

**Digital RF**

**Night Vision and**

# **Thermal Image Cameras**



The Thermal Security Camera detects objects in complete darkness by using an uncooled microbolometer array as the high-resolution sensor enabling it to be completely covert. The special waterproof design and small size ensures easy integration into an outdoor security system or allows it to be hand carried in all weathers through rugged terrain. When fitted with the small lens its x 8 zoom gives a thermal image of a person at 30m and car at 100m. With a larger lens the unit can identify objects at several Kms. The device is battery driven and can be manually or remotely controlled. Ref DRF - IR210

High quality CCTV, or covert, or hand held cameras / cam recorders can be enhanced by fitting a light intensifier tube fitted with a covert low power IR LED to recover a high resolution and bright image at a distance of 150—200m. This lens can be fitted to most video and still cameras. The light amplification lens is ideally suited for covert observation or intelligence gathering on night time missions.



The same light intensifier lens can be offered with a face harness for a night vision monocular or night vision goggles as per reference below. The lens is powered from 2 x 1.5V AA batteries and has a battery life of 112 hours. The case is IP67 rated. Ref PNP2+ or PNG2+ . Light intensifiers require an export license.

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Low cost colour surveillance cameras operate normally during daylight conditions and then switch to a monochrome camera with a ring of infra red lighting at night which allows the videoing of objects in the dark at a range of 7—20 meters. They are suitable for fixed or mobile applications and can be easily concealed, but due to the IR ring they are not completely covert. The images may be recorded, or viewed on a LCD/TFT screen, or relayed back via an FM or digital COFDM microwave link. The camera has a diameter of 22mm, length of 52mm, and is IP66 water proof. Ref DRF NVC1



High quality low cost cameras can operate down to 0.01 lux in normal mode over 5–10m and in absence of complete darkness can be used covertly. There range can be extended to 150m at zero lux using a light intensifier lens with one low light LED making them virtually covert. These cameras have the advantage that the current drawn is lower than an IR LED camera. The camera includes movement detection. A COFDM or FM or IP link will relay video back and control forward. Ref DRF NVC2



## Specification

Type	Totally Covert Thermal Image Camera ref DRF—IR210	Non Covert Low light camera with ring of 16 LEDs ref DRF-NVC1	Near Covert Lowlight camera with one low light LED plus light intensifier lens
Image pick up	Bolometer array 45 x 45 microns	1/3CCD	1/3CCD
Picture elements	320H x 240V	795H x 596V	795H x 596V
Resolution	320 lines	520 lines	520 lines
Min illumination	Zero lux @f 0.7	Zero lux with 16 xLEDs@f1.2	Zero lux with x1 low light LED@f1.2
Horizontal Sync	15.625KHz	15.625KHz	15.625KHz
Vertical freq PAL	50Hz	50Hz	50Hz
Clock PAL	18.9375MHz	18.9375MHz	18.9375MHz
Scanning System	2:1	2:1	2:1
S/N dB	Sensitivity 0.08degree per colour change over -40 to 1000C	52dB daylight	52dB daylight
Audio	None	None	None
Electronic shutter	1 to 1/120,000 sec	1 to 1/120,000 sec	1 to 1/120,000 sec
Output	1 volt in 75 ohms	1 volt in 75 ohms	1 volt in 75 ohms
Size mm	120mmx 60mmx60mm	50mmx50mmx150mm	150mmx63mmx50mm
Weight	220grm	450grm	650grm
Power Supply	7—9Volts,300mA	12volts, 160mA	12volts, 190mA
Temperature range	-20 to +50 degrees	-30 to +60degrees	-30 to +45deg
Range	Person 30m, Car 100m @ zero lux for 19mm f / 0.7 lens	5—10m @ 0.01 lux	150m @ 0 lux