FLIR VS80: Videoscope Kit with IR Thermal probe (19 mm × 1 m)

P/N: VS80-IR21

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Website

http://www.flir.com

Customer support

http://support.flir.com

Disclaimer

Specifications subject to change without further notice. Camera models and accessories subject to regional market considerations. License procedures may apply. Products described herein may be subject to US Export Regulations. Please refer to exportquestions@flir.com with any questions.



The FLIR VS80 series is a versatile, professional videoscope system that can be used to inspect locations that are difficult or unsafe to access.

The FLIR VS80 KIT-1 contains the VS80 Display Screen and the VS80 160 × 120 IR Thermal Camera Probe (19 mm × 1 m). Additional probes can be purchased individually.

For detailed data specifications of the display screen and probe, see FLIR VS80 and FLIR VS80CIR-21.

NOTE:

- The FLIR VS70 and VS80 camera probes are not interchangeable between the two series.

Shipping information	
Packaging type	Cardboard
Packaging contents	VS80 Videoscope display screen, IR Thermal probe (19 mm × 1 m), Audio headset, microSD card, USB cable, HDMI cable, Neck strap, Hand strap, Hard carrying case, Sun Visor, Power Adaptor with multiple AC plugs, Printed Quick Start Guide Multi-language User Manual is available at https://support.flir.com.
Packaging weight	6.52 kg (14.4 lb)
Packaging dimensions (L × W × H)	810 × 590 × 205 mm (31.6″ × 23″ × 8.0″)
EAN-13	0793950410875
UPC-12	793950410875
Tariff code	• Harmonized Code, US: 9031499000 • Harmonized Code, EU: 8525890000
ECCN	6A993.a
Country of origin	Taiwan

Technical support	
Website	https://support.flir.com

Teledyne FLIR Commercial Systems, Inc.
10F, No. 57, Zhouzi Street, NeiHu District, Taipei city, 114, Taiwan
Phone: +886-2-26560399 / Fax: +886-2-26578016

Declaration of Conformity

FLIR Model: ***VS80,***
VS80-KIT-1, VS80-KIT-2, VS80-KIT-3, VS80-KIT-4, VS80-KIT-5, VS80-KIT-6, VS80-IR21, VS80CIR-21, VS80C55-1RM, VS80A2-45-1RM, VS80A4-60-2RM, VS80C10-25RM, VS80CHD-55-1RM, VS80C2-49-1RM

Description: ***High-Performance Videoscope***

Date of Issue: ***27-Apr-22***

We, Teledyne FLIR Commercial Systems, Inc. 10F, No. 57, Zhouzi Street, NeiHu District, Taipei city, 114, Taiwan declare that a sample of the product listed above has been tested by a third party for CE marking according to:

EMC Directive: 2014/30/EU
Report Number: 210900046TPE-001
Report Date of Issue: 3/15/2022
Standards:

EN 55011:2016+A11:2020
EN 61000-3-3: 2013+A1:2019
EN 61326-1: 2021(Industrial)
EN 61326-2-1: 2021
EN 61000-3-2: 2019+A1:2021
EN 61000-6-2: 2019
EN 61000-6-4: 2019
EN 62311: 2008

LVD Directive: 2014/35/EU
Report Number: 210900046TPE-001R2
Report Date of Issue: 2/21/2022
Standards:

IEC 61010-1:2010, AMD1:2016
EN 61010-1:2010/A1:2019

RED Directive: 2014/53/EU
Report Number: 210900046TPE-001
Report Date of Issue: 3/15/2022
Standards:

EN 301 489-1 V2.2.3 (2019-11)
EN 301 489-17 V3.2.4 (2020-09)

RoHS Directive: EU Directive 2015/863/EU (RoHS 3)
REACH Directive: Annex XVII (SVHC Jul 16,2019)
WEEE Directive Compliance

The test reports show that the product fulfills the requirement in the EMC Directive, RoHS Directive, REACH and WEEE for CE Marking. On this basis, together with the manufacturer's own documented production control, the manufacturer (or his European authorized representative) can in his EC Declaration of Conformity verify compliance with the EMC Directive, RoHS Directive, REACH and WEEE.

