

# armstrong optical

## Medical MobIR<sup>®</sup> M8



The **Medical MobIR<sup>®</sup> M8**, the latest manifestation of the **MobIR** thermographic camera range, offering new, low cost insights into medical diagnosis. This quick and reliable medical instrument is an accurate, quantifiable, non-invasive diagnostic technique allowing an examiner to visualise and quantify changes in skin surface temperature.

### **Ultra-compact, & lightweight:**

Though weighing only 350g (with battery) and shaped like a mobile phone, the camera perfectly integrates into its casing both thermal and visible cameras, laser locator and battery bay. Data storage is accommodated on removable SD memory.

### **Easy of carriage and operation:**

Rugged and lightweight architecture enables you to carry the camera in the same way as you do a mobile phone.

### **Crisp thermal & visible imaging:**

Precision non-contact temperature measurement is accomplished with a thermal sensitivity of  $\sim 0.1^{\circ}\text{C}$  - the camera captures extremely small temperature differences as high-resolution, noise-free 16-bit thermal images and sharp digital visible images provided by the built-in visible camera.

### **On-screen imaging:**

The integrated LCD screen allows Picture-in-picture, pure thermal or visible plus IR-fusion.

### **Auto indication of hot spot and image centre:**

One cursor automatically indicates the position and temperature of the hottest spot within the image, whilst another cursor stays at the image centre to show its temperature and provide a reference for inspection analysis.

**Audible and visible alarms:**

An audio alarm will automatically trigger for a spot with temperature exceeding a preset value. In the event that the battery power goes low, both audio and video alarms can be set.

**Multiple measurement modes:**

Simultaneous four-spot & four-area analysis, line profile, isotherm analysis and electronic zoom function are available to allow comprehensive probing for, and pinpointing of, potential problems.

**Ultra large capacity for filed image storage:**

The SD memory enables the recording and storage not only of fully radiometric still images but also video. Every still image file consists of thermal images, visible images and voice annotation. Up to 30 seconds of voice clip can be saved per file.

**Plug-and-play connectivity:**

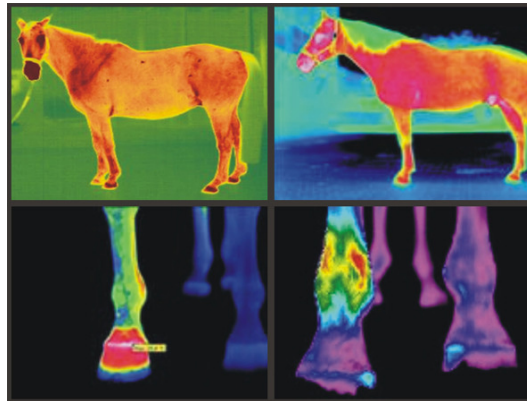
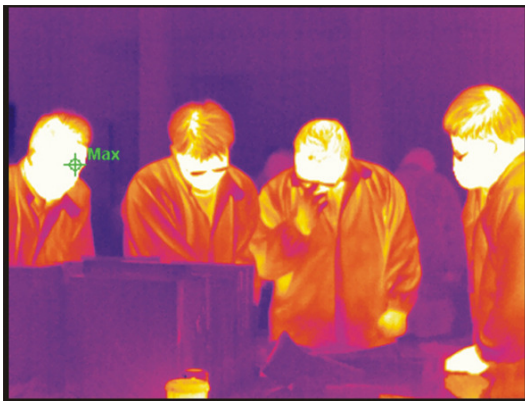
By using a standard USB2.0 interface, users are easily able to quickly download images, measurements, voice annotations and digital video from the camera to a PC.

**Robust post-processing software:**

Offering an extensive range of temperature measurement, image processing and report generating functions, the easy-to-operate Windows-based software highly automates the process of reporting and archiving infrared images, improving productivity and efficiency.

**Application areas include:**

- Fever detection
- Breast Cancer
- Nervous system disorders
- Metabolic and Vascular disorders
- Neck and back problems
- Pain syndromes
- Arthritis
- Muscle injury
- Joint inflammation
- Veterinary analysis



## Specification:

<b>Thermal channel:</b>	Detector type: Uncooled microbolometer FPA (160x120 pixels, 25µm) Spectral range: 8-14 µm FOV: 20.6° x 15.5° Thermal sensitivity: <0.1 °C at 30 °C Frame rate: 50Hz PAL or 60Hz NTSC, non-interlaced
<b>Visible channel:</b>	Built-in digital video: CMOS sensor, 1600x1200 pixels 2 <sup>24</sup> colours
<b>Image presentation:</b>	External display: 2.5" TFT high resolution LCD Display colour: 256 level, 8 palettes Video output: PAL/NTSC, composite video
<b>Measurement:</b>	Temperature range 0 to +60 °C Accuracy: +/-0.5 °C
<b>Measurement modes:</b>	Spot/manual (up to 4 moveable), spot/automatic placement at max, area (up to 4 moveable) displaying max, min, or average, isotherm, line profile, and auto alarm
<b>Emissivity correction:</b>	Variable from 0.01 to 0.99 (in 0.01 increment)
<b>Measurement features:</b>	Automatic correction based on user input for reflected ambient temperature, distance, relative humidity, atmospheric transmission and external optics.
<b>Image storage:</b>	Type: Built-in SD memory File format: IRI (an individual file consists of an IR image, visual image and voice annotation – if any) Voice annotation: Up to 30s per file
<b>System Status indication:</b>	LCD display: Shows battery status/ power indication Sound alarm: Automatic alarm for low power indication
<b>Laser locator:</b>	Classification type: Class 2 semiconductor laser
<b>Battery system:</b>	Type: Li-ion battery, rechargeable and/or replaceable Operating duration: >4hrs continuous operation Charging system: In-camera (battery charger) or 5V via USB interface from AC adapter (96-250VAC) Power consumption: 2W
<b>Environmental specification:</b>	Operating Temperature: -10 °C to +60 °C Storage temperature: -20 °C to +60 °C Humidity: Operating & storage 10 – 95%, non-condensing Encapsulation: IP54 Shock: Operational: 25g, IEC 68-2-29 Vibration: Operational: 2g, IEC 68-2-6
<b>Interfaces:</b>	USB 2.0: Images (thermal & visible), temperature measurements, voice annotations and digital video transfer to PC RS232 for external camera control
<b>Physical characteristics:</b>	Size: 154 x 69 x 45mm (standard model) Weight: 350gm (including battery)

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