



OBZERV



Passive Intensified CCD **PIC-75**

Obzerv PIC-75 INTENSIFIED CCD CAMERA is a compact and lightweight night vision camera core. The PIC-75 will amplify low light in a wide range of wavelength hence revealing more details of the scene of interest in total darkness. This core module is composed of a high performance image intensifier coupled to a CCD sensor. It includes all the high voltage power supplies required for efficient fast gating. The image intensifier is an electro-optical component based on a Micro Channel Plate (MCP). The MCP amplifies electronically an image focused onto a photocathode. The intensified image is then transmitted from the intensifier phosphor screen to a CCD sensor by means of a proprietary fiber optic bundle coupling. The camera can be operated in continuous mode or gated at high frequencies. For range-gated camera applications, the PIC-75 offers considerable capabilities with a gating frequency up to 75 kHz.

Unlike Electron Multiplying CCD cameras (EMCCD), the PIC-75 does not require cooling of its CCD sensor, thus avoiding condensation problems. The PIC-75 camera can be configured in progressive scan mode providing better image quality without any frame to frame artifacts for highly dynamic scenes. With a physical size of 124 mm x 79 mm x 39 mm and weighting only 320 g, this Passive ICCD Camera is one of the smallest and lightest integrated core module on the market.

This core module can be used in a wide variety of applications, but if you are looking for a product that matches the stringent requirements of tactical situational awareness, Obzerv Passive Intensified CCD - PIC-75 is exactly what you need.

APPLICATIONS

TACTICAL SITUATIONAL AWARENESS . INDUSTRIAL . MEDICAL . ASTRONOMICAL

FEATURES

MINIATURE AND LIGHTWEIGHT

HIGH SPEED OPTICAL SHUTTER, WITH FULL MANUAL CONTROL

NO DISTORTION

HIGH RESOLUTION

EASY TO SET-UP AND OPERATE

EMI SHIELDED

NON ITAR PRODUCT

BENEFITS

- Versatile, to be fitted with different enclosures
- Perfect to be fitted in handheld cameras (e.g.: military cameras)

- Capability to produce real time range-gated imagery

- Great and complete image quality (periphery included)

- Crystal clear and sharp images
- No chicken wire visual effect

- No need for external high voltage power supplies
- Plug and Go design
- Simple communication interfaces (RS-232 & TTL)

- Not affected by electromagnetic radiations
- Does not emit radiations

- The PIC-75 is not controlled under the International Traffic in Arms Regulations. An export license is although required from the Canadian Department of Foreign Affairs and International Trade (DFAIT).

GENERAL DATA

Active Image Area	6.53 mm x 4.89 mm (8.16 mm Diagonal)
Resolution ¹	41 lp/mm (min)
Power	5 VDC, 650 mA 12 VDC, 50 mA
Temperature range	
Operating	-10°C to 50°C
Stockage	-20°C to 60°C
Weight	320 g

INTENSIFIER PARAMETERS

Type	Second Generation
Photocathode	Multialkali
Luminous Sensitivity	800 uA/lm @ 2850 K (typical)
Photocathode Sensitivity	70 mA/W @ 800 nm (typical)
Luminous gain @ 2856°K	10000 (cd/m ²)/lx (min)
Resolution	70 lp/mm
Phosphor	P20
Signal-to-noise Ratio (SNR)	Min: 23, Typical: 25

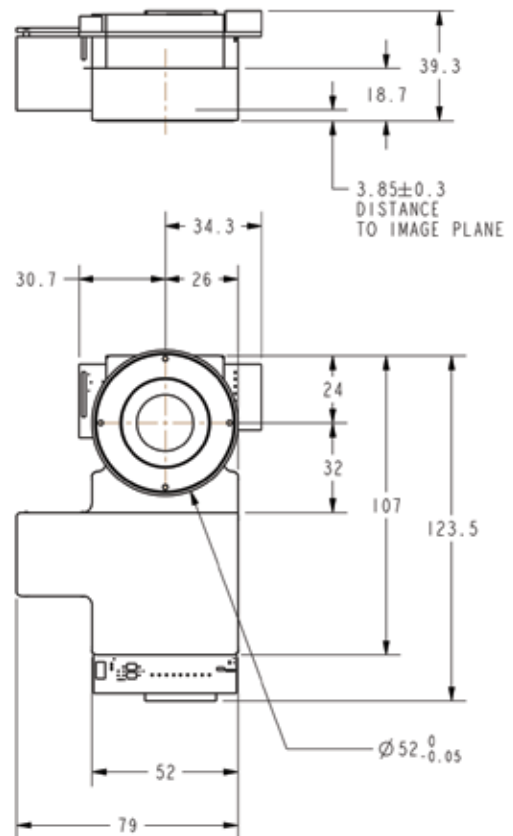
CCD CAMERA PARAMETERS

CCD type	Sony ICX-414 1/2-inch CCD
Video standard	EIA or CCIR Progressive scan 30 or 25 FPS Progressive scan 60 or 50 FPS
Sync	Internal H-Drive output (TTL) V-Drive output (TTL)
Video gain	6 dB to 40 dB
Gamma:	1
Video out	1V p-p into 75 Ω
Control	RS-232, TTL Level

GATING INTERFACE

Gate mode	External
Input Threshold	3.5 V
Input impedance	100 Ω
Logic level	High = gate on Low = gate off
Min. Gate Width	40 ns
Gating Frequency	DC to 75 kHz
Gain control	analog (0 – 2.5 V input)

¹ Measured visually in the center of the focal plane using a black and white CRT video display having a horizontal resolution of 900



PIC-75 MECHANICAL DRAWING