

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 (including
one loaded battery pack) 2.2 kg (5 lb) approx

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 integral battery pack.

Power consumption 5.0 W approx

Batteries 8 size AA cells type LR6
(alkaline manganese)

Battery life 2 hours typical

An optional rechargeable Ni-MH battery pack is also available.

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.

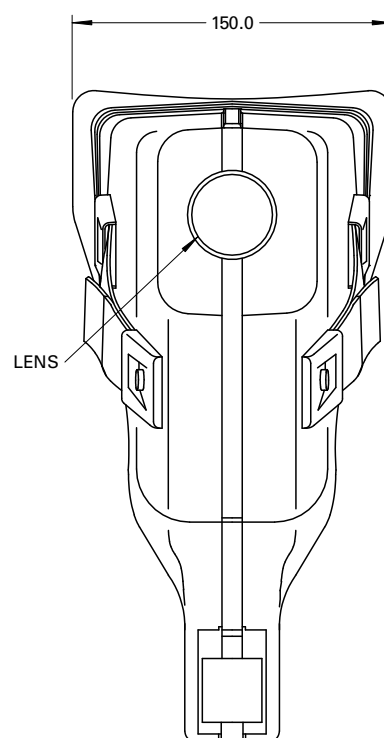
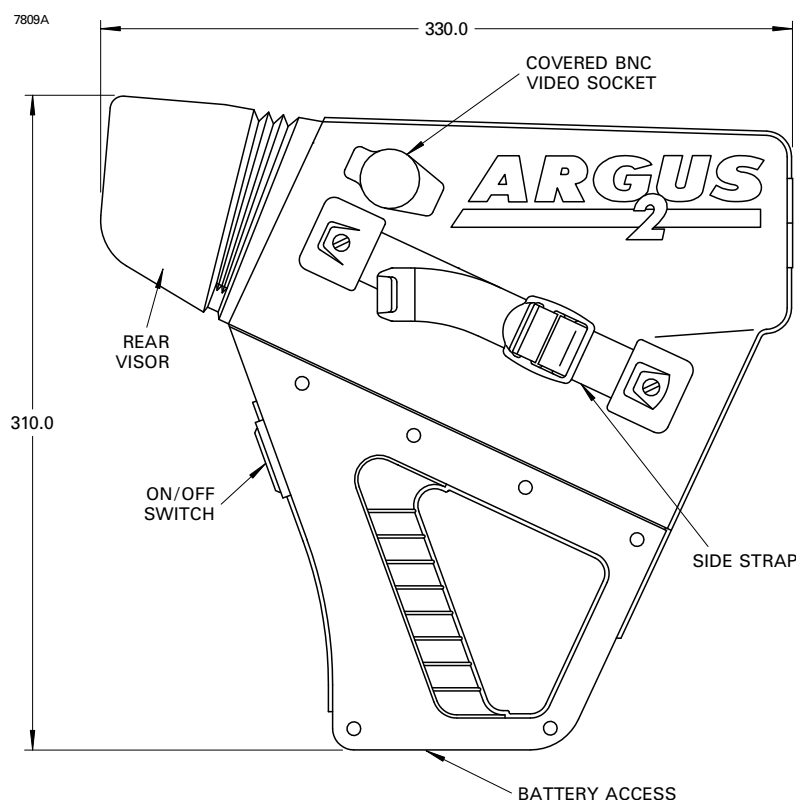
Focal length	17 mm nom
Maximum aperture	f/1.0
Horizontal angle of view	50° nom
Spectral response	8 to 14 μ m
Iris	automatic operation

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 ft). 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.

OUTLINE

(All dimensions nominal and in millimetres)



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 Argus 2 camera:

- Two primary battery packs
- Neck strap
- Argus 2 user manual
- Custom carrying case.

OPTIONS (Depending on market)

- Argus intelligent battery charger
- Ni-MH high capacity rechargeable battery packs.

Whilst Marconi Applied Technologies has taken care to ensure the accuracy of the information contained herein it accepts no responsibility for the consequences of any use thereof and also reserves the right to change the specification of goods without notice. Marconi Applied Technologies accepts no liability beyond that set out in its standard conditions of sale in respect of infringement of third party patents arising from the use of tubes or other devices in accordance with information contained herein.