Stan Lee

Stan Lee/ QA Manager

Taipei, Taiwan Apr 27, 2022

UK Declaration of Conformity

FLIR Product: VS80, VS80-KIT-1, VS80-KIT-2, VS80-KIT-3, VS80-KIT-4, VS80-KIT-5, VS80-KIT-6, VS80-IR21, VS80CIR-21, VS80C55-1RM, VS80A2-45-1RM, VS80A4-60-2RM, VS80C10-25RM, VS80CHD-55-1RM, VS80C2-49-1RM

Name and address of the manufacturer: Teledyne FLIR Commercial Systems, Inc.
10F, No. 57, Zhouzi Street, NeiHu District, Taipei city, 114, Taiwan

This declaration of conformity is issued under the sole responsibility of the manufacturer.

The object of the declaration: VS80, VS80-KIT-1, VS80-KIT-2, VS80-KIT-3, VS80-KIT-4, VS80-KIT-5, VS80-KIT-6, VS80-IR21, VS80CIR-21, VS80C55-1RM, VS80A2-45-1RM, VS80A4-60-2RM, VS80C10-25RM, VS80CHD-55-1RM, VS80C2-49-1RM

The object of the declaration described above is in conformity with the relevant statutory requirements applicable to the specific product:

Standards review between UK and EU

UK legislation refr.	UK designated standard*	EU regulation refr.	EU harmonised standard
EMC		**EMC**	
S.I. 2016 No. 1091	EN 55011:2016	2014/30/EU	EN 55011:2016
S.I. 2016 No. 1091	EN 61000-3-3	2014/30/EU	EN 61000-3-3:2013+A1:2019
S.I. 2016 No. 1091	EN 61000-3-2	2014/30/EU	EN 61000-3-2: 2019
S.I. 2016 No. 1091	EN 61000-6-2	2014/30/EU	EN 61000-6-2: 2019
S.I. 2016 No. 1091	EN 61000-6-4	2014/30/EU	EN 61000-6-4: 2019
S.I. 2016 No. 1091	EN 61326-1	2014/30/EU	EN 61326-1: 2013
S.I. 2016 No. 1091	EN 61326-2-1	2014/30/EU	EN 61326-2-1 : 2021
S.I 20016 No.1091	EN 301 489-1	2014/53/EU	EN 301 489-17 v3.2.4
S.I. 2016 No. 1091	EN 301 489-1	2014/53/EU	EN 301 489-1 v2.2.3
LVD Directive		**LVD Directive**	
S.I. 2016 No. 1101	EN 61010-1	2014/35/EU	EN 61010-1: 2010/A1: 2016
S.I. 2016 No. 1101	EN 61010-1	2014/35/EU	EN 61010-1: 2010/A1: 2019
RoHS		**RoHS**	
S.I. 2012 No. 3032	EN 50581:2012	2015/65/EU (RoHS)	EN 50581:2012

* https://www.gov.uk/guidance/designated-standards

Designated standards: EMC – consolidated list, version 1, 1 January 2021
Designated standards: Low voltage equipment – consolidated list, version 1, 1 January 2021
Designated standards: RoHS – consolidated list, version 1, 1 January 2021

FLIR Commercial Systems
Quality Assurance

Stan Lee

Stan Lee
Quality Manager

SAMSUNG SDI

Safety Data Sheet

Regulation : In accordance with Regulation (EU) 2015/830 (REACH), Annex II, and OSHA 29 CFR 1910.1200

Section I – IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Important Note: As a solid, manufactured article, exposure to hazardous ingredients is not expected with normal use. This battery is an article pursuant to 29 CFR 1910.1200 and, as such, is not subject to the OSHA Hazard Communication Standard requirement. The information contained in this Safety Data Sheet contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

1.1 Product identifier

Model name INR21700-50E

Substance name : Lithium-ion batteries

Synonyms :

Lithium-ion Cell, Lithium-ion Pack, Lithium-ion Battery, Li-Ion Cell, Li-Ion Pack, Li-Ion Battery

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : Lithium-ion batteries

Uses advised against : Use for recommended use only

Further Information : Not available

1.3 Details of the supplier of the safety data sheet

Supplier : SAMSUNG SDI Co., Ltd.

