

DESCRIPTION

Argus 2 is a simple to operate, robust, self-contained Thermal Imaging Camera designed to assist the vision of fire and rescue personnel in smoke and darkness. With fully automatic operation and with a single on/off button, no control or adjustment is required in use.

Argus 2 is constructed from materials chosen for their strength and resistance to heat, water and impact. Protection from shock is provided by a combination of rugged components and optimum mechanical design. The camera is sealed to withstand driving spray and short-term total immersion in water.

Power is provided by an integral battery pack located behind a quick-release cover in the handle of the unit.

FEATURES

- Solid-state FPA Detector
- Fully Digital Image Processing Circuitry
- On-screen Graphics
- Triple Layer Construction
- Internal Chassis Shock Isolation
- Heat Protection Layer
- One-way Fit Battery Pack for Rapid Change
- User-Replaceable External Fittings



MECHANICAL DATA

Overall dimensions see outline
 Camera weight 2.2 kg (5 pounds) nom

Materials

All externally exposed components are produced from flame retardant materials.

Outer case of camera black Lexan 940
 Visor Neoprene BR568
 Neck straps Nomex
 Side straps Nomex

ELECTRICAL DATA

Power Supply

Power is supplied from the rechargeable Ni-MH integral battery packs or eight AA alkaline cells.

Power consumption 5.0 W approx
 Batteries 1600 mAh Ni-MH
 Battery life 2 hours typical

Video Output

A video signal for connection to a remote monitor is provided. This connection has a 75 Ω characteristic impedance and conforms to EIA RS-170 525-line/60 Hz field standard. Connection is via a BNC socket located under the rubber cover on the camera right-hand side.

ENVIRONMENTAL DATA

Thermal Conditions

The camera is designed to operate for 1 hour minimum at 80 °C (176 °F). Higher temperatures will be tolerated for shorter periods.

Sealing

The camera is sealed to withstand driving spray and short-term total immersion in water.

Storage

The camera may be stored for extended periods. It is recommended that for maximum effective operational life, the storage temperature is kept between -10 and +40 °C (14 and 104 °F).

OPTICAL DATA

Sensing Optics

Image Sensor

The Argus 2 uses a state-of-the-art focal plane array detector manufactured by Raytheon and customised to meet the demanding requirements of the fireground. The detector is configured in a 4:3 format.

Lens

The thermal image is focused onto the focal plane array by a purpose-designed, three-element germanium lens. This has a hard anti-reflective coating and may be cleaned as necessary with a soft cloth.

Focal length	17 mm nom
Maximum aperture	f/1.0
Horizontal angle of view	50° nom
Spectral response	8 to 14 μ m
Iris	automatic operation

Viewing Optics

The bi-ocular display image is presented on a 38 mm diagonal CRT, viewed via a lens so that the image plane is at an approximate distance of 0.6 m (2 feet). A rear visor provides smoke exclusion and shielding from ambient light. This is designed to be compatible with the majority of BA masks in current use.

PERFORMANCE

Temperature and Spatial Resolution

The imaging system has an MTF of >80% at 30 line pairs per picture height and >40% at 60 line pairs per picture height for a temperature difference of 5 °C.

Minimum Detectable Temperature Difference

The minimum detectable temperature difference is <0.1 °C at low spatial frequencies.

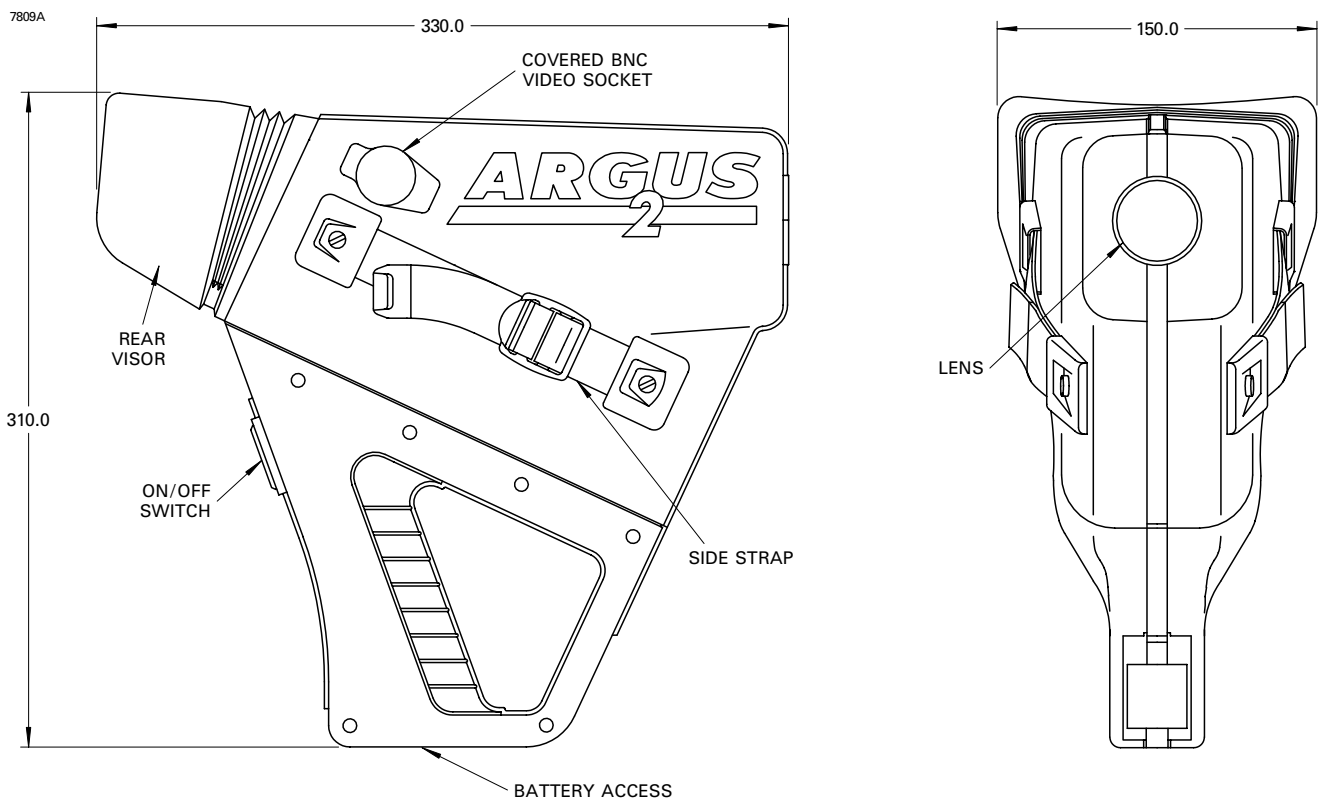
ACCESSORIES

The following accessories are supplied with each P4455R/C Argus 2 camera:

- Two primary battery packs
- Neck strap
- Argus 2 user manual
- Argus intelligent battery charger
- Two Ni-MH high capacity rechargeable battery packs (see separate Marconi Applied Technologies data sheets for full specification).
- Custom carrying case

OUTLINE

(All dimensions nominal and in millimetres)



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