


# TEST REPORT

 CTK Co., Ltd. <small>The Power Leader of Global Republics Certification</small>	<b>CTK Co., Ltd.</b> 5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea Tel: +82-31-339-9970 Fax: +82-31-624-9501	Report No.: CTK-2022-00711 Page (1) / (16) pages	
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## 1. Client

- Name : Hanwha Techwin Co., Ltd
- Address : 6 Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 13488 KOREA
- Date of Receipt : 2022-02-25

## 2. Manufacturer

- Name : Hanwha Techwin Co., Ltd
- Address : 6 Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 13488 KOREA

## 3. Use of Report : Quality control

## 4. Test Sample / Model: Thermal Camera / TNM-C4940TD

## 5. Date of Test : 2022-03-03

## 6. Location of Test : Permanent Testing Lab    On Site Testing



(Address : 5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea)

## 7. Test Standard (method) used : KS C IEC 62262: 2005

## 8. Testing Environment: Temperature: (20.0 ± 1.0) °C, Humidity: (27.0 ± 1.0) %R.H.,

## 9. Test Results : Refer to each test items

The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This Test Report cannot be reproduced, except in full.

Affirmation	Tested by SooChan Bae  (Signature)	Technical Manager WonHyeon Choi  (Signature)
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2022-03-11

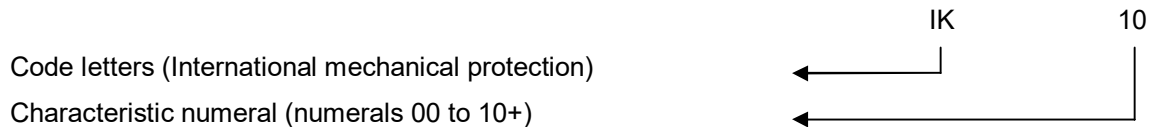
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# 1. Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)

## 1.1. Test standard: KS C IEC 62262: 2005

## 1.2. Arrangement of the IK code




## 1.3 Vertical Hammer

### 1.3.1 Test equipment

Equipment	Model	Manufacturer	Serial	Application
Spring impact hammer	Spring impact hammer (IEC 60068-2-75)	Kingpo Technology Development Limited	KP-SH05	<input type="checkbox"/>
Vertical Hammer Tester	Vertical Hammer	Kingpo technology Development Limited	0190605A01002	<input checked="" type="checkbox"/>
Vertical Hammer	20J	Kingpo Technology Development Limited	TX028-3	<input checked="" type="checkbox"/>

### 1.3.2 Test condition

IK code	Impact Energy (J)	Equivalent mass (kg)	Drop height (mm ± 1%)	Application
00	Non-protected	-	-	<input type="checkbox"/>
01	0.14	0.25	56	<input type="checkbox"/>
02	0.20	0.25	80	<input type="checkbox"/>
03	0.35	0.25	140	<input type="checkbox"/>
04	0.50	0.25	200	<input type="checkbox"/>
05	0.70	0.25	280	<input type="checkbox"/>
06	1.00	0.25	400	<input type="checkbox"/>
07	2.00	0.50	400	<input type="checkbox"/>
08	5.00	1.70	300	<input type="checkbox"/>
09	10.00	5.00	200	<input type="checkbox"/>
10	20.00	5.00	400	<input checked="" type="checkbox"/>
- Impact times: five times for each of the exposed surface. (Do not impact more than 3 times in the same spot)				

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### 1.3.3 Check Item

- External protection Enclosure damage check (except accessories not related to outer protection function)

### 1.3.4 Test Result

Item	Contents	Result
External protection Enclosure	No damage	Pass
Comment		
Some scratches were generated on the outside of the product.		