Street address/P.O. Box : 150-20, Gongse-ro, Giheung-gu, Yongin-si, Gyeonggi-do, Korea

Country ID/Postcode/Place :

Telephone number : 1-800-424-9300: US and Canada / 1-703-527-3887: International

Responsible Department: Quality team

e-mail address of competent person responsible for the SDS : Not available

National contact : 1-800-424-9300: US and Canada / 1-703-527-3887: International

1.4 Emergency Telephone

: 1-800-424-9300: US and Canada / 1-703-527-3887: International

Opening hours : Not available

Other comments : Not available

1.5 Further Information

Battery-System: Lithium-ion (Li-ion)

Nominal Voltage: 3.63 V

Rated Capacity: 4.90 Ah

Wh rating: 17.787 Wh

Anode (negative electrode): based on intercalation graphite

Cathode (positive electrode): based on lithiated metal oxide (Cobalt, Nickel, Aluminium)

Remark:

The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. SAMSUNG SDI Co., Ltd. makes no warranty, expressed or implied, with respect to this information and disclaims all liabilities from reliance on it.

Section II – HAZARDS IDENTIFICATION

※ This is a product that fulfills a certain function in solid state with specific shape without discharging any chemical substance in its use and has no obligation to write (M)SDS. Since this document contains the precautions for safe handling related to its materials or chemical substances consisting of this product, please note that these overall information is irrelevant to this product.

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No. 1272/2008 [CLP] and OSHA 29 CFR 1910.1200 : Not classified

2.1.2 Additional information:

Classification of the substance or mixture.

Preparation Hazards and Classification: The product is a Lithium ion cell or battery and is therefore classified as an article and is not hazardous when used according to the recommendations of the manufacturer. The hazard is associated with the contents of the cell or battery. Under recommended use conditions, the electrode materials and liquid electrolyte are non-reactive provided that the cell or battery integrity remains and the seals remain intact. The potential for exposure should not exist unless the cell or battery leaks, is exposed to high temperatures or is mechanically, electrically or physically abused/damaged. If the cell or battery is compromised and starts to leak, based upon the battery ingredients, the contents are classified as Hazardous.

Hazardous Materials Information Label (HMIS)
Health: Not available
Flammability: Not available
Physical Hazard: Not available

NFPA Hazard Ratings
Health: Not available
Flammability: Not available
Reactivity: Not available

2.2 Label elements

Hazard pictograms : Not applicable

Signal word : Not applicable

Hazard statement : Not applicable

Precautionary statements: Not applicable

Supplemental Hazard information (EU) : Not applicable

2.3 Other hazards :

Appearance, Color and Odor: Solid object with no odor.

Primary Routes(s) of Exposure: These chemicals are contained in a sealed enclosure. Risk of exposure occurs only if the cell or pack is mechanically, thermally, electrically or physically abused to the point of compromising the enclosure.
If this occurs, exposure to the electrolyte solution contained within can occur by inhalation, ingestion, eye contact and skin contact.

Potential Health Effect(s):

Acute (short term): see Section 8 for exposure controls.
In the event that this cell or pack has been ruptured, the electrolyte solution contained within the cell would be corrosive and can cause burns to skin and eyes.
Inhalation: Inhalation of materials from a sealed cell is not an expected route of exposure. Vapors or mists from a ruptured cell may cause respiratory irritation.
Ingestion: Swallowing of materials from a sealed cell is not an expected route of exposure. Swallowing the contents of an open cell can cause serious chemical burns to mouth, esophagus, and gastrointestinal tract.
Skin: Contact between the cell and skin will not cause any harm. Skin contact with the contents of an open cell can cause severe irritation or burns to the skin.
Eye: Contact between the cell and the eye will not cause any harm. Eye contact with the contents of an open cell can cause severe irritation or burns to the eye.
CHRONIC (long term): see Section 11 for additional toxicological data.

