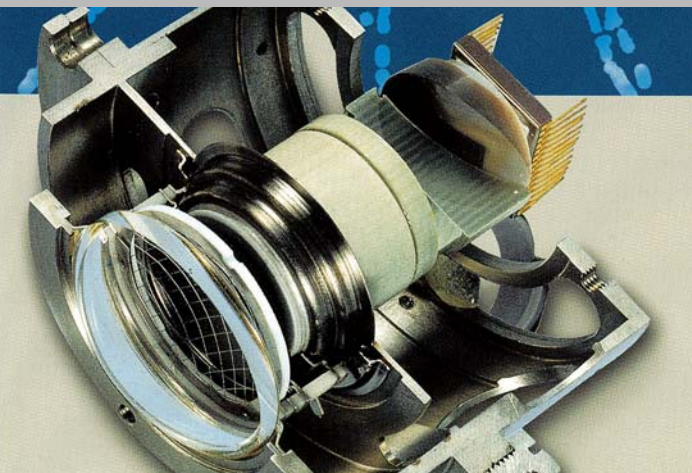


Thermo Scientific I3710D-UV

Intensified Solid State Camera

The Thermo Scientific camera I3710D-UV is a UV sensitive, high gain, gated intensified CID based camera consisting of a model 3710D solid state RS-170 version camera with 12 x 13.7 micron (4:3 aspect ratio) pixels, fiberoptically coupled to a high performance UV sensitive 18mm second generation MCP image intensifier.



Designed for UV imaging

The I3710D-UV is an intensified gated UV sensitive CID based camera consisting of the reliable 3710D RS-170 version camera which is fiberoptically coupled to an 18mm GENII-UV microchannel plate image intensifier. The GENII-UV tube has an S-20 photocathode with suprasil input window for optimal ultraviolet response to 190nm, and is resistant to browning due to radiation.

The camera is equipped with high speed gating for shutter intervals <100ns, and exhibits low noise / high gain performance with typical light gain of 12,000X.

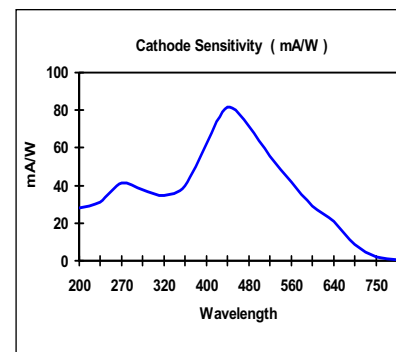
Maximum Flexibility

Intensifier gating may be controlled automatically, or manually via control knob or with external TTL input. Intensifier gain is manually controlled via the Gain control knob, or by the AutoGain feature. The MCP uses a low noise photocathode sensitive from 190nm to at least 700nm.

Internal adjustments allow for control of black level setup, edge enhancement and 2X video gain boost.

Options include digital control, optical coupling, Autogate/Autogain only, Progressive Scan, and CCIR format.

The I3710D-UV camera features a 2:1 interlace scan 776(H) x 512(V) CID array with 12 x 13.7micron pixels in a compact remote head connected to the camera control unit via flexible 2 meter cable.



Features:

- . CID (Charge Injection Device)
- . High resolution, High MTF
- . High speed gating to 50ns minimum
- . Excellent image at 7 x 10(5) rads/hr
- . 18mm DEP GENII-UV image intensifier
- . Sensitivity 5 x 10(-7)fc at faceplate
- . Typical 12,000X light gain
- . UV through visable response
- . Auto Gate/Gain with manual control
- . RS-170, 2:1 Interlace scanning format
- . 12 x 13.7 micron contiguous pixel

Applications:

- . UV or low light level inspection and measurement
- . Remote gaging, metrology
- . Florescence microscopy
- . Research
- . Machine vision
- . Spectroscopy

Imager

Image Format	776H x 512V
Total Pixels	768H x 475V
Pixel Size	12 x 13.7 micron
Full Well Capacity	>250,000 electrons
Active Area	11 mm diagonal
Optical Format	1"

Electrical

Scanning Format	RS-170,30FPS,Interlace
Resolution	>380 TVL (horizontal)
S/N Ratio	>30db at 10^{-4} lux >36db at 10^{-5} lux
Sensitivity (typical 250nm)	5×10^{-6} fc (Faceplate) 1×10^{-13} W/mm ² 0db Gain, (T=2850K)
Composite Video	1V p-p, terminated into 75 ohms
Black Level	+50mV (Auto Clamp)
White Level	+700mV
Sync Level	-300mV
Geometric Distortion	0%
Input Power	18 Watts (max.)
Input Voltage	Camera +15VDC Nominal Line Adapter 115 or 220 VAC +/- 10%, 50/60 Hz
Input Current	(@15V) 1.1A avg.
Spectral Response	See Response Curve
Gain	X2, X4 (internal SW)

Interface Signals

Outputs	J1 Video, End of frame, End of Line, H&V Drive, Composite sync. J2 Video, ALC, 14.318 ERC Clock BNC Composite Video
Inputs	J1 +15VDC, Sync J2 V Drive, I/I, F. R.

Mechanical

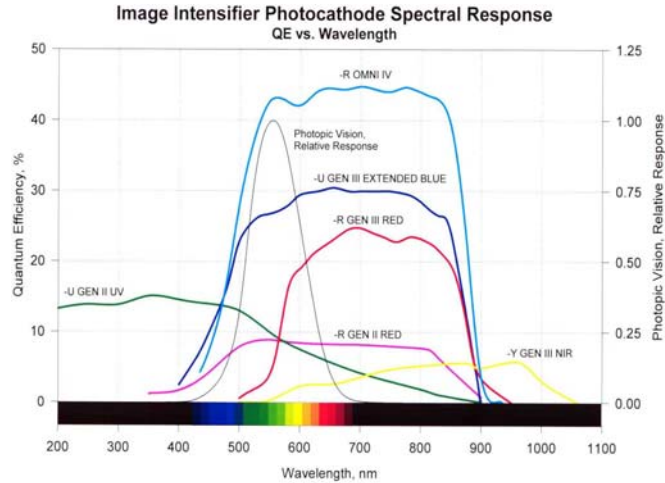
Weight	CCU 0.96 kg. (33 oz) Head 0.48 kg. (17 oz)
Cable Length	2 Meters
Lens Mount	Standard "C" Mount (1.0" - 32 Thread)
Camera Mount	1/4" - 20 Thread
Connectors	J1 25 Pin D (male) J2 25 Pin D (female) BNC standard
Dimensions	
Gain Control Unit	7.5"(L) x 7.5"(W) x 1.025"(H)
Camera Control	7.5"(L) x 7.5"(W) x 1.025"(H)

Environmental

Temperature Range	
Operating	0C to 30C case

Thermo Scientific I3710D-UV Intensified Solid State Camera

The I3710D-UV intensified solid state camera is part of a proven line of intensified cameras and sensors whose applications span a full spectrum of industries and applications. Thermo Scientific CIDTEC Cameras & Imagers have been in business for over 25 years with imaging products in scientific, machine vision, aerospace, medical, and radiation hardened markets.



Typical Photocathode Responsivity (mA/W):

200nm: 28.0 mA/W QE=17%	300nm: 38.0 mA/W QE=15%	400nm: 62.2mA/W QE=19%
520nm: 55.5 mA/W QE=13%	600nm: 29.1 mA/W QE=6%	700nm: 8.5 mA/W QE=2%

*note: export restrictions may apply