## Model description

Basic Model .....	TNM-C4940TD
Series Model .....	TNM-C4950TD, TNM-C4960TD

Model differences	TNM-A4940TD			TNM-A4950TD / 4960TD			
	Thermal Image	4 K 2.1X (YTOT)		Thermal Image		4 K 2.7X (YTOT)	
		Wide (4.4 mm)	Tele (9.3 mm)	4950 TD	4960TD	Wide (10.9 mm)	Tele (29 mm)
Lens/FoV	9.1 mm	Wide (4.4 mm)	Tele (9.3 mm)	13.5 mm	25 mm	Wide (10.9 mm)	Tele (29 mm)
Horizontal	50 °	112.1 °	47.5 °	32 °	17.4 °	42 °	15 °
Vertical	37.8 °	58.0 °	26.6 °	24.2 °	13.2 °	22.8 °	8.4 °

## Manufacturer's name

Name and address of factory (ies)	<ol style="list-style-type: none"> <li>D-TECH CO.,LTD. 173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi-do, Korea (Suwon Industrial Complex)</li> <li>HANWHA TECHWIN SECURITY VIETNAM CO.,LTD Lot O-2, Que Vo Industrial Zone extended area, Nam Son commune, Bac Ninh city, Bac Ninh province, Vietnam</li> </ol>
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## 2. APPENDIX

