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Applicant: HORING LIH INDUSTRIAL CO., LTD.**Address:** 4F., NO. 18, LANE 327, SEC. 2, CHUNG SHAN RD., ZHONGHE DIST., NEW
TAIPEI CITY 235 TAIWAN, R.O.C.**Phone:** +886-2-22487599**E-mail:** sep770116@horing-lih.com.tw**Product:** Reflective Beam Smoke Detector**Identification/** EDB01, FL-EDB01**Model No(s):****Executive Summary**

This report is a complete Technical Documentation file with IEC 63000 to assist the manufacture demonstrating the obligation required by Article 7 of the 2011/65/EU directive, and the associated product's compliance with the abovementioned directive.

The report shows that the evaluation product(s) has met the requirement of 2011/65/EU directive. This result is only based on the product sample and/or relevant documents for materials, parts, and/or sub-assemblies submitted by the Applicant and/or the Manufacturer.

This report must not be reproduced, except in full, without the written approval of the issuing testing/evaluating center. The Applicant and Manufacturer have agreed to produce the subject product(s) in accordance with the description of this report. The Manufacturer has also agreed to notify TÜV Rheinland and to request evaluation prior to using alternate parts, components or materials.

For and on behalf of
TÜV Rheinland Taiwan Ltd.

2023-11-07
DateArthur Cheng/Project Manager
Name/ Position

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Overview

The following report evaluates the submitted sample/ documents with regard to the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, 2011/65/EU ("the RoHS Directive") in order to identify to which comply with RoHS apply to the sample.

DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment, ANNEX II and its amendment Directive (EU) 2015/863

Member States shall ensure that EEE placed on the market, including cables and spare parts for its repair, its reuse, updating of its functionalities or upgrading of its capacity, does not contain the substances and maximum concentration values tolerated by weight in homogeneous materials:

- Lead (0,1 %)
- Mercury (0,1 %)
- Cadmium (0,01 %)
- Hexavalent chromium (0,1 %)
- Polybrominated biphenyls (PBB) (0,1 %)
- Polybrominated diphenyl ethers (PBDE) (0,1 %)
- Benzylbutylphthalate (BBP) (0,1 %)
- Dibutylphthalate (DBP) (0,1 %)
- Diethylhexylphthalate (DEHP) (0,1 %)
- Diisobutylphthalate (DIBP) (0,1 %)

Abbreviation:

