THERMAL-EYE™

A safer world

Thermal-Eye™ systems are designed and manufactured for applications in public safety, fire and rescue, industrial, security and transportation. Having pioneered infrared technology decades ago, our products continue to increase the safety of our neighborhoods, help rescue victims of accidents, monitor business facilities and assets and improve the safety of nighttime driving. In fact, with so many positive applications, in so many areas of life, Thermal-Eye products keep us all just a little bit safer. And when you stop to think about it, can any of us afford anything less?

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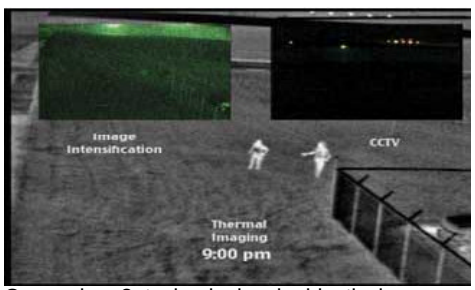
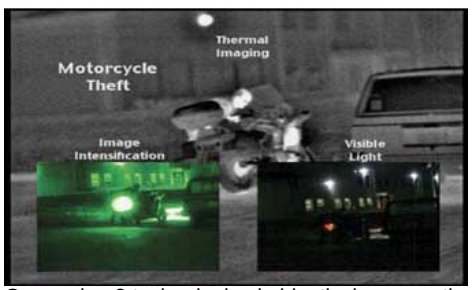
THERMAL-EYE™ TSC

Prevent the unthinkable. The risk of theft, terrorism, and crime is an increasing concern, so corporations and government agencies require complete confidence that sites are fully secured, both day and night. That's why valuable assets, employees and information are now being protected using the most advanced surveillance technology available today–thermal imaging.

The Thermal-Eye™ Thermal Security Cameras–the TSC_{SS} SS and TSCXP–use thermal imaging to detect objects hidden in unlit areas or people lurking in shadowed corners that are invisible o the naked eye and virtually indistinguishable with other technologies. Thermal cameras provide complete visibility in the darkest of nights, on the water and even in bad weather.



Comparing 3 technologies in identical scenes, notice the inability to see the people under image intensification and CCTV and the clarity of them in the thermal image.



Comparing 3 technologies in identical scenes, the image intensification has light blooming that hides the activities, the visible light image is too dark and the thermal image shows every action.

The Thermal-Eye Thermal Security Cameras operate alone and are uniquely designed to fit within almost any standard enclosure and the installation takes just a few minutes. Raytheon's line of security cameras gives the benefits of thermal imaging in a package that is specifically designed to fit into existing CCTV security architecture making implementation easy and hassle-free.
The extended detection range of the Thermal-Eye Thermal Security Cameras allow for effectively monitoring of larger areas per camera, and therefore require less investment for larger perimeter sites compared to other surveillance technologies.

Benefits

- No light is needed to provide complete night and day surveillance; people and vehicles are clearly visible.
- Plug-and-play compatibility with standard CCTV interfaces and enclosures; no need to invest in different infrastructure.
- Cost effective for large area coverage and perimeter security.