### 2.1. Product Photographs



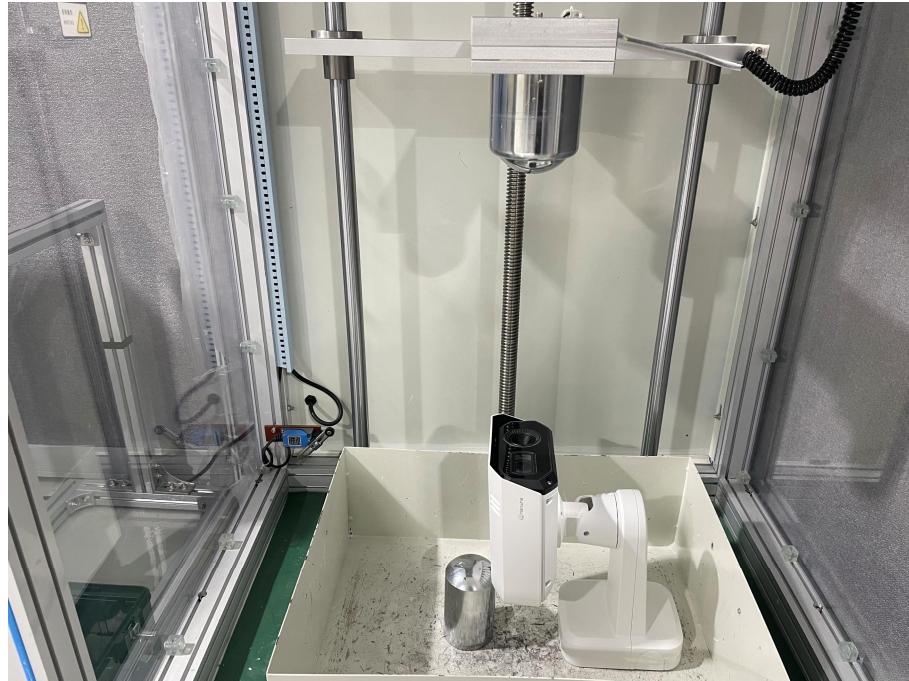


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### 2.2. Test photos





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### 2.3. Photos after test





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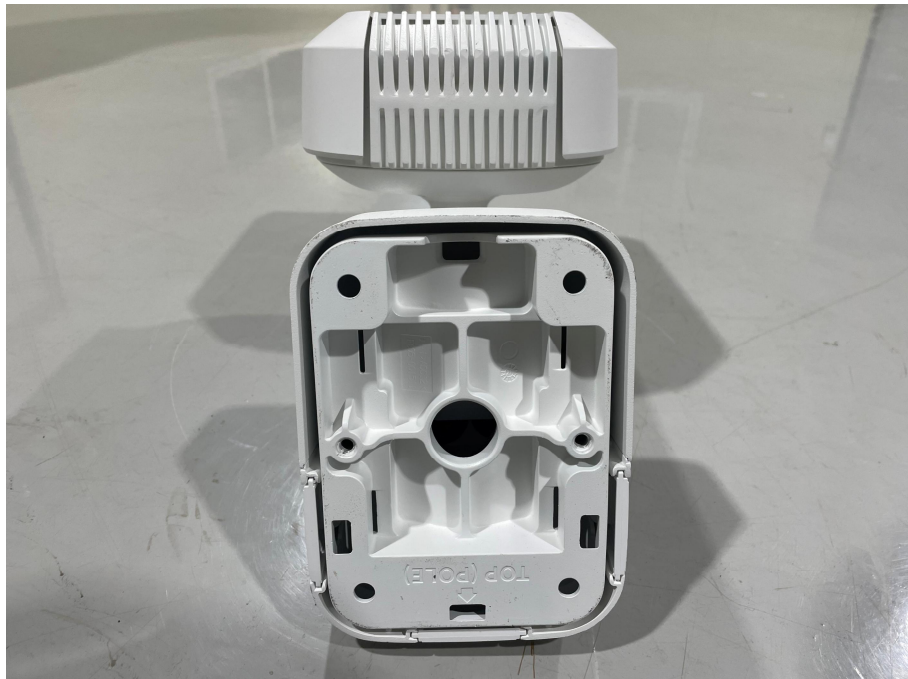




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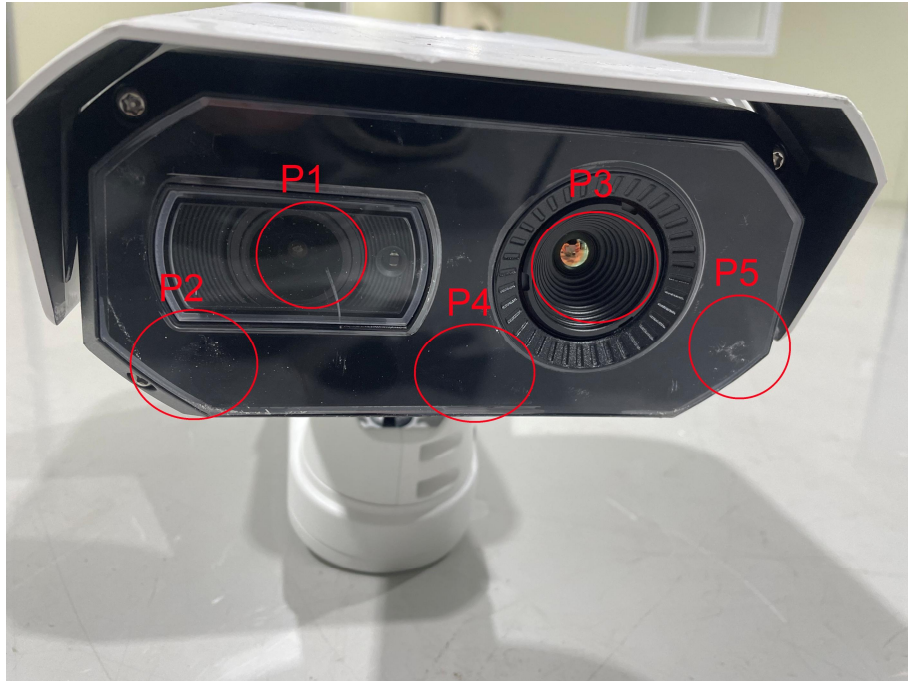
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## 2.4. Impact point