EEE = Electrical and Electronic Equipment

General Description of the Product

Product Information

General item description: Reflective Beam Smoke Detector

Model no.: EDB01, FL-EDB01

Additional Information: --

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Product Photo

Reflective Beam Smoke Detector/ EDB01, FL-EDB01



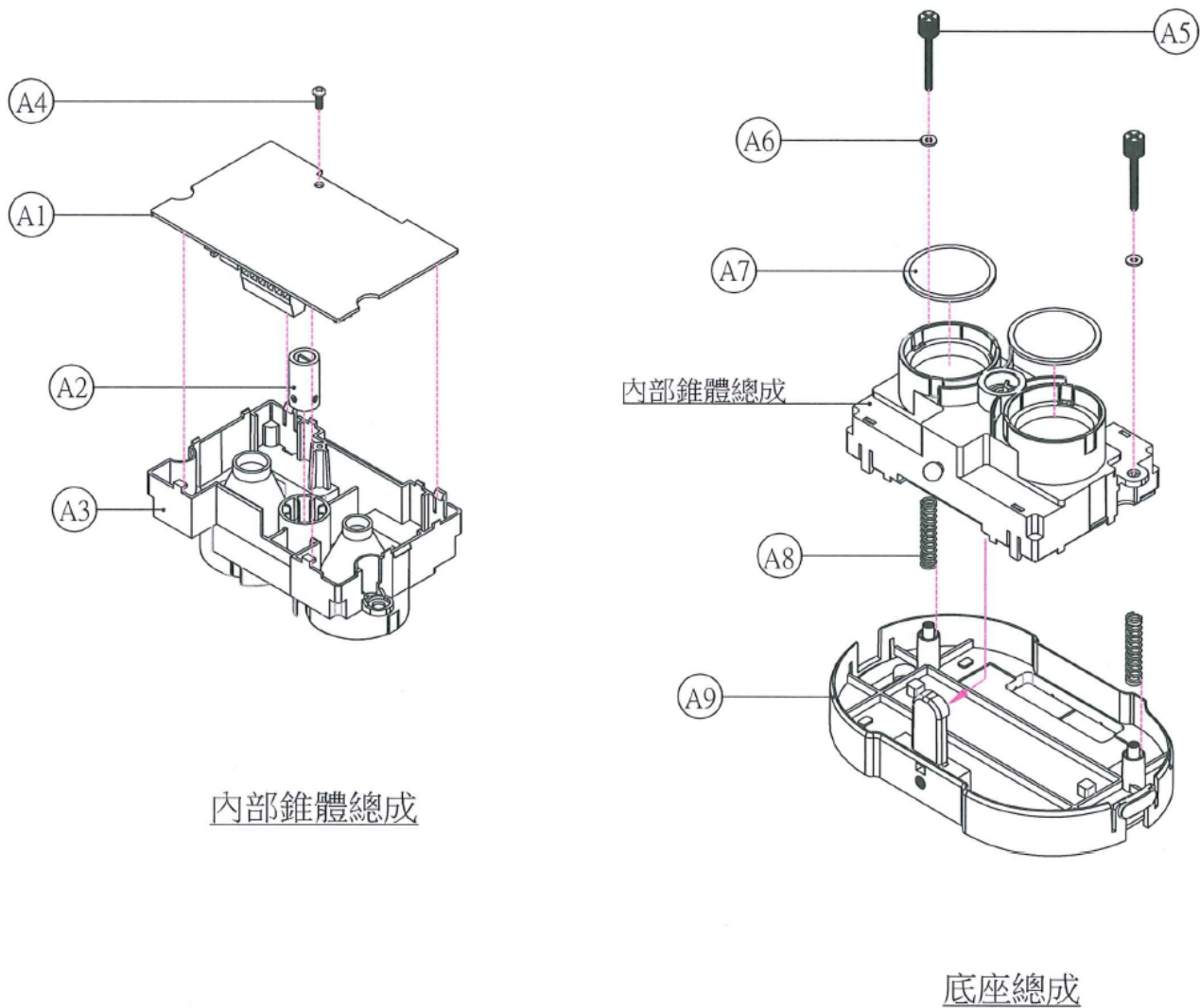
Side A

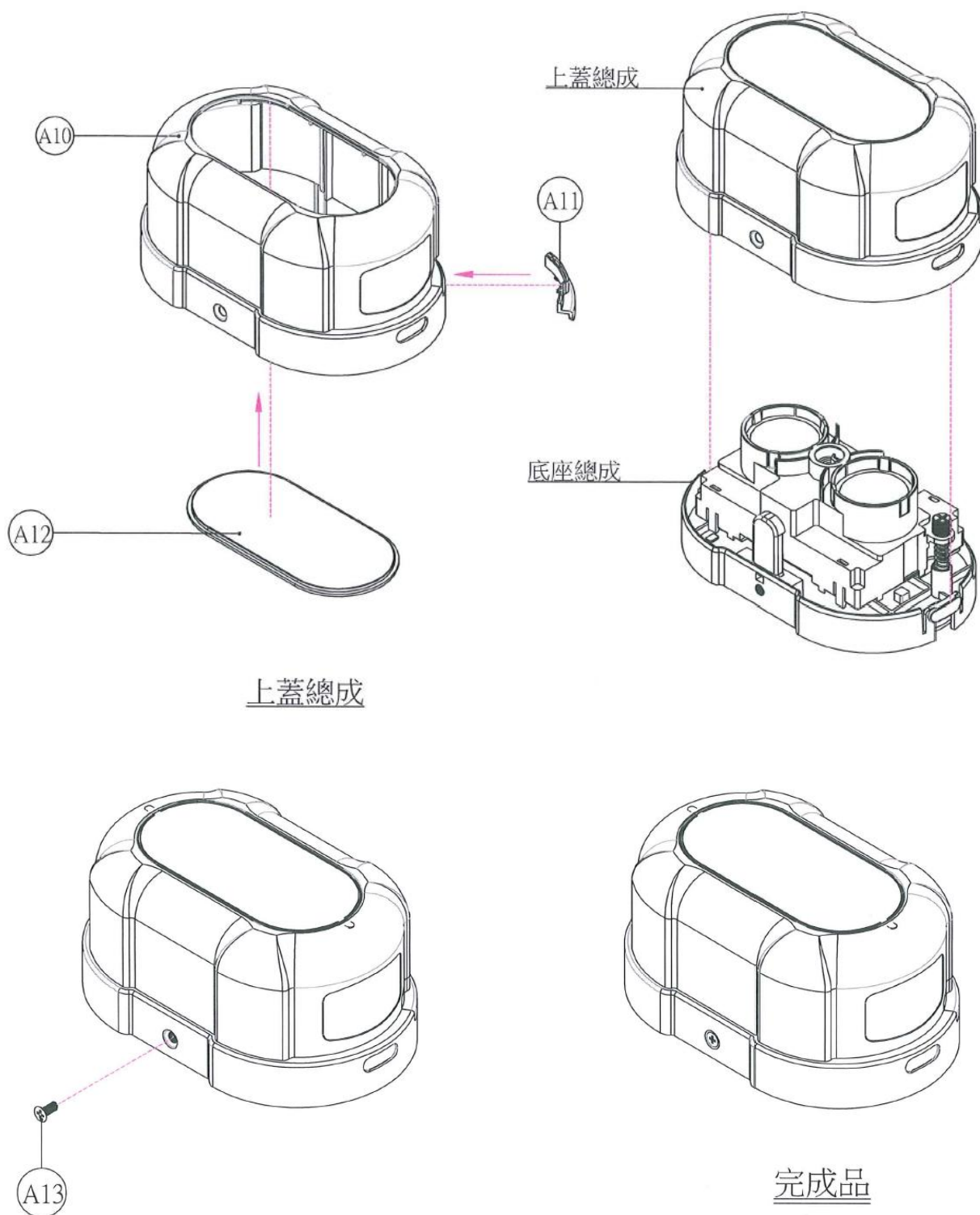


Side B

Exploded Diagram of Product

PDF-180502-A4





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Submitted Documents

This product is evaluated according to below documents provided by applicant:

- ☒ Bill of Material (BOM)
- ☒ Test reports
- ☒ Declaration by client and or supplier
- ☐ Others:

Bill of Material (BOM)

DWG NO.	PDF-180502-A4	DATE	2018.02.02	Version.	C
DOC NO.	EDB01-16-01	DATE	2023-07-14	Version	1.0

* Detail refers to Annex I

Test reports

Relevant test report number(s) is listed in 4.2 Product Evaluation Result

Declaration

Relevant declaration(s) is listed in 4.2 Product Evaluation Result

Others

Product Specification: Detail refers to Annex II

Product Evaluation Description

Product Classification

The submitted product is evaluated with regard to RoHS Directive 2011/65/EU, ANNEX I whether it is in the scope of the respective directive:

- ☐ 1. Large household appliances
- ☐ 2. Small household appliances
- ☐ 3. IT and telecommunications equipment
- ☐ 4. Consumer equipment
- ☐ 5. Lighting equipment
- ☐ 6. Electrical and electronic tools
- ☐ 7. Toys, leisure and sports equipment
- ☐ 8. Medical devices
- ☐ 9. Monitoring and control instruments including industrial monitoring and control instruments
- ☐ 10. Automatic dispensers
- ☒ 11. Other EEE not covered by any of the categories above

Evaluation Procedure

1. Component / Material selection

- BOM
- Exploded diagram

2. Evaluation base

Evaluation is according to following documents/results/experience to process.

