

Mi-TIC E L™



INTRODUCTION

The Mi-TIC E L is part of the argus range of thermal imaging cameras and is the most affordable high resolution large screen thermal imager for fire fighting applications. The camera provides a crystal clear image with dynamic range up to 760°C (1400°F) and at the same time see very low temperature objects, which is ideal for casualty searches.

The Mi-TIC E L is available with a unique dual use desktop/in-truck charger station which securely retains and charges both the thermal imager and a spare battery. The charger stations can be daisy-chained together, up to a maximum of 6 units.

PERSONAL

Weighing approximately 865g (1lb 15oz) the Mi-TIC E L thermal imager can be easily and comfortably held in the palm of your hand. Unlike many thermal imagers, the Mi-TIC E L design allows it to be worn in multiple ways – in the hand, inside a pocket, clipped outside a pocket, clipped to a lanyard or hung around the neck.

SIMPLE

With a thumb operated green on/off button and superb start up time of 5 seconds, the Mi-TIC E L is simple to use.

SAFE

The Mi-TIC E L has Class I, Division 2 and Class II, Division 2 Non-Incendive certifications. The use of Lithium Iron Phosphate technology ensures the Mi-TIC E L delivers in excess of 3 hours of battery life over 2,000 plus charge cycles. They are inherently safe due to the use of patented nanophosphate® technology.



CAMERA STANDARD FEATURES

The Mi-TIC E L comes with the most advanced features available in any Thermal Imaging Camera. These include:

3.5" LCD Display	X2 and X4 Digital Zoom*
Direct Temperature Measurement (DTM)	Image Capture (1000 images)*
Tri-Mode Sensitivity	Video Capture (16 hours) including 'Black Box' recording
Customisable start-up screen	Image Freeze*
Firefighting applications modes* <ul style="list-style-type: none"> • Fire mode • Overhaul • Size Up • Inspection 	User Replaceable Germanium window (Order code: ARG_MI_RWS)
Search and Rescue application modes* <ul style="list-style-type: none"> • White Hot • Heat Seeker Blue 	No PC Software required for image and video download – when the camera is docked, it is recognised as a removable device, like a USB memory stick

* 3-button variants only

CAMERA OPTIONAL ACCESSORIES

The Mi-TIC E L can be purchased with the following accessories:

AA Battery Pack. (Order code: ARG_MI_YAA)	Pocket Clip. (Order code: ARG_MI_PCLIP_S)
argus® Mi-TIC Lithium Iron Phosphate Battery Pack (Yellow). (Order code: ARG_MI_BLPYN-2)	Quick Start Guide.
Truck/Desktop Charger Dock with mains plug and universal mounting plate. (US, UK, Europe, Aus and South America). (Order code: ARG_MI_CS)	argus® Mi-TIC Black Hard Case. (Order code: ARG_MI_BHC)
Retractable Lanyard. (Order code: ARG_MI_RL)	argus® Mi-TIC Yellow Hard Case. (Order code: ARG_MI_YHC)
USB Connection Lead for connecting dock to PC/Laptop. (Order code: ARG_MI_USB)	argus® Soft Carry Case. (Order code: P7030SC)
	argus® Neck Strap. (Order code: P7030NS)

CAMERA ORDER CODES

Code	Resolution	Buttons	Frame rate
MI-TIC-EL-1	320x240	1	30Hz
MI-TIC-EL-3	320x240	3	30Hz

WARRANTY

3 year Camera Warranty
5 year Battery Warranty
10 year Focusing Lens and Sensor Warranty

ENVIRONMENTAL DATA

Thermal conditions The camera has been designed to operate:
• continuously between -20°C (-4°F) and +85°C (185°F)
or
• 150°C (300°F) for 15 minutes
• 260°C (500°F) for 5 minutes

Sealing	IP67, will withstand immersion in water
Impact	The camera will withstand a drop from a height of 2m (78 inches) onto concrete
Storage	It is recommended that for maximum effective operational life, the storage temperature is kept between -20°C (-4°F) and +40°C (104°F)

OPTICAL DATA

Detector	
Sensor type	Un-cooled Microbolometer
Sensor material	Amorphous Silicon (ASi)
Resolution	384 x 288px
Pixel size	17µm
Spectral response	7.5 – 14µm
MDTD (Full camera system sensitivity)	50mK (0.05°C) typical (Minimum Discernible Temperature Difference)
NETD (Sensor sensitivity)	<50mK (<0.05°C)
Dynamic range	-40°C to 760°C (-40°F to 1400°F)
Refresh rate	60Hz
Direct Temperature Measurement (DTM)	-40°C to 760°C (-40°F to 1400°F)
Lens	
Lens material	Germanium Composite
Focal length	1m to infinity, optimised at 4m (3 ft to infinity, optimised at 13ft)
Aperture	f/1.0
Field of view	50° horizontal, 37.5° vertical, 62° diagonal
Display	
Type	High grade, Industrial, colour TFT active matrix LCD
Size	90mm (3.5 inches)
Pixel format	QVGA 320 x 240, (each pixel RGB format)
Video input	Sensor synchronised direct digital drive
Backlight	350cd/m ²

MECHANICAL DATA

Camera dims (H x W x D)	216mm x 110mm x 82mm (8½ x 4¾ x 3¼ inches)
Camera weight	700g (1lb 9oz) without battery 865g (1lb 15oz) with standard battery
Battery dims (H x W x D)	87mm x 76mm x 28mm standard battery
Battery weight	165g (6oz) (standard battery)
Charger dims (H x W x D)	167mm x 112mm x 120mm (6¾ x 4¾ x 4½ inches)
Charger weight	550g (1lb and 3oz)
Main camera body	Radel®R-5100 and Santoprene®
LCD window	Ultrason® E 2010 HC
LCD bumper	Santoprene®
Ge Window collar	Radel®R-5100 and Santoprene®
Lens window	Germanium (2mm thick) with durable coating

ELECTRICAL DATA

Power consumption	<3 W typical
Start-up time	5 seconds typical
Battery type	Lithium Iron Phosphate Rechargeable Battery
Battery capacity	1500 mAh, 6.6V (standard battery)
Std Battery life	In excess of 3 hours @ ambient temperature (22°C, 72°F)
Std Battery charge time	Less than 3 hours
Battery recharge cycles	Over 2000 cycles
Battery charging temp.	5°C to 40°C (41°F to 104°F)
Charger input voltage	11V – 30V DC (12V and 24V vehicle systems)
Charger operating temp.	0°C to 40°C (32°F to 104°F)

COMPLIANCE DATA

Performance	NFPA 1801:2018 Standard on Thermal Imagers for the Fire Service
Safety	IEC 62368-1:2014 and related national standards ANSI/ISA 12.12.01:2015 Class I, Div 2, Groups C, D T4; Class II, Div 2 Groups F, G T4
Emissions RFI/EMC	EN 55032:2015, Class A EN 54098:2010 FCC CFR 47 subpart 15b, ICES 003:2017 AUS/NZ 4251.1
Immunity	EN 55103-2:2009
Vibration/Shock	BS EN 60721-3-2 Class 2M3
RoHS	All parts of the system are compliant with EU directive 2011/65/EC

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