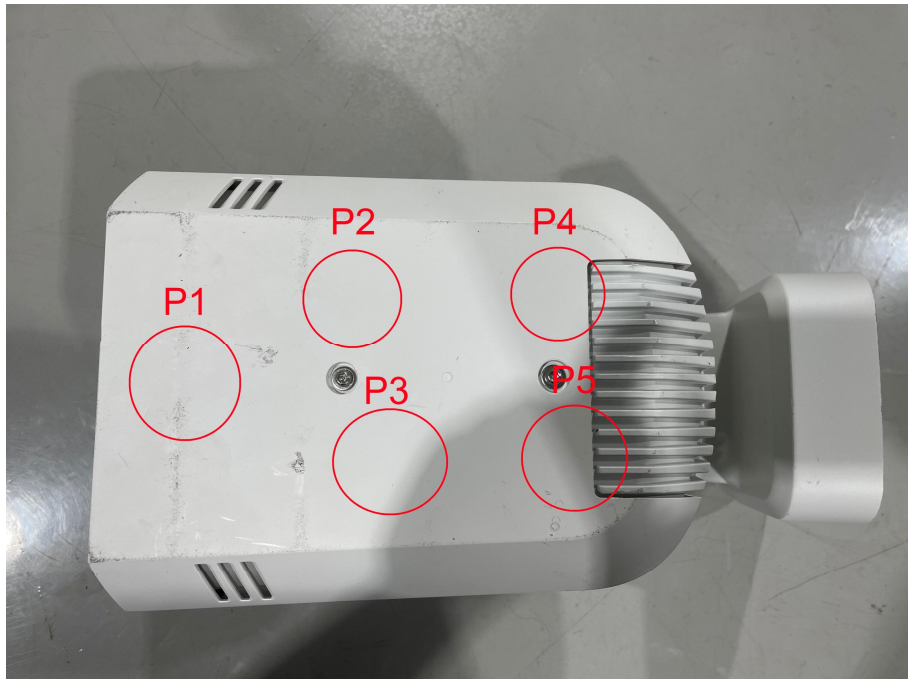




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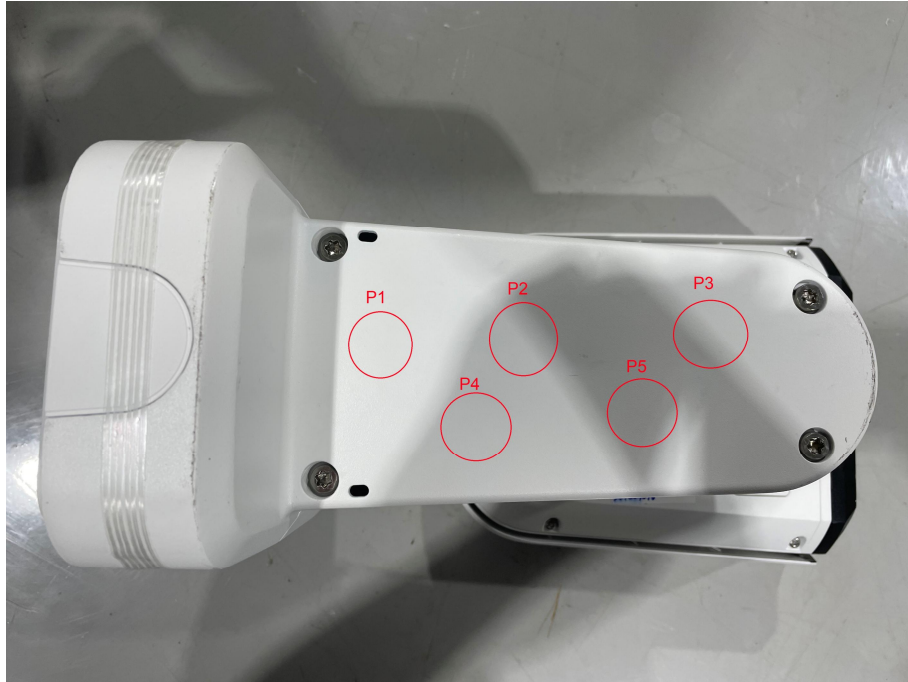