- 1 Test report provided by vendor
- 2 Compliance declaration or supplementary document

Once test result excess following limit in homogeneous material basis, the ANNEX III exemptions of 2011/65/EU should be checked and the compliance declaration from vendor is required. Compliance verification check is conducted according to the relevant standards listed in Article 5.

- | | |
|--|---|
| • Lead (0,1 %) | • Polybrominated diphenyl ethers (PBDE) (0,1 %) |
| • Mercury (0,1 %) | • Benzylbutylphthalate (BBP) (0,1 %) |
| • Cadmium (0,01 %) | • Dibutylphthalate (DBP) (0,1 %) |
| • Hexavalent chromium (0,1 %) | • Diethylhexylphthalate (DEHP) (0,1 %) |
| • Polybrominated biphenyls (PBB) (0,1 %) | • Diisobutylphthalate (DIBP) (0,1 %) |

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Product Evaluation Summary

Acceptance Criteria for Test Report/ Declaration

Requirement of Test Report

Test reports from laboratories that are accredited as complying with ISO/IEC Standard 17025 by the International Accreditation Service (IAS) or by any other accreditation body that is a signatory to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA). The scope of the laboratory's accreditation shall include the specific type of testing covered in the test report.

- The up-to-date regulation/ directive should be applied.
- The up-to-date standard or appropriate test method should be adopted.
- The test report should be renewed every 1 year which defined by manufacturer based on component/ material's character.

Requirement of Declaration

The following declarations shall be provided to TÜV Rheinland Taiwan in a signed and dated declaration from the listee or report holder:

- The listee or report holder will promptly investigate and respond to TÜV Rheinland Taiwan when appraised by TÜV Rheinland Taiwan of complaints concerning product performance.
- The listee or report holder agrees to permit TÜV Rheinland Taiwan representatives to examine, at distribution points and the manufacturing plant, any product labelled as being in conformance with the listing or evaluation report.
- TÜV Rheinland Taiwan will be notified in writing if there is a significant change in the product, manufacturing procedures or quality system documentation from what was recognized upon issuance of the listing or evaluation report.
- TÜV Rheinland Taiwan will be notified in writing if there is a change in the agency performing ongoing inspections

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Product Evaluation Result

EDB01-16-01

No.	Part No.	Part Name	QTY	Vendor	No. of document	Document		Evaluation base	Remark
	2M.EDB01.711	Prusm 反射片(圖)	4	SICK TAIWAN CO., LTD.	1	SICK AG	RoHS Declaration of Conformity	2	Headquarters: SICK AG Branch: SICK TAIWAN CO., LTD.
A1	5P.EDB01.D03	PCB EDB01 PCB DIP	1	HORING LIH INDUSTRIAL CO., LTD.	1	--			
A1-1	2M.2MX30.001	LED Cover 塑膠 LED 套	1	PINGOOD ENTERPRISE CO., LTD.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 20	1	
A1-2	41.10110.002	Oscillator 振盪器	1	Jinhua TROQ Electronic CO.,LTD	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 21	1	
A1-3	4C.00470.001	Electrolytic Capacitor DIP 電解電容 JACKCON	2	HONJU TAIWAN CO., LTD.	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP
A1-4	4K.THU12.001	Relay 繼電器	2	SUN HOLD ELECTRIC INC.	1	SUN HOLD ELECTRIC INC.	RoHS Declaration of Conformity	2	
A1-5	4C.000100.K32	Ceramic Capacitor SMT 陶瓷電容 TDK	3	Walsin Technology Corporation	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 22		
A1-6	4C.02200.S02	Capacitor 電容 SMT	1	ELNA CO., LTD.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 23	1	
A1-7	4C.6030P.001	Ceramic Capacitor SMT 陶瓷電容 (PHYCOMP)	2	YAGEO CORPORATION	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP

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No.	Part No.	Part Name	QTY	Vendor	No. of document	Document		Evaluation base	Remark
A1-8	4C.6033P.001	Ceramic Capacitor SMT 陶瓷電容 (PHYCOMP)	1	YAGEO CORPORATION	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP
A1-9	4C.6103K.001	Ceramic Capacitor SMT 陶瓷電容 (PHYCOMP)	6	YAGEO CORPORATION	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP
A1-10	4C.6104K.005	Ceramic Capacitor SMT 陶瓷電容 MURATA	11	Murata MFG .Co., Ltd	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP
A1-11	4C.6105K.002	Capacitor 電容 (TAIYO YUDEN)	6	TAIYO YUDEN CO., LTD.	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP
A1-12	4C.7107M.S01	Capacitor 電容 (TAIYO YUDEN)	1	TAIYO YUDEN CO., LTD.	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP
A1-13	4C.00022.S01	Ceramic Capacitor SMT 陶瓷電容 (PHYCOMP)	3	YAGEO CORPORATION	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP
A1-14	4D.0340A.S01	Bridge Rectifier Diode 二極體 SMD	1	GOODWORK SEMICONDUCTOR CO., LTD	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP

