

# Mi-TIC E™



## INTRODUCTION

The Mi-TIC E is the world's smallest high resolution 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.

Every Mi-TIC E is supplied 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 750g (26oz) the Mi-TIC E is a small format thermal imager that can be easily and comfortably held in the palm of your hand. Unlike many thermal imagers, the Mi-TIC E 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 is simple to use.

## SAFE

The Mi-TIC E 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 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 comes with the most advanced features available in any thermal imaging camera. These include:

2.7" LCD Display	Image Capture (1000 images)*
Direct Temperature Measurement (DTM)	X2 and X4 Digital Zoom*
Tri-Mode Sensitivity	Video Capture (16 hours) including 'Black Box' recording
Customisable start-up screen	Image Freeze*
Firefighting application modes* <ul style="list-style-type: none"> <li>• Fire mode</li> <li>• Overhaul</li> <li>• Size Up</li> <li>• Inspection</li> </ul>	User Replaceable Germanium window (Order code: ARG_MI_RWS)
Search and Rescue application modes* <ul style="list-style-type: none"> <li>• White Hot</li> </ul>	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 STANDARD ACCESSORIES

The Mi-TIC E comes with the following accessories as standard:

Two Mi-TIC Lithium Iron Phosphate Battery Pack. (Yellow) (Order code: ARG_MI_BLPYN-2)	USB Connection Lead for connecting dock to PC / Laptop. (Order code: ARG_MI_USB)
Truck/Desktop Charger Dock with mains plug and universal mounting plate. (US, UK, Europe, Aus and South America). (Order code: ARG_MI_CS)	Pocket Clip. (Order code: ARG_MI_PCLIP)
Retractable Lanyard. (Order code: ARG_MI_RL)	Quick Start Guide

## CAMERA OPTIONAL ACCESSORIES

argus® Mi-TIC Black Hard Case. (Order code: ARG_MI_BHC)	argus® Neck Strap. (Order code: P7030NS)
argus® Mi-TIC Sunshroud. (Order code: ARG_MI_SS)	AA Battery Pack. (Order code: ARG_MI_YAA)
argus® Soft Carry Case. (Order code: P7030SC)	

## CAMERA ORDER CODES

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

## WARRANTY

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

## ENVIRONMENTAL DATA

<b>Thermal conditions</b>	The camera has been designed to operate: <ul style="list-style-type: none"> <li>continuously between -20°C (-4°F) and +85°C (185°F) or</li> <li>150°C (300°F) for 15 minutes</li> <li>260°C (500°F) for 5 minutes</li> </ul>
<b>Sealing</b>	IP67, will withstand immersion in water
<b>Impact</b>	The camera will withstand a drop from a height of 2m (78 inches) onto concrete
<b>Storage</b>	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

<b>Detector</b>	
<b>Sensor type</b>	Un-cooled Microbolometer
<b>Sensor material</b>	Amorphous Silicon (ASi)
<b>Resolution</b>	384 x 288px
<b>Pixel size</b>	17µm
<b>Spectral response</b>	7.5 – 14µm
<b>MDTD (Full camera system sensitivity)</b>	60mK (0.06°C) typical (Minimum Discernible Temperature Difference)
<b>NETD (Sensor sensitivity)</b>	<50mK (<0.05°C)
<b>Dynamic range</b>	-40°C to 760°C (-40°F to 1400°F)
<b>Refresh rate</b>	60Hz
<b>Direct Temperature Measurement (DTM)</b>	-40°C to 760°C (-40°F to 1400°F)
<b>Lens</b>	
<b>Lens material</b>	Germanium Composite
<b>Focal length</b>	1m to infinity, optimised at 4m (3ft to infinity, optimised at 13ft)
<b>Aperture</b>	f/1.0
<b>Field of view</b>	50° horizontal, 37.5° vertical, 62° diagonal
<b>Display</b>	
<b>Type</b>	High grade, Industrial, colour TFT active matrix LCD
<b>Size</b>	69mm (2.7 inches)
<b>Pixel format</b>	QVGA 320 x 240, (each pixel RGB format, total pixels 230,400 pixels)
<b>Video input</b>	Sensor synchronised direct digital drive
<b>Backlight</b>	400cd/m <sup>2</sup>

## MECHANICAL DATA

<b>Camera dims (H x W x D)</b>	203mm x 96mm x 71mm (8 x 3 <sup>3</sup> / <sub>4</sub> x 2 <sup>13</sup> / <sub>16</sub> inches)
<b>Camera weight</b>	600g (21oz) without battery 765g (27oz) with standard battery 855g (30oz) with high capacity battery
<b>Battery dims (H x W x D)</b>	87mm x 76mm x 28mm (standard battery) 87mm x 76mm x 35mm (high capacity battery)
<b>Battery weight</b>	165g (6oz) standard battery 255g (9oz) high capacity battery
<b>Charger dims (H x W x D)</b>	167mm x 112mm x 120mm
<b>Charger weight</b>	550g (1lb 3oz)
<b>Main camera body</b>	Radel®R-5100 and Santoprene®
<b>LCD window</b>	Ultrason® E 2010 HC
<b>LCD bumper</b>	Santoprene®
<b>Ge Window collar</b>	Radel®R-5100 and Santoprene®
<b>Lens window</b>	Germanium (2mm thick) with durable coating

## ELECTRICAL DATA

<b>Power consumption</b>	<3 W typical
<b>Start-up time</b>	5 seconds typical
<b>Battery type</b>	Lithium Iron Phosphate Rechargeable Battery
<b>Battery capacity</b>	1500 mAh, 6.6V (standard battery) 2500mAh, 6.6V (high capacity battery)
<b>Std Battery life</b>	In excess of 3 hours @ ambient temperature (22°C, 72°F)
<b>Std Battery charge time</b>	Less than 3 hours
<b>High Capacity Battery Life</b>	In excess of 5 hours @ ambient temperature (22°C, 72°F)
<b>High Cap, Battery charge time</b>	Less than 4.5 hours
<b>Battery recharge cycles</b>	Over 2000 cycles
<b>Battery charging temp.</b>	5°C to 40°C (41°F to 104°F)
<b>Charger input voltage</b>	11V – 30V DC (12V and 24V vehicle systems)
<b>Charger operating temp.</b>	0°C to 40°C (32°F to 104°F)

## COMPLIANCE DATA

<b>Performance</b>	NFPA 1801:2018 Standard on Thermal Imagers for the Fire Service
<b>Safety</b>	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
<b>Emissions RFI/EMC</b>	EN 55032:2015, Class A EN 54098:2010 FCC CFR 47 subpart 15b, ICES 003:2017 AUS/NZ 4251.1
<b>Immunity</b>	EN 55103-2:2009
<b>Vibration/Shock</b>	BS EN 60721-3-2 Class 2M3
<b>RoHS</b>	All parts of the system are compliant with EU directive 2011/65/EC

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GR03143-01