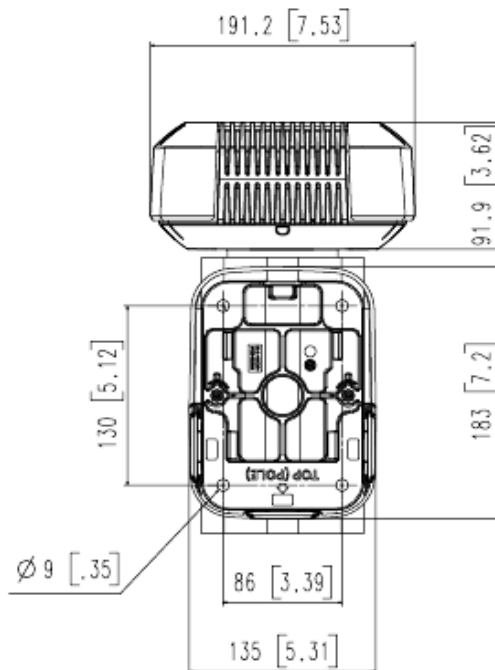
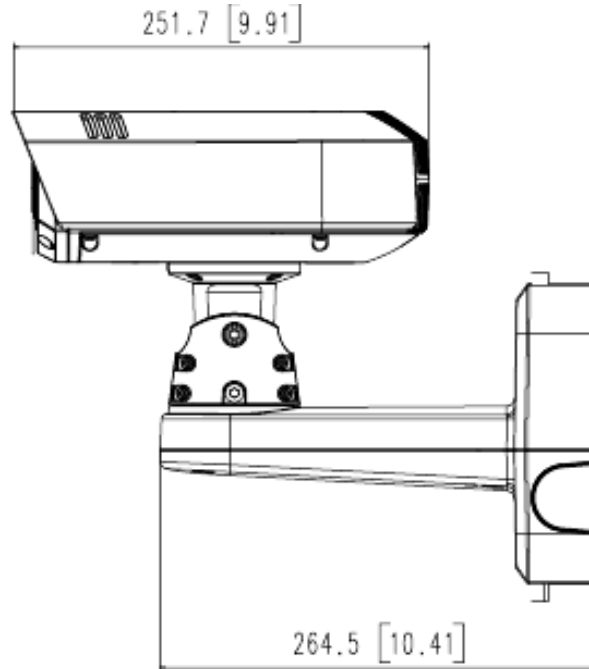
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**2.5. Enclosure Dimensions or Impact point (Unit: mm)**