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No.	Part No.	Part Name	QTY	Vendor	No. of document	Document		Evaluation base	Remark
A1-15	4D.3033V.004	TVS SMD (翰緯)	1	Highway Technology Co. LTD	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP
A1-16	4D.3040V.004	TVS SMD (翰緯)	1	Highway Technology Co. LTD	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP
A1-17	4D.500M7.S01	Bridge Rectifier Diode 二極體 SMD	2	GOODWORK SEMICONDUCTOR CO., LTD	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP
A1-18	4D.54007.S01	Diode 二極體 SMD (翰緯)	2	Highway Technology Co. LTD	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP
A1-19	4D.705V6.004	Zener diode 穩壓 SMD (翰緯)	1	Highway Technology Co. LTD	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP
A1-20	4D.54148.006	Diode 二極體 SMD (翰緯)	8	Highway Technology Co. LTD	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP
A1-21	4D.6MD5S.002	Bridge Rectifier 橋式整流 SMD (翰緯)	1	Highway Technology Co. LTD	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP
A1-22	4Q.2SB171.S01	Transistor 晶體 SMT (ROHM)	1	ROHM Semiconductor - ROHM Co., Ltd.	1	ROHM Co. Ltd.	RoHS Declaration of Conformity	2	

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No.	Part No.	Part Name	QTY	Vendor	No. of document	Document		Evaluation base	Remark
A1-23	4Q.52412.S01	Transistor 晶體	6	ROHM Semiconductor - ROHM Co., Ltd.	1	ROHM Co. Ltd.	RoHS Declaration of Conformity	2	
A1-24	4R.6001K.001	Resistor SMD 電阻 天二	1	EVER OHMS TECHNOLOGY CO.,LTD.	1	SGS TAIWAN LTD.	EKR21C01832	1	
A1-25	4R.6002M.001	Resistor SMD 電阻 天二	1	EVER OHMS TECHNOLOGY CO.,LTD.	1	SGS TAIWAN LTD.	EKR21C01832	1	
A1-26	4R.6010K.001	Resistor SMD 電阻 天二	13	EVER OHMS TECHNOLOGY CO.,LTD.	1	SGS TAIWAN LTD.	EKR21C01832	1	
A1-27	4R.6033K.001	Resistor SMD 電阻 天二	1	EVER OHMS TECHNOLOGY CO.,LTD.	1	SGS TAIWAN LTD.	EKR21C01832	1	
A1-28	4R.6039K.001	Resistor SMD 電阻 天二	1	EVER OHMS TECHNOLOGY CO.,LTD.	1	SGS TAIWAN LTD.	EKR21C01832	1	
A1-29	4R.608K2.001	Resistor SMD 電阻 天二	1	EVER OHMS TECHNOLOGY CO.,LTD.	1	SGS TAIWAN LTD.	EKR21C01832	1	
A1-30	4R.6100K.001	Resistor SMD 電阻 天二	3	EVER OHMS TECHNOLOGY CO.,LTD.	1	SGS TAIWAN LTD.	EKR21C01832	1	
A1-31	4R.6115K0.FB1	Resistor SMD 電阻 天二	1	EVER OHMS TECHNOLOGY CO.,LTD.	1	SGS TAIWAN LTD.	EKR21C01832	1	
A1-32	4R.64K530.FB1	Resistor SMD 電阻 天二	2	EVER OHMS TECHNOLOGY CO.,LTD.	1	SGS TAIWAN LTD.	EKR21C01832	1	
A1-33	4R.6510K.001	Resistor SMD 電阻 天二	2	EVER OHMS TECHNOLOGY CO.,LTD.	1	SGS TAIWAN LTD.	EKR21C01832	1	
A1-34	4R.700R5.001	Resistor SMD 電阻 天二	1	EVER OHMS TECHNOLOGY CO.,LTD.	1	SGS TAIWAN LTD.	EKR21C01832	1	

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No.	Part No.	Part Name	QTY	Vendor	No. of document	Document		Evaluation base	Remark
A1-35	4R.801K5.001	Resistor SMD 電阻 天二	3	EVER OHMS TECHNOLOGY CO.,LTD.	1	SGS TAIWAN LTD.	EKR21C01832	1	
A1-36	4R.9MCP97.001	Thermistor 熱敏電阻	1	Microchip technology - DigiKey	1	Microchip Technology Inc.	RoHS Declaration of Conformity	2	Headquarters: Microchip Technology Inc. Branch: Microchip technology - DigiKey
A1-37	4R.P010K.041	Chip Resistor SMT 排列 電阻 天二	1	EVER OHMS TECHNOLOGY CO.,LTD.	1	SGS TAIWAN LTD.	EKR21C01832	1	
A1-38	4W.0056U.S01	Inductor 電感 SMD	1	Mag.Layers Scientific-Technics Co., Ltd	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP
A1-39	4W.0100U.S01	Inductor 電感 SMD(M.M.)	2	MC.D CORP	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 24	1	
A1-40	4W.7060M.001	Inductor 電感	1	Mag.Layers Scientific-Technics Co., Ltd	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP
A1-41	4W.7300R.001	Inductor 電感 0603	2	Mag.Layers Scientific-Technics Co., Ltd	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 25	1	Original manufacturer: SOFTECH ELECTRONICS CORP
A1-42	51.EDB01.002	PCB 電路板 PCB	1	TEN CHANCE ENT CO., LTD.	1	TEN CHANCE ENT CO., LTD.	RoHS Declaration of Conformity	2	

