



# Gen 3 Intensified CCD Camera with Auto-Gating ISG-780/1180

ITT Industries Night Vision, the world's leading producer of Generation (Gen) 3 night vision devices, offers the ISG-780/1180, a Gen 3 intensified CCD camera with auto-gating. This intensified video camera is a high-performance imaging system, providing unequalled low-light-level performance.

## Features and Benefits

- Five Modes of Gate Control enable motion analysis and allow keying to an event
  - Synchronous Gating
  - Asynchronous Gating
  - Automatic Gating
  - Triggered Gating
  - Direct Gating
- Advanced High-Voltage Power Supply
- Bonded CCD/Intensifier Design
- Choice of Intensifier Type
- "C"-mount Lens Interface
- Rugged Packaging
- Remote Control
- On-Camera Gate, Intensification and Camera Gain Controls

ISG-780/1180



## Description

Utilizing an advanced control algorithm and proprietary high-voltage power supply and gating circuitry, system dynamic range is continuously optimized and spans up to eight decades of light control. Built-in support for an auto-iris lens expands system performance to 12 decades or more of light control. This versatility is vital to guarantee performance under uncontrolled lighting conditions that would quickly damage less sophisticated systems. The high gain and resolution of the ISG-780/1180 enables use of a long-range lens under lighting conditions that would render conventional systems non-operational.

Rugged construction, multiple mounting points, and 9-36 Vdc operation simplify integration into any imaging system. Fiber-optic coupling of the intensifier and imager results in maximum sensitivity and system resolution. Fully automatic, local, or remote control of camera features makes the ISG-780/1180 ideal for a broad range of applications including: scientific imaging, day/night surveillance, bio-medical studies, microscopy, aerial surveillance and remote sensing. Many options and accessories are available.

## Accessories

200-SC	Foam-lined shipping/storage case for camera and PS-110
210-SC	Foam-lined shipping/storage case for camera and CCU-01
CCU-01	Camera control unit
PS-110-GC	110/220 VAC power supply with remote intensifier gain-limit control and 6ft. cable
PS-110-MG	110/220 VAC power supply with remote black level, camera gain/intensifier-gain limit controls, and 6ft. cable
ISG-UPS	Universal 110/220 VAC power adapter with frame flag and VD output BNC pigtails



# Gen 3 Intensified CCD Camera with Auto-Gating

## ISG-780/1180

### Specifications

#### Electrical:

- CCD Sensor 768h x 494v; 752h x 484v active
- 18mm Gen 3/OMNI V or Pinnacle™ image intensifier options with 64 lp/mm typical resolution
- Resolution greater than 525 TVL/RH horizontal
- Gating: < 100ns
- Operates over more than 12 decades of light-level input (with auto-iris)
- Automatic brightness control (ABC) of gain and gating
- Remote peak average gating control
- Auto-iris control
- Frame or field mode select for enhanced motion analysis
- Image inhibit for time integration or asynchronous gating
- Field flag signal for frame grabber compatibility
- Sync
  - Crystal control
  - Genlock
    - Composite video
    - H & V
- Synchronous, asynchronous or external gating
- Camera gain and intensifier gain on camera rear panel
- Camera AGC on/off switch
- Rear-panel gate trigger input via SMB connector
- 9-18 Vdc operating voltage - 10 Watts
- 9-36 Vdc available as an option

#### Environmental:

- Operating temperature: 0 to 50° C
- Relative humidity: 0 to 95%, non-condensing

#### Mechanical:

- 23-pin full function I/O connector
- Dimensions – 4.01 H x 3.10 W x 8.33 L inches
- Housing – extruded aluminum
- "C"-mount lens, one-inch format
- Weight - 4.15 lbs.

#### Options:

- ISG-780/1180-B — ABC override/normal select (eliminates AGC switch)
- ISG-780/1180-C — CCIR format (Imager format changes to 752h x 581v)
- ISG-780/1180-N — Remove 1 - 90  $\mu$ s delay
- ISG-780-1180-Q — Ruggedized for shock and vibration

#### Gen 3 Image Intensifier Tube Performance:

Model	Key Features	Tube Type	Peak Response*	Bandwidth Response	Sensitivity* @2856K	Resolution
ISG-780	Standard	OMNI V	800 nm	400-900 nm	1800 $\mu$ A/lm	64 lp/mm
	Extended Blue	OMNI V	800 nm	375-900 nm	1800 $\mu$ A/lm	64 lp/mm
ISG-1180	0.90 mm Low Halo	Pinnacle™	800 nm	500-900 nm	2000 $\mu$ A/lm	64 lp/mm
	0.75 mm Low Halo	Pinnacle™	800 nm	500-900 nm	2000 $\mu$ A/lm	64 lp/mm

\*Spectral Response curves available upon request

For further information, contact:  
 ITT Industries Night Vision  
 8380 Miralani Drive, San Diego, CA 92126-4347  
 Attention: Marketing Department  
 Telephone: (858) 566-7850  
 Fax: (858) 566-2032  
 e-mail: nvsales@itt.com

Export of this product is regulated by the U.S. Department of State in accordance with guidelines of "International Traffic in Arms Regulations (ITAR)" per Title 22, Code of Federal Regulations, Parts 120-130.

This data sheet is approved for unlimited public release per 02-S-2567

Specifications subject to change without notice.

Rev. 3-04

Engineered for life is a registered trademark  
 © 2004, ITT Industries, Inc.

#### Intelligence for Critical Missions... Innovative Solutions on Demand

ITT Industries is the leading developer and supplier of Generation 3 image intensifier devices for U.S. and international military forces, federal agencies and law enforcement. We continue to advance the state of the art in low-light sensing technology. Our engineering expertise, customer responsiveness and commitment to quality assure our customers intelligence for critical missions with innovative solutions on demand.



**ITT Industries**  
 Engineered for life