

The Thermo Scientific CID8725D radiation hardened Monochrome camera features new Low Noise, Pre-amplifier Per Pixel Radiation Hardened Charge Injection Device (CID) imager technology for use in radiation environments.

Monochrome RS-170 video is available via Coax, and digital video is available via USB2.0. The compact remote head is connected to a camera control unit (CCU) with a flexible cable supplied to length.

Thermo Scientific CID8725D



Designed for Versatility

The CID8725D camera is designed specifically for Monochrome imaging in radiation environments.

Camera versions include models for use in air applications with typical ambient operating temp. conditions, and OEM models designed for use in customer specific enclosures such as a 40mm diameter tube housing.

Our unique radiation hardened CID based cameras feature a small detachable remote head with radiation tolerance to at least 3×10^6 rads total dose and low noise operation in flux rates up to 1×10^5 rads/hr. Video output is standard RS-170 format via the Camera Control Unit (CCU) BNC connector, or digitally via the USB2.0 port.

Camera models include CID8725DX6 for operation up to 50 meters remote distance between the rad. hard head and CCU while the CID8725DX7 offers remote operation up to 150 meters.



loss due to SETI' s (single event transfer inefficiencies) is minimized.

CID based cameras allow at least an order of magnitude improvement in operation when compared to CCD and CMOS based cameras and imagers. Options include customized packaging and Color versions, as well as partnered programs for complete systems for Air or Underwater operation.

Features:

- . CID (Charge Injection Device) Radiation Hardened Imager
- . Exceptional signal to noise and sensitivity.
- . 3×10^6 Rads Total Dose (gamma)
- . Excellent image at 1×10^5 rads/hr
- . Replaceable Remote Head
- . USB2.0 digital output
- . Automatic White Balance

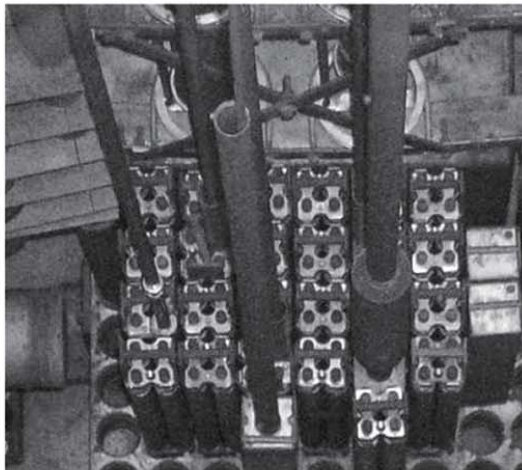
Applications:

- . Inspection and measurement
- . Process monitoring, Robotic handling
- . Hot cell monitoring, Laser beam profiling
- . Research

Uniqueness of the CID

The radiation hard PPP (Pre-amplifier Per Pixel) CID based imager technology allows exceptional signal to noise with sensitivity never before available with radiation hardened cameras.

The CID8725D camera has been tested and proven tolerant to high levels of gamma radiation, and since charge readout is within the pixel, charge



Product Specifications

Imager

Image Format	730H x 512V
Total Pixels	10H x 484V
Pixel Size	18.0 x 16.4 micron
Full Well Capacity	>100,000 electrons
Active Area	14.5 mm diagonal
Optical Format	1"

Electrical

Scanning Format	RS-170, 30FPS, Interlace
Resolution	>400 TVL (horizontal)
S/N Ratio	-45db typ. signal/RMS 10KHz - 4.2MHz, with 3.58MHz trap
Sensitivity	.1 lux (for min. video) 1 lux (for maximum output) with AGC in, illumination T=2850K
Composite Video	1V p-p, terminated into 75 ohm
Black Level	+50mV (Auto Clamp)
White Level	+700mV
Sync Level	-300mV
Geometric Distortion	0%
Input Power	18 Watts (max.)
Input Voltage	+15VDC Nominal
Camera	+7/+10VDC(TE) 110 - 220 VAC +/- 10%, 50/60 Hz
Line Adapter	Camera 1.2A avg. SW3 - X2/X4
Input Current	
Spectral Response	
Gain	