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No.	Part No.	Part Name	QTY	Vendor	No. of document	Document		Evaluation base	Remark
A1-43	5P.BM78S.001	Bluetooth module	1	Microchip technology - DigiKey	1	Microchip Technology Inc.	RoHS Declaration of Conformity	2	Headquarters: Microchip Technology Inc. Branch: Microchip technology - DigiKey
A1-44	6L.BPW34S.001	Infra-red Light Receiver 紅外線接收器	1	ARROW ELECTRONICS TAIWAN LTD.		TUV Rheinland Taiwan Ltd.	48225012a 001 Mat. No. 3	1	
A1-45	6L.HGK34C.001	LED 燈/LED	1	BRIGHT LED ELECTRONICS CORP.	1	TSON-HSING INDUSTRIAL CO.,LTD	RoHS Declaration of Conformity	2	Original manufacturer: TSON-HSING INDUSTRIAL CO.,LTD
A1-46	6L.HJD34.001	LED 燈/LED	1	BRIGHT LED ELECTRONICS CORP.	1	TSON-HSING INDUSTRIAL CO.,LTD	RoHS Declaration of Conformity	2	Original manufacturer: TSON-HSING INDUSTRIAL CO.,LTD
A1-47	6L.HKT34C.001	LED 燈/LED	1	BRIGHT LED ELECTRONICS CORP.	1	TSON-HSING INDUSTRIAL CO.,LTD	RoHS Declaration of Conformity	2	Original manufacturer: TSON-HSING INDUSTRIAL CO.,LTD
A1-48	6S.BSW00.101	Reed Relays 磁簧開關	1	BRIGHT TOWARD INDUSTRIAL CO., LTD.		TUV Rheinland Taiwan Ltd.	48225012a 001 Mat. No. 1	1	
A1-49	6S.RS6647.001	Switch 開關(圖)	1	LYUJIYU CO., LTD.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 26, 27, 28, 29, 30	1	
A1-50	6U.0006P.S02	Wafer Reel and Cable 排線座 SMT6P(承洵)	1	CHERNG-WEEI TECHNOLOGY CORP	1	SOFTECH ELECTRONICS CORP	RoHS Declaration of Conformity	2	Original manufacturer: SOFTECH ELECTRONICS CORP

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No.	Part No.	Part Name	QTY	Vendor	No. of document	Document		Evaluation base	Remark
A1-51	71.16331T.811	IC	1	Microchip technology - DigiKey	1	Microchip Technology Inc.	RoHS Declaration of Conformity	2	Headquarters: Microchip Technology Inc. Branch: Microchip technology - DigiKey
A1-52	71.6C883.S09	IC PIC16F883 (EDB01)	1	Microchip technology - DigiKey	1	Microchip Technology Inc.	RoHS Declaration of Conformity	2	Headquarters: Microchip Technology Inc. Branch: Microchip technology - DigiKey
A1-53	71.MCP6S9.411	IC	2	Microchip technology - DigiKey	1	Microchip Technology Inc.	RoHS Declaration of Conformity	2	Headquarters: Microchip Technology Inc. Branch: Microchip technology - DigiKey
A1-54	71.07533.S01	IC	3	HOLTEK SEMICONDUCTOR INC.		TUV Rheinland Taiwan Ltd.	48225012a 001 Mat. No. 2	1	
A1-55	6H.06P50.002	Terminal Blocks 端子 "- "Green	1	GIGAWAY TECHNOLOGY CORP.	1	GIGAWAY TECHNOLOGY CORP.	RoHS Declaration of Conformity	2	Exemption 6(c)
A1-56	6L.TS6210.001	Infra-red Light Transmitter 紅外線發射器	1	Holy Stone Enterprise Co., Ltd.	1	Vishay Semiconductor Opto	RoHS Declaration of Conformity	2	Original manufacturer: Vishay Semiconductor Opto
A1-57	6S.EDG04.001	Dip Switch 開關	1	EXCEL CELL ELECTRONIC CO., LTD.	1	EXCEL CELL ELECTRONIC CO., LTD.	RoHS Declaration of Conformity	2	

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No.	Part No.	Part Name	QTY	Vendor	No. of document	Document		Evaluation base	Remark
A1-58	6U.0002P.002	Cable 排針、排線	1	TECHBEST ENTERPRISE CO., LTD.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 31, 32	1	
A2	6V.IL876.001	Laser Module 雷射模組	1	E-LASER ENTERPRISE CO., LTD	1	E-LASER ENTERPRISE CO., LTD	RoHS Declaration of Conformity	2	
A3	2M.EDB01.301	Middle Base EDB01 內部錐體(圖)	1	CHENYOU Co.,Ltd.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 7	1	
A4	3E.03008.008	Screw P 頭 3*8 螺絲(圖)	1	CHIU YING SCREW METAL CO., LTD.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 11	1	
A5	3E.EDB01.001	Thumb Screw EDB01 手轉螺絲(圖)	2	CHIU YING SCREW METAL CO., LTD.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 14	1	
A6	2M.00008.008	Washer 塑膠(圖)	2	倘聖工業有限公司	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 15	1	
A7	2M.EDB01.501	Optical Lens EDB01 分偵光學鏡片(圖)	2	Ledlink Optics, Inc.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 9, 10	1	
A8	3E.EDB01.101	Spring EDB01 彈簧(圖)	2	CHIANENG SPRING CO., LTD.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 19	1	
A9	2M.EDB01.201	Base EDB01 底座(圖)	1	CHENYOU Co.,Ltd.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 4, 5, 6	1	Exemption 6(c): Mat. No.4, 6
A9-1	3E.EDB01.201	Pillar M3 特殊銅柱(圖)	2	CHIU YING SCREW METAL CO., LTD.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 16	1	Exemption 6(c)
A9-2	3E.EDB01.211	Insert Nut 埋入螺帽(圖)	1	LIAN HER SCREWS & HARDWARE CO., LTD.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 17	1	Exemption 6(c)
A9-3	3E.10040.001	Screw Nut 螺絲(圖)	1	CHIU YING SCREW METAL CO., LTD.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 13	1	

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No.	Part No.	Part Name	QTY	Vendor	No. of document	Document		Evaluation base	Remark
A9-4	2M.EDB01.611	Tape EDB01 持固膠帶	0.004	TAIWAN ELECTRONIC ENTERPRISE CORP.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 18	1	
A10	2M.EDB01.101	Cover EDB01 上蓋(圖)	1	CHENYOU Co.,Ltd.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 3	1	
A11	2M.EDB01.401	LED Lens Cap EDB01 導光罩(圖)	1	CHENYOU Co.,Ltd.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 8	1	
A12	2M.EDB01.001	Filter with protector EDB01 濾鏡+保護貼(圖)	1	Ledlink Optics, Inc.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 1, 2	1	
A13	3E.04008.003	Screw 螺絲	1	CHIU YING SCREW METAL CO., LTD.	1	TUV Rheinland Taiwan Ltd.	48218859a 001 Mat. No. 12	1	