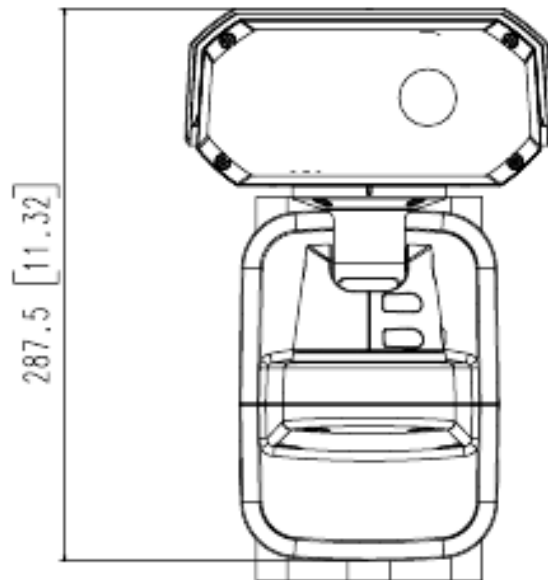
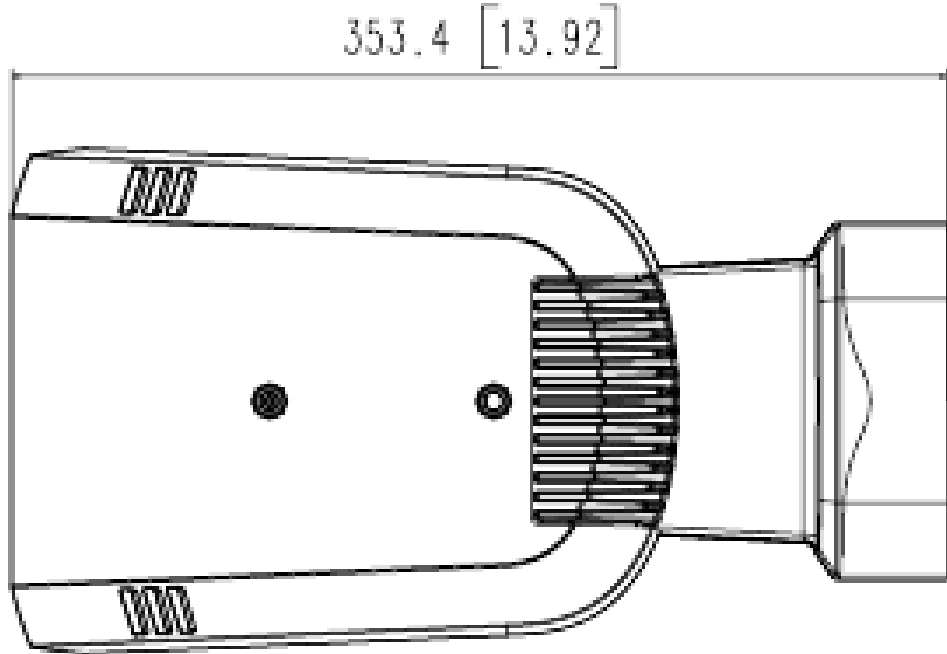




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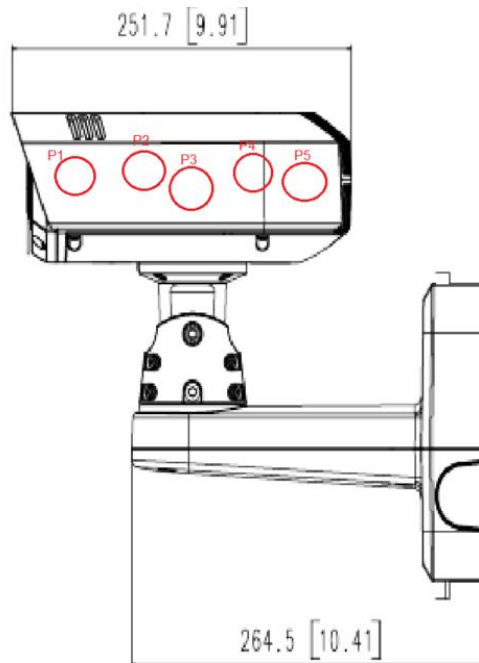
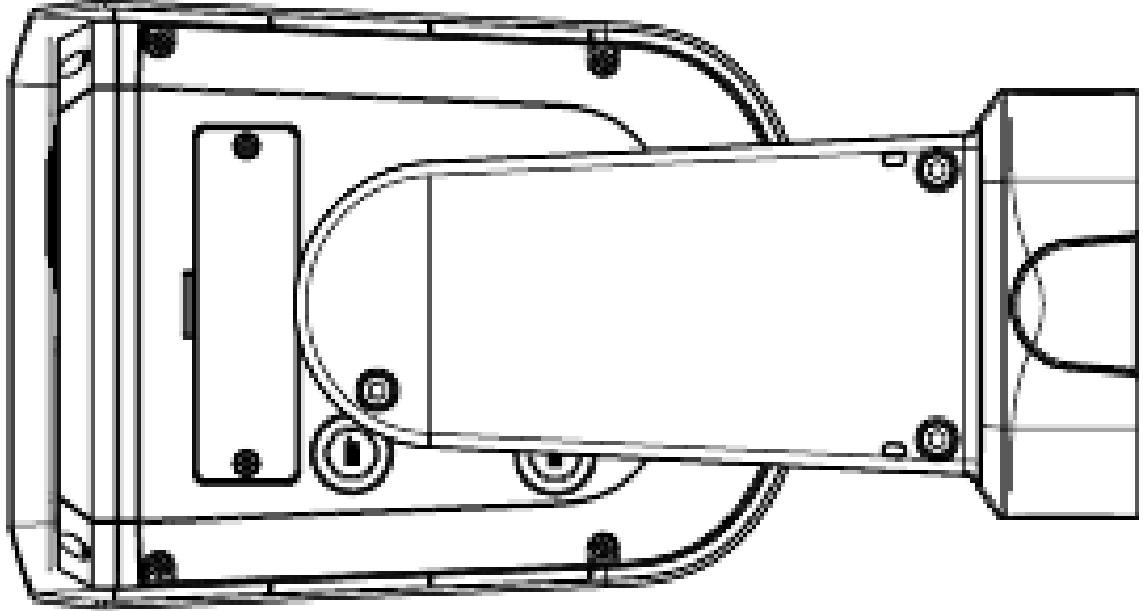


