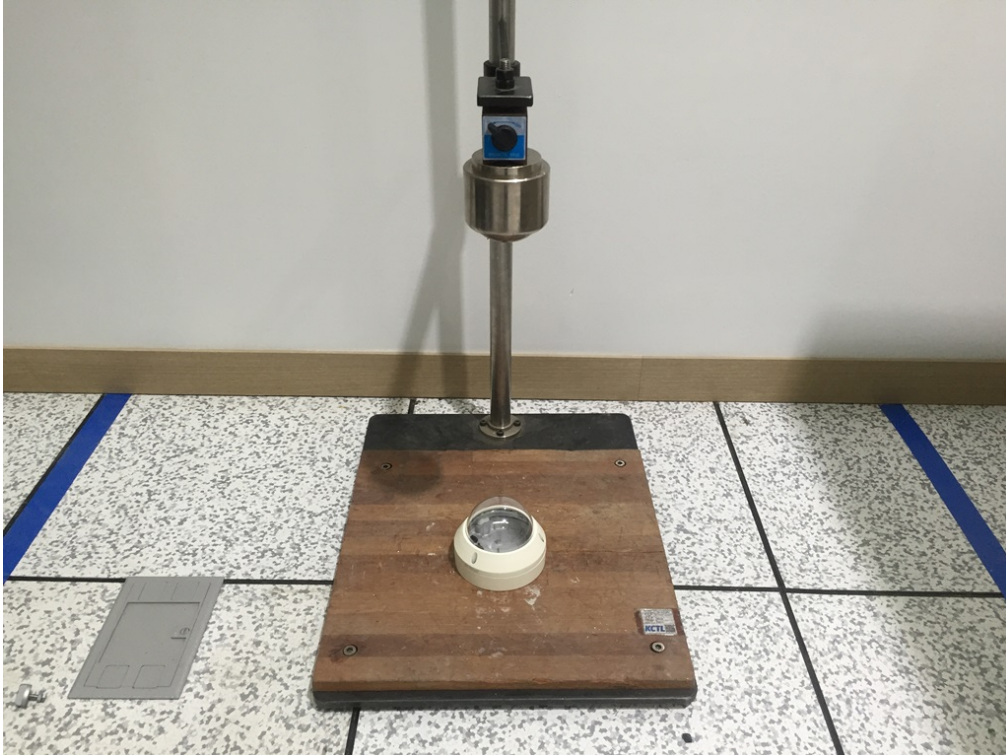


3.1.7 Test Results

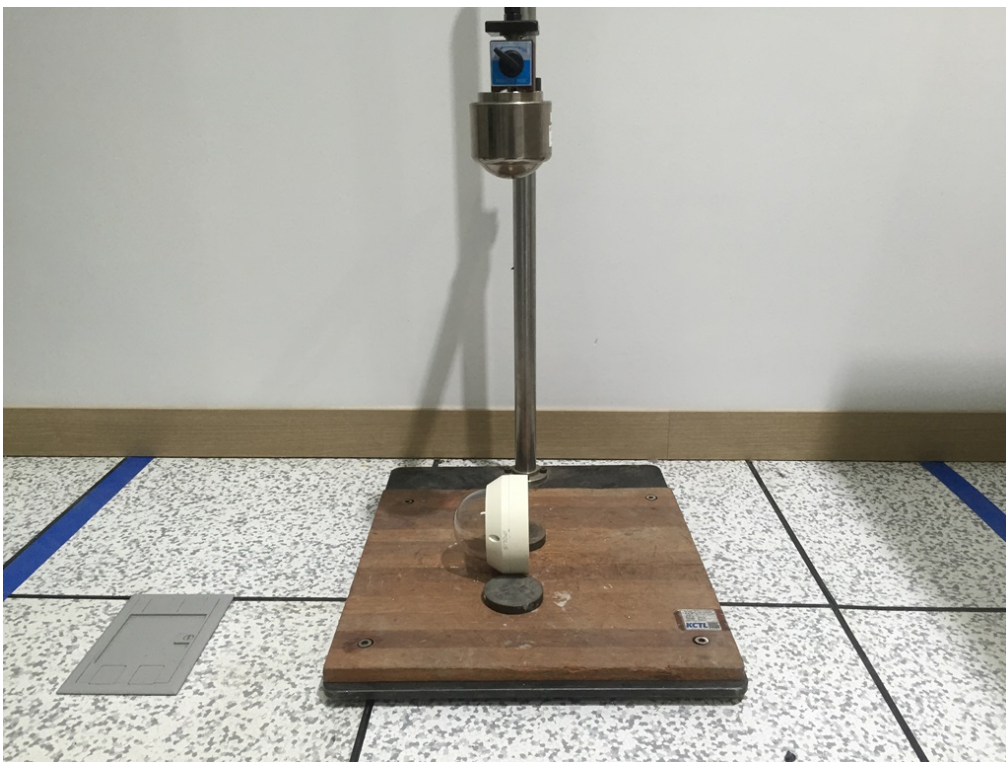
Drop Zone: Window		
Drop #	Orientation	Results
Drop 1	Vertical drop onto center of Window.	No abnormal was found ※ Refer to 3.1.8

Drop Zone: Enclosure		
Drop #	Orientation	Results
Drop 1	Normal to surface of enclosure.	No abnormal was found ※ Refer to 3.1.8
Drop 2	Normal to surface of enclosure, about 90° circumferentially from previous drop.	
Drop 3	Normal to surface of enclosure, about 90° circumferentially from previous drop.	
Drop 4	Normal to surface of enclosure, about 90° circumferentially from previous drop.	
Drop 5	Normal to surface of enclosure, about 90° circumferentially from previous drop.	

3.1.8 TEST Photograph



[During the test_Window]



[During the test_Enclosure]

3.1.9 Test Result Photograph



[Test result]