Relevant Standards and Reference

IEC63000:2016 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

- The above-mentioned standard applied in full or in part here to the evaluation of this entire electrical and electronic product. Especially it provided the key concept and guidance for technical documentation compiling to show the product's compliance with RoHS recast directive (2011/65/EU)
- The process to create the technical documentation follows the flowchart as below:

RoHS Directive (2011/65/EU) Article 7(b)

"Member States shall ensure that manufacturers draw up the required technical documentation and carry out the internal production control procedure in line with module A of Annex II to Decision No 768/2008/EC or have it carried out"



Decision 768/2008/EC Annex II, Module A "Internal production control"

2. Technical documentation

The manufacturer shall establish the technical documentation. The documentation shall make it possible to assess the product's conformity to the relevant requirements, and shall include an adequate analysis and assessment of the risk(s).

The technical documentation shall specify the applicable requirements and cover, as far as relevant for the assessment, the design, manufacture and operation of the product. The technical documentation shall, wherever applicable, contain at least the following elements:

- a general description of the product,
- conceptual design and manufacturing drawings and schemes of components, sub-assemblies, circuits, etc.
- descriptions and explanations necessary for the understanding of those drawings and schemes and the operation of the product,
- a list of the harmonised standards and/or other relevant technical specifications the references of which have been published in the Official Journal of the European Union, applied in full or in part, and descriptions of the solutions adopted to meet the essential requirements of the legislative instrument where those harmonised standards have not been applied. In the event of partly applied harmonised standards, the technical documentation shall specify the parts which have been applied,
- results of design calculations made, examinations carried out, etc., and
- test reports.



IEC 63000 "Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances"

"This European Standard specifies the technical documentation that the manufacturer needs to compile in order to declare compliance with the applicable substance restrictions."



Technical Documentation ("Technical File")

Including (amongst others) information on materials, parts, and/or sub-assemblies:

- Supplier declarations and/or contractual agreements
- Material declarations
- Analytical test results

EN 62474:2012 Material declaration for products of and for the electrotechnical industry

- This standard provides a harmonized international requirement to exchange the material composition data and provides requirements for material declaration; and benefits the electrical and electronics industry and its supply chain to track and declare specific information about the material composition of its product.
- The declaration(s) is listed in 4.2 Product Evaluation Result

IEC 62321 (all parts), Determination of certain substances in electrotechnical products

- This standard is established and adopted to avoid the disparities between the measurement methods as adopted by the member states regarding the restriction of the use of hazardous substances in electrical and electronic equipment, and benefits the electrical and electronics industry and its supply chain to evaluate the product on the same page.
- The reports listed in 4.2 Product Evaluation Result

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Annex I – Bill of Material

EDB01-16-01

宏力實業股份有限公司 HORING LIH INDUSTRIAL CO., LTD.					
BILL OF MATERIAL---BOM					
DWG NO.	PDF-180502-A4	DATE	2018-02-02	Version	C
DOC NO.	EDB01-16-01	DATE	2023-07-14	Version	1.0
零件編號 No.	元件品號 Part No.	品 名 Part Name	組成用量 QTY	供應商名稱 Vender (/Original Manufacturer)	
	2M.EDB01.711	Prusm 反射片(圖)	4	SICK TAIWAN CO., LTD.	
A1	5P.EDB01.D03	PCB EDB01 PCB DIP	1	HORING LIH INDUSTRIAL CO., LTD.	
A1-1	2M.2MX30.001	LED Cover 塑膠 LED套	1	PINGOOD ENTERPRISE CO., LTD.	
A1-2	41.10110.002	Oscillator 振盪器	1	Jinhua TROQ Electronic CO.,LTD	
A1-3	4C.00470.001	Electrolytic Capacitor DIP 電解電容 JACKCON	2	HONJU TAIWAN CO., LTD. (SOFTECH ELECTRONICS CORP)	
A1-4	4K.THU12.001	Relay 繼電器	2	SUN HOLD ELECTRIC INC.	
A1-5	4C.000100.K32	Ceramic Capacitor SMT 陶瓷電容 (WALSIN)	3	Walsin Technology Corporation	
A1-6	4C.02200.S02	Capacitor 電容 SMT	1	ELNA CO., LTD.	
A1-7	4C.6030P.001	Ceramic Capacitor SMT 陶瓷電容 (PHYCOMP)	2	YAGEO CORPORATION (SOFTECH ELECTRONICS CORP)	
A1-8	4C.6033P.001	Ceramic Capacitor SMT 陶瓷電容 (PHYCOMP)	1	YAGEO CORPORATION (SOFTECH ELECTRONICS CORP)	
A1-9	4C.6103K.001	Ceramic Capacitor SMT 陶瓷電容 (PHYCOMP)	6	YAGEO CORPORATION (SOFTECH ELECTRONICS CORP)	
A1-10	4C.6104K.005	Ceramic Capacitor SMT 陶瓷電容 MURATA	11	Murata MFG .Co., Ltd (SOFTECH ELECTRONICS CORP)	
A1-11	4C.6105K.002	Capacitor 電容 (TAIYO YUDEN)	6	TAIYO YUDEN CO., LTD. (SOFTECH ELECTRONICS CORP)	
A1-12	4C.7107M.S01	Capacitor 電容 (TAIYO YUDEN)	1	TAIYO YUDEN CO., LTD. (SOFTECH ELECTRONICS CORP)	
A1-13	4C.00022.S01	Ceramic Capacitor SMT 陶瓷電容 (PHYCOMP)	3	YAGEO CORPORATION (SOFTECH ELECTRONICS CORP)	
A1-14	4D.0340A.S01	Bridge Rectifier Diode 二極體 SMD	1	GOODWORK SEMICONDUCTOR CO., LTD (SOFTECH ELECTRONICS CORP)	
A1-15	4D.3033V.004	TVS SMD (翰緯)	1	Highway Technology Co. LTD (SOFTECH ELECTRONICS CORP)	
A1-16	4D.3040V.004	TVS SMD (翰緯)	1	Highway Technology Co. LTD (SOFTECH ELECTRONICS CORP)	
A1-17	4D.500M7.S01	Bridge Rectifier Diode 二極體 SMD	2	GOODWORK SEMICONDUCTOR CO., LTD (SOFTECH ELECTRONICS CORP)	
A1-18	4D.54007.S01	Diode 二極體 SMD (翰緯)	2	Highway Technology Co. LTD (SOFTECH ELECTRONICS CORP)	

