



Product Features

- Extremely small size (44mm x 46mm x 115mm)
- Direct fiberoptic coupling of CCD to intensifier
- High resolution 1/2" HyperHad CCD 768H x 494V (EIA); 752H x 582V (CCIR)
- Gen II, Gen III or Gen III "Ultra" intensifier
- External CCD camera gain, gamma, AGC controls;
- Accepts external H, V sync; 12V DC
- C-mount with backfocus adjustment

General Description

Robust construction, compact size, ease of use, and high quality images were the primary considerations behind the "007" design concept. PULNiX uses custom CCD imagers bonded to fiberoptic minifiers to achieve a very small size. The total volume of the "007" series is only 233 cubic centimeters (14 cubic meters) with a weight of just 395 grams (14 oz.). Whether used for surveillance, remotely piloted vehicles or aircraft, industrial or medical imaging, the "007" mini intensifiers make small very low light cameras a practicality. Available in CCIR as DN-006.

The "007" series comprises three basic models, designated as "F2", "F3" or F3U for Gen II, Gen III or Gen III Ultra respectively. All versions feature an intensifier with a micro-channel plate (MCP) directly coupled via a fiberoptic minifier to a PULNiX TM-7EX 1/2" format CCD camera. The "DN" versions use fixed gain intensifiers which are designed for use in applications where little or no operator interface is required (such as RPV's, unmanned covert installations, etc.).

The "007" cameras are extremely easy to use. All versions use 12V DC power which inputs through a standard PULNiX 12-pin connector located on the rear of the camera. One-inch format auto iris lenses having an f1200 or greater aperture (highly recommended in applications where exposure to bright light

conditions is likely) are controlled by a 6-pin auto iris I/O connector also located on the rear of the camera. AGC (on/off) and Gamma (4.5 or 1.0) for the CCD camera are switch-selectable on the rear control panel; a manual control for CCD camera gain adjustment is also located with the other controls.

All "007" ICCD cameras use 1" format C-mount lenses; auto iris lenses are mandatory when bright light conditions may be encountered. A back-focus adjustment is built into the front end of all versions. The 1/4-20 tripod mounting plate may be located on the top or bottom of the camera.

Intensifier Specifications

The "007" mini ICCD cameras are available with either Gen II or Gen III intensifiers. These two intensifier types are similar in terms of general design and construction. The Gen III uses a gallium arsenide photocathode which offers greater red (near infrared) response than the Gen II. Intrinsically more sensitive; the Gen III tubes are also more expensive, are less resistant to extremes in temperature, and may be subject to some use (export) restrictions. Gen III Ultra tubes offer enhanced sensitivity and gain characteristics.

	Intensifier Tube Specifications		
	Gen II ("F2")	Gen III ("F3")	Gen IIIU ("F3U")
Input	1" (18mm diameter)		
Output	2/3" (tapered-fiber coupled to CCD)		
Photocathode	S-25	GaAs	GaAs
Phosphor Screen	P20	P43	P43
Gain	10,000 - 20,000 (typ.)	20,000 - 35,000	30,000 - 50,000
Resolution	30 lp/mm	45 lp/mm	64 lp/mm
EBI	3.5x10 ⁻¹¹ lm/cm ² (max)	2.5x10 ⁻¹¹ lm/cm ² (max)	2.5x10 ⁻¹¹ lm/cm ² (max)
Tube Life	2500 hrs	10,000 hrs	10,000 hrs

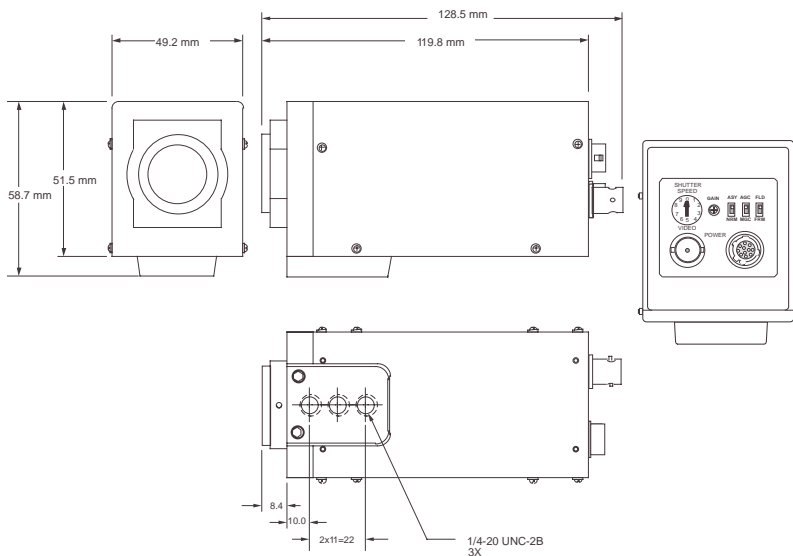
Specifications

Model	ALL "007" MODELS
Imager	1/2" interline transfer CCD
Pixels	768(H) x 494(V)
Cell size	8.4µm x 9.8µm
Scanning	525 lines EIA RS-170
Sync	Internal crystal or external HD, VD composite
TV resolution	570(H) x 350(V) (Internal CCD Camera)
S/N ratio	50 dB min. AGC off
Video output	1.0 Vp-p composite video 75Ω
AGC	Selectable ON/OFF (16dB Std., 32dB max.)
Gamma	Selectable 0.45 or 1.0
CCD camera gain	Manual adjustment on rear panel
Lens mount	C-mount, back-focus adjustable
Lens type	1" format lenses (f1200 or greater auto iris lenses required for use in non-dark conditions)
Power req.	12V DC 350mA
Operating temp.	-10°C to 50°C
Size (W x H x L)	49mm x 59mm x 120mm (1.93" x 2.32" x 4.73")
Weight	395 grams (14 oz.)
Power supply	K25-12V or PD-12

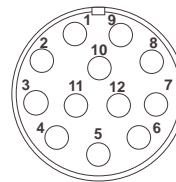
Model	ALL "006" MODELS
Imager	1/2" interline transfer CCD
Pixels	752(H) x 582(V)
Cell size	8.6µm x 8.3µm
Scanning	625 lines CCIR
TV resolution	560(H) x 420(V) (internal CCD camera)
	<i>All other specifications same as EIA models.</i>

Due to ongoing product improvements, specifications may change without notice. Export regulations may apply.

Physical Dimensions



Pin Configuration



12-Pin Connector

- | | |
|----|-------|
| 1 | GND |
| 2 | +12V |
| 3 | GND |
| 4 | Video |
| 5 | N/C |
| 6 | VINIT |
| 7 | VD in |
| 8 | GND |
| 9 | HD in |
| 10 | N/C |
| 11 | N/C |
| 12 | N/C |

6-Pin Connector

- | | |
|---|--------------|
| 1 | D2 |
| 2 | GND |
| 3 | Video |
| 4 | +12V (or 5V) |
| 5 | D0 |
| 6 | D1 |

D0, D1, D2 Shutter control

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DN-007/DN-006 Series

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