

IR-400

IF COST IS A MAJOR FACTOR
AND YOU ARE GOING TO BE EXPOSED
TO HIGH LEVELS OF RADIATION
YOU STILL WANT THE BEST!

IR-400 SERIES CAMERA

APPLICATIONS:

- ❖ Remote Viewing for Robotics and Manipulators
- ❖ Serial Number Verification
- ❖ Underwater Surveillance
- ❖ Reactor Inspection
- ❖ Fuel Monitoring
- ❖ Tube Inspection



FEATURES:

- ❖ Compact Nuclear Inspection Tool
- ❖ 2×10^7 Rad Accumulated Radiation Dose
- ❖ 2/3" Chalnicon Tube
- ❖ Fixed or Zoom Standard Glass Lens with Accumulated Dose Rating of 1×10^5 Rad
- ❖ With or without internal LED lights
- ❖ Diameter: from 108mm (4.25")
- ❖ Length: from 266mm (10.47")
- ❖ Stainless Steel or Aluminum Housing
- ❖ Rack Mount or Desktop Controller
- ❖ Flexible 5.5mm (.22") Diameter Cable
- ❖ Manufactured in the United Kingdom for Lights Camera Action LLC

QUALITY YOU CAN COUNT ON, CUSTOMER SERVICE YOU CAN BELIEVE IN

The IR-400 camera incorporates an all-magnetic Chalnicon tube to provide excellent resolution, freedom from image burn-in and good sensitivity over a wide spectral range.

The internal components of the IR-400 camera are identical to the RH-400 high radiation tolerant camera, which provides a total dose rate of 2×10^7 . However, what makes the IR-400 unique is the interchangeable glass lens that has a total dose rate of 1×10^5 ; thus the "Intermediate Radiation Tolerance" classification. Exchanging the glass lens when the total dose limit has been exceeded is easy and cost effective. The IR-400 is designed to provide high quality video and superior performance over an extended period of time.

One of the many benefits of this camera is the design functionality of the exterior housing which allows for easy access into the internal cavity and components when performing field maintenance. Printed circuit scanning coils, developed in conjunction with wide-band video processing circuits, ensure the full potential of the Chalnicon tube. The primary design virtually eliminates the need for regular readjustment during the long operating life of the system. Among its uncommon features is a tube beam current stabilizer which compensates automatically as the tube's cathode emission diminishes with age.

The voltage and waveforms required by the camera to operate are controlled by a separate Camera Control Unit (CCU). The CCU may control the Focus, Iris, Auto/Main Gain, Zoom, Pan & Tilt, Lights, Genlock and two (2) BNC Video Outputs depending on your application.



1730 W SUNRISE BLVD, STE B102 · GILBERT, AZ 85233-5023

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IR-400 SPECIFICATIONS

QUALITY YOU CAN COUNT ON...
INTEGRITY YOU CAN TRUST.



IR-400 CAMERA PERFORMANCE & SPECIFICATIONS

- ❖ Diameter 108mm (4.25")
- ❖ Length..... 266mm (10.47")
- ❖ Weight 1.2 Kg (2.65 lb.) enclosed with zoom lens
- ❖ Optics A variety of standard glass lenses are available per specification

ENVIRONMENTAL

- ❖ Operating Temperature..... -25° to 45° C (-13° to 113° F) continuous operation
- ❖ Storage Temperature..... -25° to 60° C (-13° to 140° F)
- ❖ Radiation Tolerance..... 2 x 10⁷ Rad total dose
10⁵ Rad/Hr dose rate
- ❖ Lens Radiation Tolerance 1 x 10⁵ Rad total dose

ELECTRICAL

- ❖ Video Signal 1V composite to EIA or CCIR standard
Peak white limit +0.9V
Sync pulses 0.3V
Black level clamp, variable gamma correction, aperture correction
- ❖ Sync System..... Crystal controlled; Automatic Genlocking to external source of mixed sync or composite video
- ❖ Signal to Noise Ratio 43db
- ❖ Spectral Response 375 - 725 nM (50%)
- ❖ Sensitivity 20 lux on faceplate for full image quality
2 lux at maximum video gain at reduced quality
- ❖ Scanning Format 625 lines, 50 fields/sec, 2:1 interlace (CCIR)
525 lines, 60 fields/sec, 2:1 interlace (EIA RS170)
- ❖ Resolution..... 700 Horizontal TV lines (Center)
- ❖ Camera Power..... 12VDC @ approximately 651mA (11-14V acceptable)

CAMERA CONTROL UNIT PERFORMANCE AND SPECIFICATIONS

- ❖ Dimensions..... Rack Mount:
Desk Top: 270mm x 145mm x 225mm (10.63" x 5.71" x 8.86")
- ❖ Weight 3.2 kg. (7.05 lbs.)
- ❖ Electrical Supply 110/220VAC 50/60 Hz.

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