See the Unseen™

L3 communications Infrared Products

		TSC$_{SS}$ (Standard Series)		**TSC$_{XP}$ (Extended Performance)**	
Focal Plane Array	Material & Structure	Amorphous Silicon Microbolometer (160 x 120 pixel array)			
	Spectral Response	7-14 µm (filter bandwidth)			
	Thermal Sensitivity	≤100 mK			
Thermal Imaging Performance	Start-up Time	~ 7 sec			
	Contrast / Brightness	Enhanced Image Processing			
Optics	FOV Alternatives	Wide FOV (50°x35°)	Medium FOV (17°x12°)	Wide FOV (50°x35°)	Medium FOV (17°x12°)
	Range to detect human activity	Up to 300 Feet (90 meters)	Up to 1000 Feet (300 meters)	Up to 300 Feet (90 meters)	Up to 1000 Feet (300 meters)
	Focus	Fixed	Manual adjust	Fixed	Manual adjust with passive athermalized lens
Video	Output Format	Analog: SMPTE-170 (cf. NTSC compatible, monochrome)			
	Synchronization	Line sync when 24 VAC power used			
Power	Input Voltage	24 VAC or 9-30 VDC *(Note: Full Function Rear Cover option required for 9-30VDC.)*			
	Input Power	< 2.0 W for 9-30VDC input and <3W for AC input at all temperatures			
Environmental Characteristics	Operating Temperature (Ambient air temperature)	For indoor use without an enclosure: 6°C to 40°C (42.8°F to 104°F) For outdoor use with a protective enclosure: -14°C to 40°C (6.8°F to 104°F) *(see notes 1 and 2 below)*		For indoor or outdoor use: -20°C to 60°C (-4°F to 140°F) *(see notes 2 and 3 below)*	
	Storage Temperature	-40°C to 85°C (-40°F to 185°F)		-40°C to 85°C (-40°F to 185°F)	
	EMC Compliance	FCC Part 15 & CE Mark		FCC Part 15 & CE Mark	
Physical Characteristics	Size	7.7"L x 1.9"W x 2.3"H (3.8cm x 0.75cm x 0.91cm)		8.0"L x 1.9"W x 2.3"H (3.1cm x 0.75 cm x 0.91 cm)	
	Color	Silver Extruded Anodized Aluminum		Black Extruded Anodized Aluminum	
	Weight	14 oz (460 g)		16 oz (525 g)	
	Mounting Bracket	¼" – 20 UNC-2B Universal top or bottom mount		¼" – 20 UNC-2B Universal top or bottom mount	
Ordering Information	FOV Alternatives	Wide FOV (50°x35°)	Medium FOV (17°x12°)	Wide FOV (50°x35°)	Medium FOV (17°x12°)
	24VAC Rear Cover, NTSC Line Lock *(see note 3)*	4978510-002	4978510-001	4978510-004	4978510-003
	Full Function Rear Cover, NTSC Line Lock *(see note 4)*	4978520-002	4978520-001	4978520-004	4978520-003
Additional Camera Functions	*(Full Function Rear Cover required)*	Serial data port for camera setup and diagnostics (EIA/RS-485) White-hot/black-hot polarity control (through RS-485) Choice of power input: 24 VAC or 9-30 VDC			
Optional Enclosure Window Kits – Part numbers	For Pelco 2500 Series	4" dia. window frame 4978525 –1* or –2**			
	For Pelco 3500 Series	2.9"x2.5" window frame 4978535 –1* or –2**			
	For Pelco 4700 Series	4.3"x3.9" window frame 4978547 –1* or –2**			
	For Universal Series *(see note 5)*	6"x6" window frame 4978540 –1* or –2**			
	–1* Germanium window (96% Trans in 7-14 µm) 2.25" diameter				
	–2** Silicon window (73% Trans in 7-14 µm) 2.25" diameter				

Notes:

1. For outdoor use, the **TSC$_{SS}$** is assumed to be installed in a Pelco enclosure, model EH4718-2, with heater, defroster, blower, and sun shroud options, and with the vent covers installed, or equivalent NEMA 4 rated enclosure.
2. When used in an enclosure, an infrared-transmitting window must be installed. Infrared window conversion kits are available for the following Pelco enclosure products: Pelco Series 2500 enclosures, Pelco Series 3500 enclosures, Pelco Series 4700 enclosures
3. For outdoor use, a UL approved protective enclosure with NEMA 4 rating must be used.
4. Other video formats also available.
5. Universal Series Enclosure window comes as a kit designed to fit the intended enclosure after being sized by the installer. The silicon or germanium window is then bonded into the frame using the provided bonding material and instructions, to ensure proper fit and function.

Specifications and design subject to change without notice.
Additional product information may be found within the instruction/user manual.