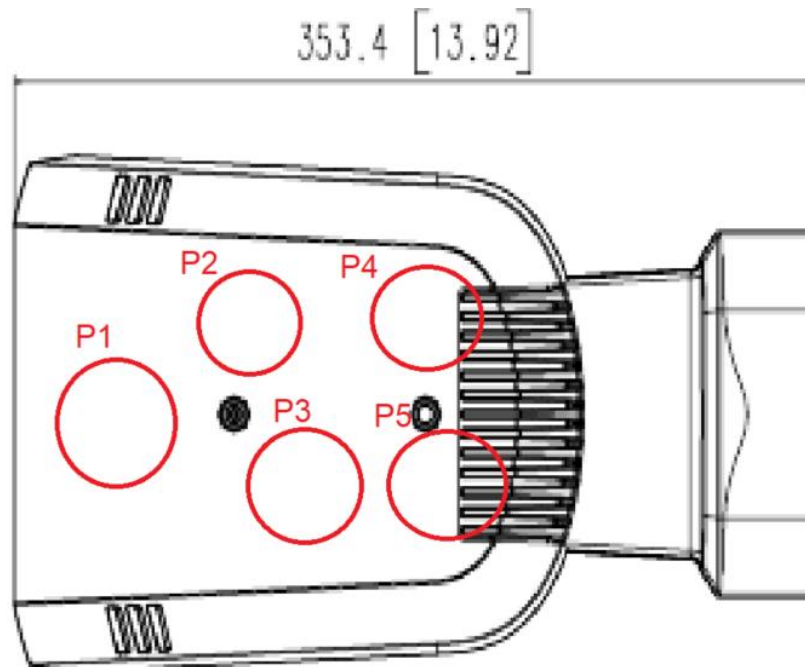
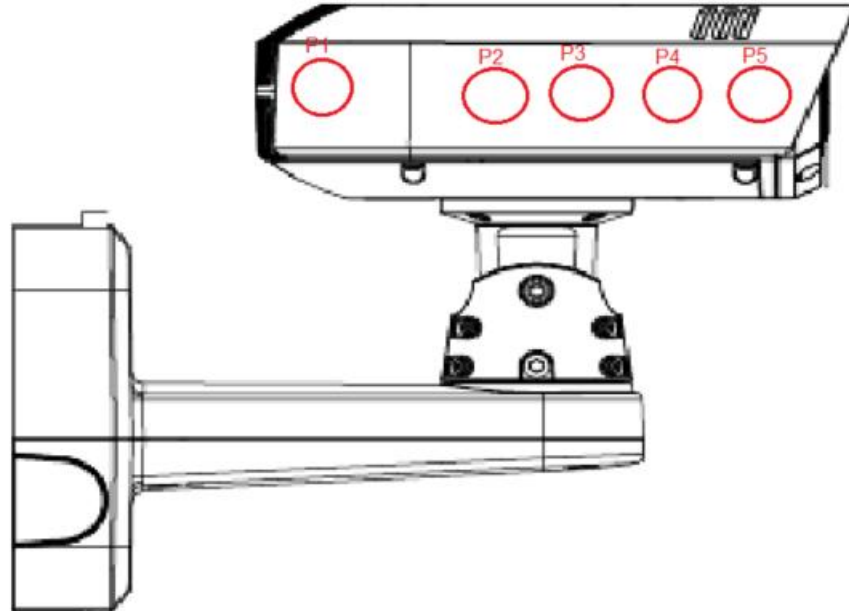


