

# Mi-TIC S™



## INTRODUCTION

The Mi-TIC S is part of the argus range of thermal imaging cameras and the world's smallest thermal imager to feature a large format, high resolution display for advanced fire fighting applications. The camera provides a crystal clear image with a superb dynamic range: you can clearly view extremely high temperatures up to 1100°C (2000°F) and at the same time see very low temperature objects, which is ideal for casualty searches.

Every Mi-TIC S 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 870g (31oz) the Mi-TIC S 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 S 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 S is simple to use.

## SAFE

The Mi-TIC S has Class I, Division 2 Non Incendive certification. The use of Lithium Iron Phosphate technology ensures the Mi-TIC S delivers 3 hours of battery life over 1,000s of cycles. They are inherently safe due to the use of patented nanophosphate® technology.



## CAMERA STANDARD FEATURES

The Mi-TIC S 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)	Laser Pointer
Tri-Mode Sensitivity	Electronic Compass
Customisable start-up screen	Image Capture (1000 images)
Firefighting applications modes: <ul style="list-style-type: none"> <li>• Fire mode</li> <li>• Overhaul</li> <li>• Size Up</li> <li>• Inspection</li> </ul>	Video Capture (16 hours) including 'Black Box' recording
Search and Rescue application modes: <ul style="list-style-type: none"> <li>• White Hot</li> <li>• Heat Seeker Blue</li> </ul>	Image Freeze
Heat Seeker Cold Seeker	User Replaceable Germanium window (Order code: ARG_MI_RWS)
	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

## CAMERA STANDARD ACCESSORIES

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

Two argus® Mi-TIC Lithium Iron Phosphate Battery Packs. (Standard) (Order code: ARG_MI_BLPSN-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_S)
Retractable Lanyard. (Order code: ARG_MI_RL)	Quick Start Guide

## CAMERA OPTIONAL ACCESSORIES

AA Battery Pack. (Order code: ARG_MI_BAA)	argus® Soft Carry Case. Order code: (P7030SC)
argus® Mi-TIC Black Hard Case. (Order code: ARG_MI_BHC)	argus® Neck Strap. Order code: (P7030NS)
argus® Mi-TIC Lithium Iron Phosphate Battery (High capacity). (Order code: ARG_MI_BLPL)	

## CAMERA ORDER CODES

Code	Resolution	Buttons	Frame rate
MI-320-3-S	320x240	3	30Hz
MI-329-3-S	320x240	3	9Hz

## WARRANTY

5 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>	25µm
<b>Spectral response</b>	7.5 – 14µm
<b>MDDT (Full camera system sensitivity)</b>	50mK (0.05°C) typical (Minimum Discernible Temperature Difference)
<b>NETD (Sensor sensitivity)</b>	<50mK (<0.05°C)
<b>Dynamic range</b>	-40°C to 1100°C (-40°F to 2000°F)
<b>Refresh rate</b>	60Hz
<b>Direct Temperature Measurement (DTM)</b>	-40°C to 1100°C (-40°F to 2000°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>	90mm (3.5 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>	350 cd/m <sup>2</sup>

## MECHANICAL DATA

<b>Camera dims (H x W x D)</b>	216mm x 110mm x 82mm (8½ x 4¼ x 3¼ inches)
<b>Camera weight</b>	705g (25oz) without battery 870g (31oz) with standard battery 960g (34oz) 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 (11b 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>	1500mAh, 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 1801:2013 Standard on Thermal Imagers for the Fire Service
<b>Safety</b>	IEC 60950-1:2005+A1:2009+A2:2013 and related national standards (Tamb +80°C max.) ANSI/ISA 12.12.01:2007 Class I, Division 2, Groups C, D T4. -25°C (-13°F) to +70°C (158°F)
<b>Emissions RFI/EMC</b>	BS EN 61000-6-3:2007 + A1:2011, BS EN 50498:2010, ICES-003(2012), FCC CFR-47 Subpart B, AUS/NZ 4251.1
<b>Immunity</b>	BS EN 61000-6-2:2005, BS EN 50498:2010
<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
<b>Laser</b>	IEC/EN 60825:2014 & 21 CFR 1040.10 & 1040.11 except for deviations pursuant of Laser Notice No. 50, dated June 24, 2007

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