Interactions with other chemicals: Immersion in high conductivity liquids may cause corrosion and breaching of the cell or battery enclosure. The electrolyte solution inside of the cells may react with alkaline (basic) materials and present a flammability hazard.

Potential Environmental Effects: Not Available.

Section III – COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixture

CAS No.	EC No.	REACH Registration No.	%[weight]	Name	Common Name (Synonyms)	Classification according to Regulation(EC) No 1278/2008(CLP)
12325-84-7	Not available	-	25~35	Lithium Nickel Oxide	Not available	Not classified
7782-42-5	231-955-3	-	20~30	Graphite	Not available	Not classified
7439-89-6	231-096-4	-	10~20	Iron	Not available	Not classified
7440-50-8	231-159-6	-	5~15	Copper	Not available	Not classified
12190-79-3	235-362-0	-	1~5	cobalt lithium dioxide	Not available	Not classified

554-12-1	209-060-4	-	1~5	Methyl propanoate	Not available	Flam. Liq. 2, H225 Acute Tox. 4, H332
7429-90-5	231-072-3	-	1~5	Aluminium	Not available	Pyr. Sol. 1, H250 Water-react. 2, H261
21324-40-3	244-334-7	-	1~3	lithium hexafluorophosphate(1-)	Not available	Not classified
114435-02-8	Not available	-	1~3	4-Fluoro-1,3-dioxolan-2-one	Not available	Not classified
616-38-6	210-478-4	-	1~3	dimethyl carbonate	Not available	Flam. Liq. 2, H225
9002-88-4	Not available	-	1~3	Polyethylene	Not available	Not classified
1309-37-1	215-168-2	-	0.1~1	diiron trioxide	Not available	Not classified
1318-23-6	215-284-3	-	0.1~1	Boehmite (Al(OH)O)	Not available	Not classified
1333-86-4	215-609-9	-	0.1~1	Carbon black	Not available	Not classified
7440-02-0	231-111-4	-	0.1~1	Nickel	Not available	Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372 Aquatic Chronic 3, H412
11089-89-7	Not available	-	0.1~1	Aluminum lithium oxide (LiAlO)	Not available	Not classified
7440-47-3	231-157-5	-	0.1~1	Chromium	Not available	Not classified
554-13-2	209-062-5	-	0.1~1	lithium carbonate	Not available	Not classified
100-41-4	202-849-4	-	0.1~1	ethylbenzene	Not available	Flam. Liq. 2, H225 Acute Tox. 4, H332 Asp. Tox. 1, H304 STOT RE 2, H373(hearing organs)

Further Information
Because of the cell structure the dangerous ingredients will not be available if used properly.
During charge process a lithium graphite intercalation phase is formed.

Section IV – FIRST-AID MEASURES

4.1 Description of first aid measures

Following eye contact :

- Rinse eyes with plenty of water for at least 15 minutes and seek medical attention.

Following skin contact :

- Remove contaminated clothing and wash before reuse.
- Immediately rinse contact area with plenty of clean water.
- Provide first aid to contacted area to prevent infection.
- Get medical attention.

Following inhalation :

- In case of inhalation of organic electrolyte mist, move from exposure to fresh air.
- If necessary give oxygen. Get medical attention.

Following ingestion :

- In case of ingestion of electrolyte don't induce vomiting.
- If patient is conscious and alert give 2~4 cupfuls of milk or water.
- Never give anything by mouth to an unconscious person.
- Get medical attention immediately.

Further Information :

- The following first aid measures are required only in case of exposure to interior battery components after damage of the external battery casing.
- Undamaged, closed cells do not represent a danger to the health.

4.2 Most important symptoms and effects, both acute and delayed

Acute effects : Not available

Delayed effects : Not available

4.3 Indication of immediate medical attention and special treatment needed

- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Section V – FIRE-FIGHTING MEASURES

5.1 Extinguishing media

- When the scale of the fire is small, use a HFC (hydrofluorocarbon) clean-agent fire extinguisher or alcohol resistant foam fire extinguishers. (In case of battery overheating, wear protective gear and immerse heated battery in water)
- In case of large fire, use large amount of water to extinguish.

