argus®

thermal imaging from Avon Protection

Mi-TIC E L™

The argus® Mi-TIC E L 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 760ºC (1400ºF) and at the same time see very low temperature objects, which is ideal for casualty searches.

The argus® 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 argus® Mi-TIC E L thermal imager can be easily and comfortably held in the palm of your hand. Unlike many thermal imagers, the argus® 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 argus® Mi-TIC E L is simple to use.

SAFE

The use of Lithium Iron Phosphate technology ensures the argus® Mi-TIC E L delivers 2 hours of battery life over 1,000s of cycles. They are inherently safe due to the use of patented nanophosphate® technology.

TO BOOK A DEMONSTRATION OR FIND OUT MORE GO TO:

argusdirect.com

CAMERA WARRANTY 3 YEAR Mi-TIC E L

BATTERY WARRANTY 5 YEAR Mi-TIC E L

SENSOR AND LENS WARRANTY 10 YEAR Mi-TIC E L

CAMERA STANDARD FEATURES

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

- 3.5" LCD Display
- Direct Temperature Measurement (DTM)
- Tri-Mode Sensitivity
- Customisable start-up screen
- Firefighting applications modes*
  - Fire mode
  - Overhaul
  - Size Up
  - Inspection
- Search and Rescue application modes*
  - White Hot
  - Heat Seeker Blue
- X2 and X4 Digital Zoom*
- Image Capture (1000 images)*
- Video Capture (16 hours) including 'Black Box' recording
- Image Freeze*
- 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

* 3-button variants only

CAMERA OPTIONAL ACCESSORIES

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

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

Please refer to the argus website for details.

DATA SHEET
CAMERA SPECIFICATION

Mi-TIC E L™

CAMERA ORDER CODES

Code	Resolution	Buttons	Frame rate
MI-320-1-EL	320x240	1	30Hz
MI-329-1-EL	320x240	1	9Hz
MI-320-3-EL	320x240	3	30Hz
MI-329-3-EL	320x240	3	9Hz

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 -20ºC (-4ºF) and +85ºC (185ºF) or • 150ºC (300ºF) for 15 minutes • 260ºC (500ºF) 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	25µm
Spectral response	7.5 – 14µm
MDTD (Full camera system sensitivity)	50mK (0.05ºC) typical (Minimum Discernible Temperature Difference)
NETD (Sensor sensitivity)	<50mK (<0.05ºC)
Dynamic range	-40°C to 760°C (-40ºF to 1400°F)
Refresh rate	60 Hz
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/m²

MECHANICAL DATA

Camera dims (H x W x D)	216mm x 110mm x 82mm (8½ x 4⁵⁄₁₆ x 3¼ inches)
Camera weight	700g (1lb 9oz) without battery 865g (1lb 15oz) with std battery
Battery dims (H x W x D)	87mm x 76mm x 28mm (std battery)
Battery weight	165g (6oz) (std battery)
Charger dims (H x W x D)	167mm x 112mm x 120mm (6⁹⁄₁₆ x 4⁷⁄₁₆ x 4½ inches)
Charger weight	550g (1lb and 3 oz)
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	1100 mAh, 6.6V (std battery)
Std Battery life	In excess of 2hrs @ ambient temperature (22ºC, 72ºF)
Std Battery charge time	Less than 2 hours
Battery recharge cycles	Over 1000 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.	0ºC to 40ºC (32ºF to 104ºF)

COMPLIANCE DATA

Safety	IEC 60950-1:2005+A1:2009+A2:2013 and related national standards (T_{amb} +80ºC max)
Emissions RFI/EMC	BS EN 61000-6-3:2007 + A1:2011, BS EN 50498:2010, ICES-003(2012), FCC CFR-47 Subpart B, AUS/NZ 4251.1
Immunity	BS EN 61000-6-2:2005, BS EN 50498:2010
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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