

## RADIATION TOLERANT CAMERAS

# R93™

*High Radiation Camera*

### FEATURES

- Very high radiation tolerance (exceeding 2 MGy)
- Easy decontamination
- Wide range of non-browning lenses
- High resolution pictures for inspections
- Remote control of functions
- Wide range of attachments, lens bodies and viewing heads

### APPLICATIONS

- Underwater surveillance
- Fuel monitoring
- Reactor inspection
- Tube inspection
- Robotics and manipulator surveillance
- Serial number verification

### DESCRIPTION

Combining versatility, high radiation tolerance and wide-range viewing capabilities, the R93 Camera from Mirion is designed to meet your inspection needs.

The camera has been specifically designed for very high radiation area inspection requirements and features a rapidly removable outer housing for ease of service with minimal dose or contamination in support of ALARA goals. In addition, a number of optical viewing attachments can be affixed to the front of the camera without any tooling required to support alternate views to be obtained in tight places. When combined with our range of lenses that feature different viewing angles, the R93 becomes a versatile solution to your high radiation tolerant inspection needs.

## SPECIFICATIONS AND PERFORMANCE

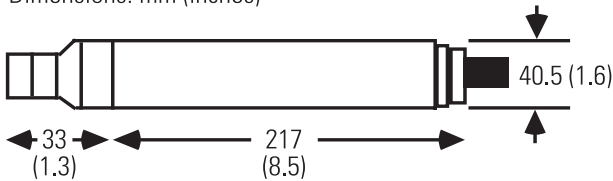
Maximum application flexibility is achieved using interchangeable Viewing Heads or Lens Bodies enabling the R93 camera to provide:

- Underwater applications to a depth of 200 m (656 ft)
- Lighting power from 0.7 W to 100 W
- Non-browning 12-72 mm f/1.8 zoom capability
- Radial viewing with full 360° scan facility
- Complete hemispherical viewing ability
- Wide angle viewing

All the interchangeable Viewing Heads and Lens Bodies can be matched to the radiation tolerance of the R93 unit and are very easily fitted to the camera.

Camera	
Diameter	40.5 mm (1.6 in.)
Length (excluding connector)	217 mm (8.5 in.)
Length (including connector)	250 mm (9.8 in.)
Weight	1.25 kg (2.8 lb) without head or lens body

Dimensions: mm (inches)



Electrical (excluding viewing heads or lens bodies)	
Max power	3 watts
Mechanical	Stainless Steel, non-browning optics
Cable Length: Minikevlar TV36	200 m max (656 ft)

Environmental	
Operating Temperature	0 to 55 °C (32 to 130 °F)
Storage Temperature	0 to 60 °C (32 to 140 °F)
(The R93 Camera is fully waterproof when fitted with an appropriate viewing head or lens body)	
Radiation Tolerance	2 MGy (H <sub>2</sub> O)[ <sup>60</sup> Co] (2 x 10 <sup>8</sup> rads) total dose >30k Gy/hour (>3 x 10 <sup>6</sup> rads per hour) Vidicon 1k Gy/hour (1x10 <sup>5</sup> rads per hour) Newvicon/Chalnicon

## SPECIFICATIONS AND PERFORMANCE OPTICS

Non-browning 9 mm D mount auto iris lens fitted as standard. Optional non-browning 6 mm and 25 mm D mount lenses and C mount lenses available.

Viewing Angles in Air (typical)	Horizontal	Vertical	Diagonal	Focus Range
Standard 9 mm lens	50°	39°	61°	30 mm to infinity
Optional 6 mm lens	73°	58°	85°	5 mm to infinity
Optional 25 mm lens	20°	15°	25°	170 mm to infinity

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