5.2 Special hazards arising from the substance or mixture

- Flammable gas leaks before ignition and then the product ignites.

5.3 Advice for firefighters

- The ignited battery has a high temperature, so there is a risk of additional ignition even if the fire is extinguished at early stage. Sprinkle a large amount of water until the battery temperature drops to normal temperature.
- If the battery is ignited in multi-stacked condition, multi-stack should be disassembled and then extinguished so that heat is not transferred between batteries
- In the event of a battery fire, cool it by spraying water directly on the battery.
- When handling a overheated battery, wear heat-resistant protective equipment.

Section VI – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment : Use personal protective equipment, see Section 8

Emergency procedures :

- In case of cell damage, possible release of dangerous substances and a flammable gas mixture.
- Eliminate all ignition sources.
- Please note that materials and conditions to avoid.
- Battery may emit electrolyte if charging or discharging rates exceed manufacturer's recommendations or if pack has been breached.
- Move battery to well ventilated area to prevent gas accumulation.

For emergency responders

- Eliminate all ignition sources.
- Please note that materials and conditions to avoid.
- Move battery to well ventilated area to prevent gas accumulation.

6.2 Environmental precautions :

- Avoid release to the environment.
- Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up

For containment : Not available

For cleaning up :

- Cover with Dry earth, DRY sand or other non-combustible material and put on the plastic sheet to minimize spreading or contact with rain.
- Move battery to well ventilated area to prevent gas accumulation.
- Dispose in accordance with applicable local, state and federal regulations.

Other information: Not available

6.4 Reference to other sections

JHT
POWER IN PARTNERSHIP

Jhih Hong Technology Co., Ltd. 智弘科技股份有限公司
6F, No.15, Wu Chuan Road,
Wu-Ku Industrial Park,
New Taipei City 248, Taiwan
http://www.jht-energy.com
248 新北市新北產業園區五權路15號6樓
T +886 2 2298 9236
F +886 2 2290 1657
E service@jht-energy.com

Lithium cell or battery test summary in accordance with sub-section 38.3 of Manual of Tests and Criteria

The following information shall be provided in this test summary:			
(a)	Name of cell, battery or product manufacturer as applicable		
(b)	Cell, battery, or product manufacturer's contact information to include		Jhih Hong Technology Co., Ltd.
	address		6F, No.15, Wu Chuan Road, Wu-Ku Industrial Park , New Taipei City 248, Taiwan (R.O.C.)
	phone number		+886-2-2298-9236
	Email address		Jason_hu@jht-energy.com
	and website for more information		www.jht-energy.com
(c)	Name of the test laboratory to include		Jhih Hong Technology Co., Ltd.
	address		6F, No.15, Wu Chuan Road, Wu-Ku Industrial Park , New Taipei City 248, Taiwan (R.O.C.)
	phone number		+886-2-2298-9236
	email address		Jason_hu@jht-energy.com
	and website for more information		www.jht-energy.com
(d)	A unique test report identification number		20220114002
(e)	Date of test report		14/01/2022 (dd/mm/yyyy)
(f)	Description of cell or battery to include at a minimum:		
	(i)	Lithium ion or lithium metal cell or battery	Rechargeable Li-ion Battery Pack
	(ii)	Mass	150g
	(iii)	Watt-hour rating, or lithium content	3.6V 9800mAh 35.28Wh
	(iv)	Physical description of the cell/battery; and	Black
	(v)	Model numbers	INR21700-50E
(g)	List of tests conducted and results (i.e., pass/fail)		See below

List of Test			
Clause	Test Item	Result	Sample No.
38.3.4.1	Altitude simulation	Pass	1~8
38.3.4.2	Thermal test	Pass	1~8
38.3.4.3	Vibration	Pass	1~8
38.3.4.4	Shock	Pass	1~8
38.3.4.5	External short circuit	Pass	1~8
38.3.4.6	Crush/Impact	N/A	N/A
38.3.4.7	Overcharge	Pass	9~16
38.3.4.8	Forced discharge	N/A	N/A