

Advantages of Thermal imaging

Law Enforcement ROI Analysis

Thermal imaging cameras, sometimes referred to as FLIR cameras or IR infrared imager cameras increase the safety, effectiveness and efficiency of operations both night and day. How can my department afford thermal imaging? Perhaps the better question is— how can your department afford NOT to have it? Is the safety of your officers and community really something you can put a price on? The results speak for themselves, and are not only measured in dollars, but in other ways.

Some are simply **PRICELESS**:

- Officer finds missing child before it's too late
- SWAT team pre-empts terrorist activity
- Officer injuries reduced during nighttime operations
- Crime goes down, confidence in local law enforcement goes up

EXAMPLE #1

SITUATION 1: Response to an alarm prompts a routine search for a break in suspect in an open, heavily wooded area next to an industrial park.

RESPONSE: Responding officer calls in three other officers who search with spotlights and on foot in the dark for 2.5 hours and come up dry.

RESULTS WITH THERMAL: As shown in the table below, the number of officers required, time involved and costs per hour are significantly higher using traditional search methods and the fugitive still remains at large. But using a vehicle mounted Thermal, officers can scan open areas quickly, from the safety of their patrol car or on foot using a handheld Thermal.

FUGITIVE SEARCH	WITHOUT THERMAL	WITH	SAVINGS
Patrol Officers required	4	2	Half the number of officers are required
Length of time to complete search	2.5 hours	.5 hour	2 hours in search time saved
Total labor cost per search (\$60/hour per officer)	\$600.00	\$60.00	\$540.00 labor cost savings per search
Outcome of search	Unsuccessful-fugitive still at large	Successful-fugitive located and apprehended	Dangerous fugitive off the street, no officer or citizen injuries incurred.



SAVINGS: Total savings for this scenario adds up to \$540.00 for just one search. Assume a typical department is involved in 3 searches per week, or 156 per year total.
\$540.00 in savings per search X 156 searches per year = **\$84,240.00 savings per year.**
Subtract the initial cost of the cameras, and the result is beyond break-even, with a year one savings of over \$60,000.00. The Thermal equipment pays for itself in the first year. Five years of use would equate to over **\$400,000.00 in department savings.**
\$84,240.00 annual savings using Thermal cameras
-\$20,000.00 initial investment (\$7k for Pan Tilt, \$13k for handheld)
\$64,240.00 Year One savings after equipment purchases
Savings/redeployment after Year One- \$84,000/yr

COST JUSTIFICATION FOR LAW ENFORCEMENT

EXAMPLE #2

SITUATION 2: Murder suspect seen fleeing park at night.

RESPONSE: Captain calls in neighboring department's helicopter crew to support four ground units. Helicopter and ground crews search for suspect for just over 4 hours using traditional search methods. Suspect is located in 4 hours, requiring extensive manpower and helicopter support.

RESULTS WITH THERMAL: Using Thermal technology, even without a helicopter, four officers in two police cruisers equipped with the Thermal (vehicle mounted camera) can locate the suspect in a quarter of the time and with less manpower.



MURDER SUSPECT SEARCH – AIR/GROUND	WITHOUT THERMAL	WITH	RESULT
Officers required	6 (4 officers on the ground, 2 helicopter crew)	4 (4 officers on the ground, no helicopter crew)	Only 2/3 the number of officers required with Thermal
Helicopter operating cost (rental, fuel)	\$250.00/hr (4 hours x \$250.00= \$1000.00)	\$0	Helicopter costs add up to \$1,000.00 for a full four-hour search. With Thermal, the cost is zero, no copter necessary.
Length of time to complete search	4 hours	1 hour	3 hours in search time saved (time in which the murderer could have committed another criminal act)
Total personnel/labor cost per search	\$1,440.00 (6 officers x \$60/hr x 4 hours=\$1440.00)	\$240.00 (4 officers x \$60/hr x 1 hour = \$240.00)	Labor savings of \$1200.00 per search!
Outcome of search	Finally locate suspect after 4 hours, expensive helicopter time and labor.	Successfully locate suspect in under an hour with less resources.	Suspect apprehended quickly before he escaped and performed more illegal acts.
TOTAL COST	\$2440.00	\$240.00	Without Thermal, a traditional search could cost 10 times as much.

SAVINGS:

- Total savings for this scenario add up to \$2200.00 for just one search.
- Assume a typical department requires helicopter assistance in searches 10x per year.
- \$2200.00 savings per search X 10 searches per year = **\$22,000.00 savings per year.**
- Total savings after 5 years would equal \$96,000.00, even after the equipment investment cost
- That doesn't take into account all the other scenarios in which the camera might be used to prevent crime and reduce costs, like lost child searches, burglaries and more.

\$22,000.00 annual savings using Thermal cameras - \$14,000.00 initial investment (\$7k each for vehicle mount)

\$8,000.00 Year One savings after equipment purchases

\$22,000.00 Year Two savings and beyond.

