



COHU

4810 Series

Wide-spectrum response 2/3" CCD camera

Wide spectral response: 193nm UV to near-IR

High blue response including DUV

Dynamic range >48 dB

2/3" format sensor for wide selection of optics

Internal or external H&V drive options

Light weight with rugged construction for long-term reliability

Made in USA



The Model 4810 camera is designed for applications that require wide spectral response and high sensitivity. The high gain of the camera enables the user to detect images in real-time (30 frames/sec.) even when energy levels are low. The 2/3" format CCD image sensor characteristics, combined with Cohu's proven design and rugged construction make the Model 4810 ideal for:

- **Fluorescence Imaging**
- **UV Imaging**
- **Near IR**
- **Semiconductor Inspection / Test / Measurement**
- **Process Quality Control**

This camera is identical in form, fit, and function to previous models in the 4810 Series. It looks like the original 4800 Series, and performs better.

Automatic gain control (AGC) is incorporated in Cohu's Model 4810 to provide high sensitivity for use in low light areas. The 4810 utilizes the frame transfer method and more than 388,000 pixels. Low power consumption allows flexible system integration and easy operation.

- *Machine Vision*
- *Medical Imaging*
- *EMI Environments*
- *Robotics*
- *ROV (land, air, or submersible)*
- *Security / Surveillance*

4810 Series Specifications

CAMERA SPECIFICATIONS

Image Sensor

2/3" Monochrome CCD
8.8mm (H) x 6.6mm (V)

Scanning System

2:1 Interlace

Active Pixels

754 (H) x 488 (V)

Pixel Cell Size

11.5um (H) x 13.5um (V)

Resolution

565 (H) x 350 (V) line

Sensitivity (Faceplate)

Full video, AGC off:
0.075 fc (0.75 lux)

Spectral Response

(see illustration)
Note: Response below 420nm requires sensor option '3'

Video Output

1.0 V p-p @ 75 ohms, unbalanced

Gamma

0.45 or 1.0

Shutter

1/60 sec

Gain

0 to 20 db

SNR

58 db max

Synchronization

External H & V
Internal crystal

USER SETTINGS

Gamma Setting
Lens Video Sync
Auto/Manual Gain Mode
Auto/Manual Gain Level
Black Level Reference
Substrate Voltage

LENS

C mount
Auto iris Lens Drive

ELECTRICAL

Power

12 Vdc; < 4.0 W (+/-10%)

MECHANICAL

Dimensions (mm)

2.72" h x 2.3" w x 5.5" d
(69.1) h x (58.4) w x (139.7) d
(see illustration)

Weight

15 oz/426 g

Camera Mount

Two ¼-20 mount

Connectors

Video: BNC
Lens Drive: Switchcraft TB4M
Power In: Switchcraft TB3M
Auxiliary: Hirose SR30-10R-6S

ENVIRONMENTAL

Temperature

Operating: -10° to 50° C
Storage: -30° to 70° C

Humidity

<95% non condensing

Vibration

12g [IEC68]

Shock

40g [IEC68]

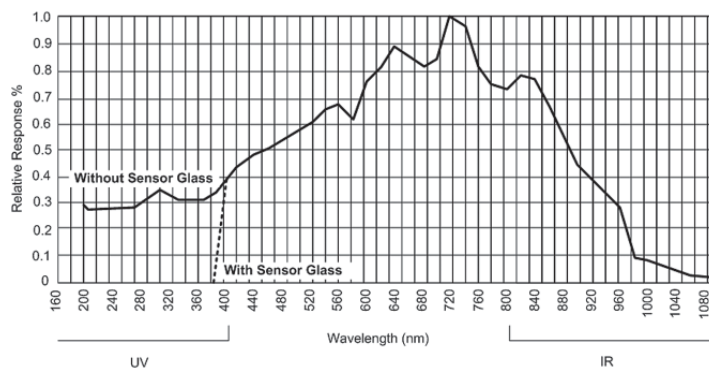
REGULATORY

FCC/CE CISPR11 Class A
EN61000-4-3, -4-6, -4-8 interference immunity

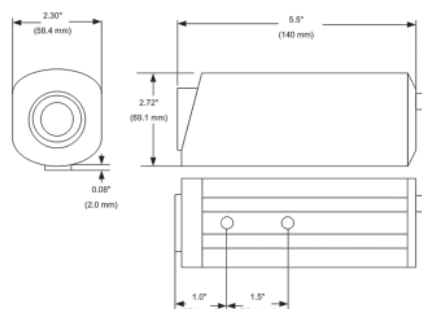
SHIPPING INFORMATION

Weight 2 lbs (907 g)
Volume 10" x 4" x 4" (254mm x 101mm x 101mm)

SPECTRAL RESPONSE



DIMENSIONS



4810 SERIES ORDERING

481x-xx00/xxxx

Power

6 - 12 VDC
7 - 115 VAC

Sync

7 - H&V external, revert to crystal

Sensor

2 - 2/3" mono CCD
3 - 2/3" mono CCD, UV sensitive
(Remove sensor glass to achieve spectral response <420nm)

Lenses

0000 - None
Manual iris
AL12 - 12.5mm, f1.4, 1"
AL25 - 25mm, f1.4, 1"
Auto Iris*
ES08 - 8mm, f1.4, 2/3"
ES12 - 12.5, f1.4, 1"
ES16 - 16mm, f1.4, 2/3"
ES25 - 25mm, f1.4, 1"
ES50 - 50mm, f1.8, 1"
EH75 - 75mm, f1.8, 1"

* Auto iris lens requires lens connector 1310356-104, which must be ordered separately when customer provides own auto iris lens

Accessories

8368-4 - 120 VAC to 12 VDC power supply
1310356-104 - Connector for auto iris lens