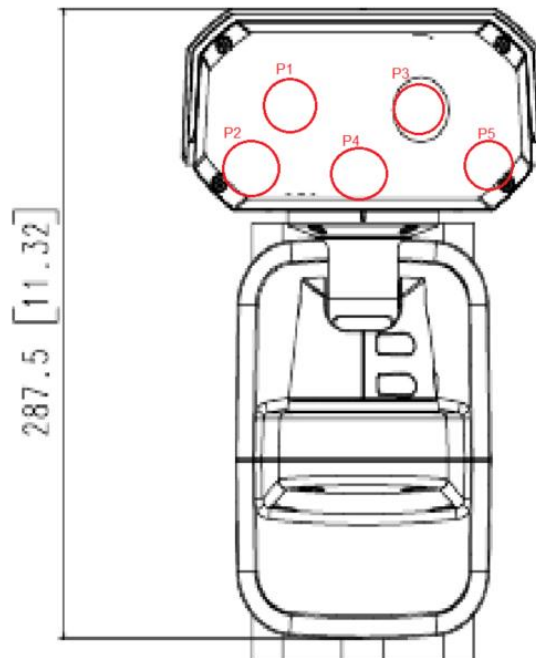
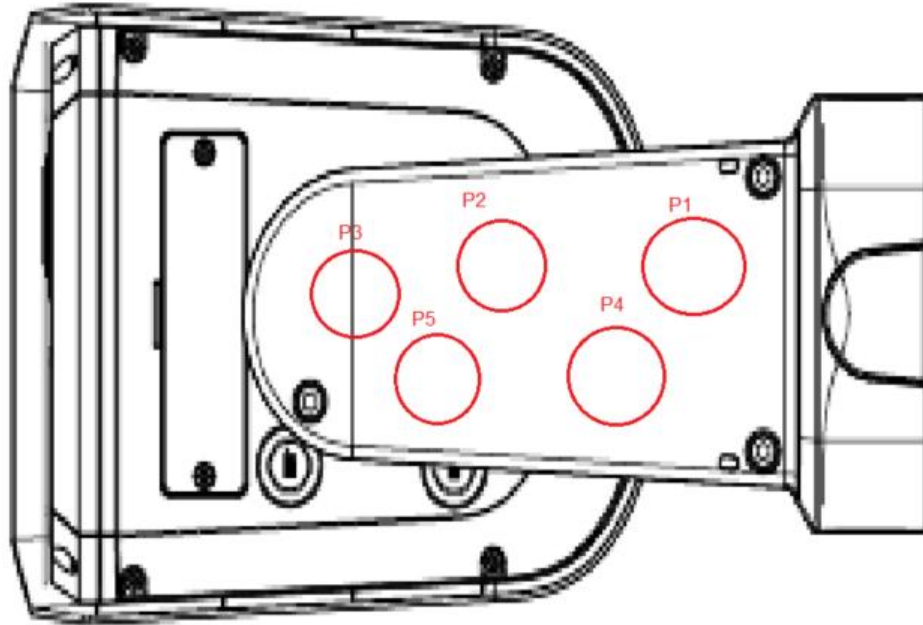
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