A1-19	4D.705V6.004	Zener diode 矽鉍 SMD (翰緯)	1	Highway Technology Co. LTD (SOFTECH ELECTRONICS CORP)
A1-20	4D.54148.006	Diode 二極體 SMD (翰緯)	8	Highway Technology Co. LTD (SOFTECH ELECTRONICS CORP)
A1-21	4D.6MD5S.002	Bridge Rectifier 橋士整流SMD (翰緯)	1	Highway Technology Co. LTD (SOFTECH ELECTRONICS CORP)
A1-22	4Q.2SB171.S01	Transistor 晶體 SMT (ROHM)	1	ROHM Semiconductor - ROHM Co., Ltd.
A1-23	4Q.52412.S01	Transistor 晶體	6	ROHM Semiconductor - ROHM Co., Ltd.
A1-24	4R.6001K.001	Resistor SMD 電阻 天二	1	EVER OHMS TECHNOLOGY CO.,LTD.
A1-25	4R.6002M.001	Resistor SMD 電阻 天二	1	EVER OHMS TECHNOLOGY CO.,LTD.
A1-26	4R.6010K.001	Resistor SMD 電阻 天二	13	EVER OHMS TECHNOLOGY CO.,LTD.
A1-27	4R.6033K.001	Resistor SMD 電阻 天二	1	EVER OHMS TECHNOLOGY CO.,LTD.
A1-28	4R.6039K.001	Resistor SMD 電阻 天二	1	EVER OHMS TECHNOLOGY CO.,LTD.
A1-29	4R.608K2.001	Resistor SMD 電阻 天二	1	EVER OHMS TECHNOLOGY CO.,LTD.
A1-30	4R.6100K.001	Resistor SMD 電阻 天二	3	EVER OHMS TECHNOLOGY CO.,LTD.
A1-31	4R.6115K0.FB1	Resistor SMD 電阻 天二	1	EVER OHMS TECHNOLOGY CO.,LTD.
A1-32	4R.64K530.FB1	Resistor SMD 電阻 天二	2	EVER OHMS TECHNOLOGY CO.,LTD.
A1-33	4R.6510K.001	Resistor SMD 電阻 天二	2	EVER OHMS TECHNOLOGY CO.,LTD.
A1-34	4R.700R5.001	Resistor SMD 電阻 天二	1	EVER OHMS TECHNOLOGY CO.,LTD.
A1-35	4R.801K5.001	Resistor SMD 電阻 天二	3	EVER OHMS TECHNOLOGY CO.,LTD.
A1-36	4R.9MCP97.001	Thermistor 熱敏電阻	1	Microchip technology - DigiKey
A1-37	4R.P010K.041	Chip Resistor SMT 排列電阻 天二	1	EVER OHMS TECHNOLOGY CO.,LTD.
A1-38	4W.0056U.S01	Inductor 電感 SMD	1	Mag.Layers Scientific-Technics Co., Ltd (SOFTECH ELECTRONICS CORP)
A1-39	4W.0100U.S01	Inductor 電感 SMD(M.M.)	2	MC.D CORP
A1-40	4W.7060M.001	Inductor 電感	1	Mag.Layers Scientific-Technics Co., Ltd (SOFTECH ELECTRONICS CORP)
A1-41	4W.7300R.001	Inductor 電感 0603	2	Mag.Layers Scientific-Technics Co., Ltd (SOFTECH ELECTRONICS CORP)
A1-42	51.EDB01.002	PCB 電路板 PCB	1	TEN CHANCE ENT CO., LTD.
A1-43	5P.BM78S.001	Bluetooth module	1	Microchip technology - DigiKey
A1-44	6L.BPW34S.001	Infra-red Light Receiver 紅外線接收器	1	ARROW ELECTRONICS TAIWAN LTD.
A1-45	6L.HGK34C.001	LED 燈/LED	1	BRIGHT LED ELECTRONICS CORP. (TSON-HSING INDUSTRIAL CO.,LTD)