Interface

Outputs	J1000 Head Interface J1001 Adv. Features J1002 Raw Video P1000 Power Input
Digital Interface	J5 USB2.0 type "B"
Analog Video	J2 "Main" Video Out

Mechanical

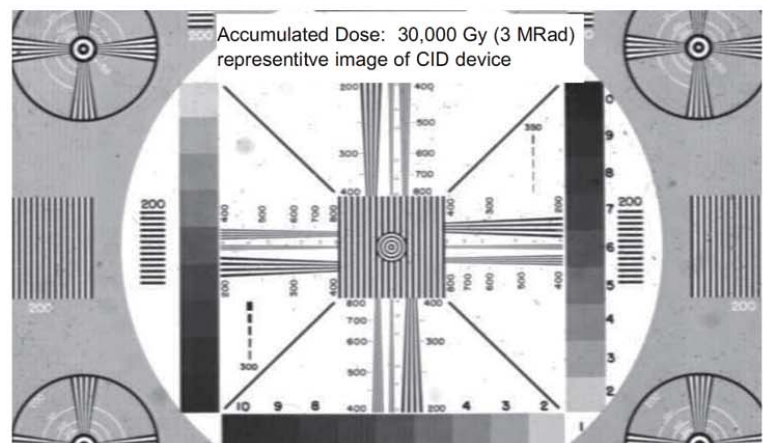
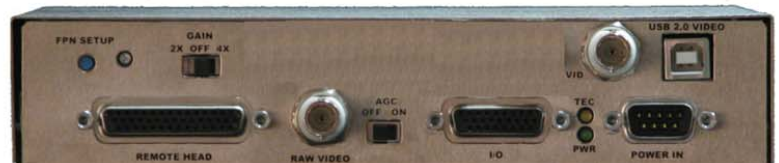
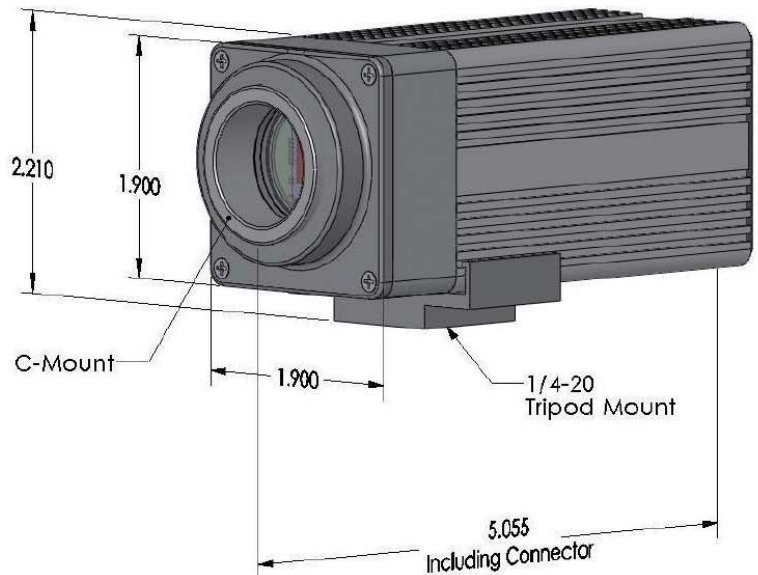
Weight	CCU 0.86 kg. (30 oz.) Head 0.45 kg. (16 oz.) P/S 1.81 kg. (64 oz.)
Cable Length	DX1 option to 50M DX2 option to 150M
Lens Mount	Standard "C" Mount (1.0" - 32 Thread)
Camera head case	Standard AI housing or TEST/SHIP case

Environmental

Temperature Range	0C to 55C case(DX6)
Operating	-25C to 85C
Storage	0-95% noncondensing
Humidity	50G (1/2 Sinewave at 10ms duration)
Shock	

Thermo Scientific CID8725D Radiation Hard camera module

The CID8725D Monochrome solid state video camera is part of a proven line of radiation hardened cameras and sensors whose applications span a full spectrum of industries and applications. Thermo Scientific CIDTEC Cameras & Imagers has been in business for over 25 years with imaging products in scientific, machine vision, aerospace, medical, and radiation hardened markets.



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ISO 9001 Thermo CIDTEC, Liverpool, NY is ISO9001:2000 certified

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