A1-46	6L.HJD34.001	LED 燈/LED	1	BRIGHT LED ELECTRONICS CORP. (TSON-HSING INDUSTRIAL CO.,LTD)
A1-47	6L.HKT34C.001	LED 燈/LED	1	BRIGHT LED ELECTRONICS CORP. (TSON-HSING INDUSTRIAL CO.,LTD)
A1-48	6S.BSW00.101	Reed Relays 磁簧開關	1	BRIGHT TOWARD INDUSTRIAL CO., LTD.
A1-49	6S.RS6647.001	Switch 開關(圖)	1	LYUJIYU CO., LTD.
A1-50	6U.0006P.S02	Wafer Reel and Cable 排線座 SMT6P(承洵)	1	CHERNG-WEEI TECHNOLOGY CORP (SOFTECH ELECTRONICS CORP)
A1-51	71.16331T.811	IC	1	Microchip technology - DigiKey
A1-52	71.6C883.S09	IC PIC16F883 (EDB01)	1	Microchip technology - DigiKey
A1-53	71.MCP6S9.411	IC	2	Microchip technology - DigiKey
A1-54	71.07533.S01	IC	3	HOLTEK SEMICONDUCTOR INC.
A1-55	6H.06P50.002	Terminal Blocks 端子 "-"Green	1	GIGAWAY TECHNOLOGY CORP.
A1-56	6L.TS6210.001	Infra-red Light Transmitter 紅外線發射器	1	Holy Stone Enterprise Co., Ltd.
A1-57	6S.EDG04.001	Dip Switch 開關	1	EXCEL CELL ELECTRONIC CO., LTD.
A1-58	6U.0002P.002	Cable 排針、排線	1	TECHBEST ENTERPRISE CO., LTD.
A2	6V.IL876.001	Laser Module 雷射模組	1	E-LASER ENTERPRISE CO., LTD
A3	2M.EDB01.301	Middle Base EDB01 內部錐體(圖)	1	CHENYOU Co.,Ltd.
A4	3E.03008.008	Screw P頭3*8螺絲(圖)	1	CHIU YING SCREW METAL CO., LTD.
A5	3E.EDB01.001	Thumb Screw EDB01 手轉螺絲(圖)	2	CHIU YING SCREW METAL CO., LTD.
A6	2M.00008.008	Washer 塑膠(圖)	2	倘聖工業有限公司
A7	2M.EDB01.501	Optical Lens EDB01 分偵光學鏡片(圖)	2	Ledlink Optics, Inc.
A8	3E.EDB01.101	Spring EDB01 彈簧(圖)	2	CHIANENG SPRING CO., LTD.
A9	2M.EDB01.201	Base EDB01 底座(圖)	1	CHENYOU Co.,Ltd.
A9-1	3E.EDB01.201	Pillar M3特殊銅柱(圖)	2	CHIU YING SCREW METAL CO., LTD.
A9-2	3E.EDB01.211	Insert Nut 埋入螺帽(圖)	1	LIAN HER SCREWS & HARDWARE CO., LTD.
A9-3	3E.10040.001	Screw Nut 螺絲(圖)	1	CHIU YING SCREW METAL CO., LTD.
A9-4	2M.EDB01.611	Tape EDB01 持固膠帶	0.004	TAIWAN RECTRONIC ENTERPRISE CORP.

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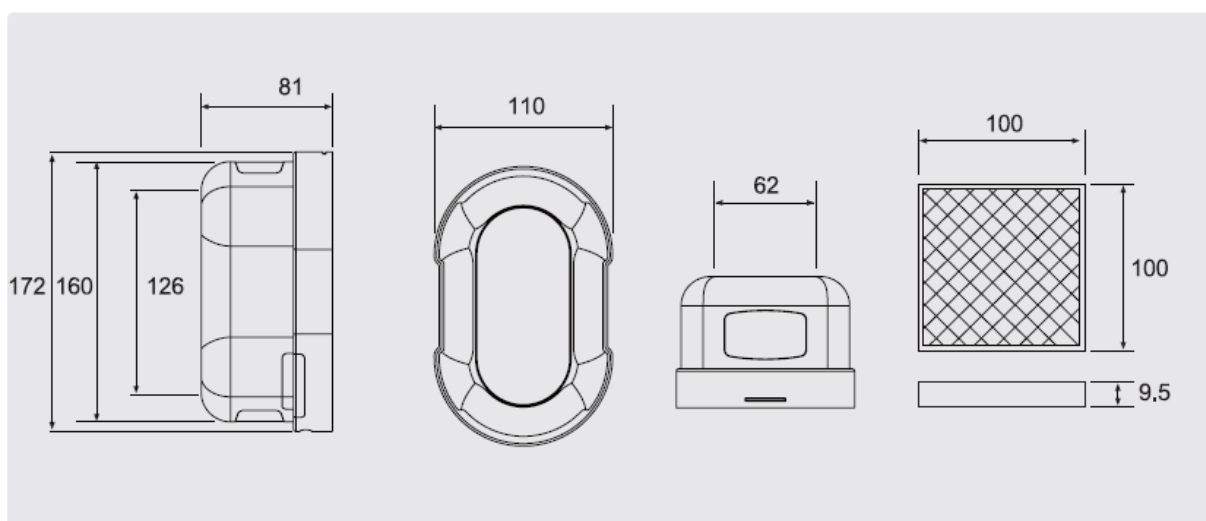
A10	2M.EDB01.101	Cover EDB01 上蓋(圖)	1	CHENYOU Co.,Ltd.
A11	2M.EDB01.401	LED Lens Cap EDB01 導光罩(圖)	1	CHENYOU Co.,Ltd.
A12	2M.EDB01.001	Filter with protector EDB01 濾鏡+保護貼(圖)	1	Ledlink Optics, Inc.
A13	3E.04008.003	Screw 螺絲	1	CHIU YING SCREW METAL CO., LTD.

Annex II – Product Specification

EDB01 Reflective Beam Smoke Detector User Manual



Dimensions: (unit:mm)



Specifications

Operating voltage	12-30V DC
Standby current	3~20mA
Alarm current	20~40mA
Alarm output	COM/NO (1A @30V DC)
Fault output	COM/NC (1A @30V DC)
Ambient temperature	-10°C ~ +55°C
Sensitivity	18%(0.75-0.96dB) 、 25%(1 dB) 、 35%(1.07dB) 、 50%(1.24-1.59dB)
Weight	350g
Material	ABS
Operating Rang	10m to 50m use one prism 50m to 100m use four prisms
Angular Tolerance	Detector: $\pm 0.5^{\circ}$ Prism: $\pm 5.0^{\circ}$

--END--