

## Thermal imaging cameras for security and surveillance applications



Ceiling mount

Pendant mount

**INDOOR USE ONLY**



### D-series

Thermal dome cameras for indoor security and safety applications

The D-series are extremely affordable thermal imaging domes. They incorporate a thermal imaging camera which produces clear, crisp images in total darkness. A thermal imaging camera can also see through smoke. The D-series incorporate the same thermal imaging technology found in many of FLIR's most sophisticated systems, but is packaged for users who have indoor security and safety as their primary application. Contrary to other technologies, thermal imaging does not need any light whatsoever to produce an image on which the smallest of details can be seen.

#### Extremely affordable

Thanks to the increasing demand for thermal imaging cameras FLIR Systems can market the D-series at an extremely affordable price.

#### Choice of systems

The D-6 is equipped with a 6.3 mm wide angle lens. It gives you an extremely wide field of view (52°) so that you can cover a large area. The D-6 produces crisp images of 160 x 120 pixels.

Users that want to see farther can choose for the D-19. It is equipped with a 19 mm lens which gives it more range performance. Furthermore, it produces ultra-sharp images of 320 x 240 pixels on which the smallest of details can be seen.

#### Pan/Tilt

The D-series can continuously rotate 360° horizontally and tilt 0° to 90°, allowing the operator to look wherever he wants. Up to 32 different positions can be preset so that by a push on a button, the camera turns in the desired direction.

The D-series allows the user to record a defined pattern existing of up to 200 instructions. The system can be commanded to 'replay' the path of motion. Setting up a scanning path between 2 user defined points is also possible.

#### Lightweight

Very lightweight, the D-series can be installed at any position.

#### Different installation options

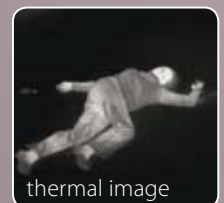
The D-series can either be pendant mounted or ceiling mounted. A ring for the ceiling mount comes with every camera so that the user can decide himself which is the preferred option.

#### Easy-to-install / Easy-to-use

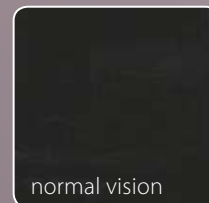
The D-series are extremely easy to use and require no operator training. They can be easily integrated in any existing CCTV infrastructure. The thermal images can be displayed on any existing display that accepts composite video.



normal vision



thermal image



normal vision



thermal image

#### A wide range of applications

When, for whatever reason, the lights go out or when a fire starts and smoke is produced, conventional CCTV cameras become useless. Thermal imaging camera can see through smoke, in total darkness. They are ideal for finding people or objects in a smoke filled room. Also when the lights go out, thermal imaging will still produce a crisp image so that you can see what is happening.

Installing thermal imaging cameras in an indoor environment can also save power. In order to secure the inside of warehouses and other facilities with CCTV, they need to be well lit. Installing thermal imaging cameras like the FLIR Systems D-series will eliminate the need for installing and powering lights or any other technology.

## Technical specifications

### Imaging performance

<i>Detector type</i>	Focal Plane Array (FPA), uncooled microbolometer: 160 x 120 pixels for D-6; 320 x 240 pixels for D-19
<i>Spectral range</i>	7.5 to 13 $\mu$ m
<i>Field of View</i>	D-6: 52° (H) x 40° (V) with 6.3 mm lens and 160 x 120 pixels FPA D-19: 36° (H) x 27° (V) with 19 mm lens and 320 x 240 pixels FPA
<i>Spatial Resoluion (IFOV)</i>	D-6: 6 mrad- D-19: 2 mrad
<i>Image frequency*</i>	7.5 Hz NTSC or 8.3 Hz PAL *
<i>Focus</i>	Fixed
<i>Min. focus distance</i>	D-6: 30.5 cm - D-19: 183 cm

### Pan/Tilt

<i>Az Range; Az Velocity</i>	360° continuous; 0.5°/sec to 100°/sec
<i>El Range; El Velocity</i>	0° to 90° 0.5°/sec to 100°/sec
<i>Programmable presets</i>	32
<i>Auto Scan</i>	1 path: scans linearly between 2 user-defined points
<i>Pattern</i>	1 route, up to 200 instructions
<i>Auto-flip</i>	Enabled

### Image presentation

<i>Video output</i>	PAL or NTSC
<i>Connector types</i>	RS-485, Pelco D

### Power

<i>Requirements</i>	24 V AC +/- 25%
<i>Consumption</i>	< 20 W

### Environmental specifications

<i>Operating temperature range</i>	-10°C to +50°C
<i>Humidity</i>	< 90% RH, non-condensing. Indoor use only. Must be protected from direct or indirect precipitation or water spray

### Physical characteristics

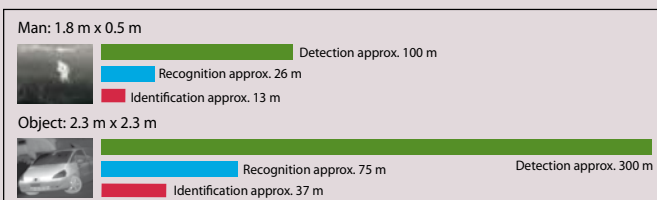
<i>Camera weight</i>	Pendant: 1.6 kg - ceiling mount configuration 3.0 kg
<i>Camera size</i>	Pendant: 200 mm H, 152 mm $\emptyset$ Ceiling trim ring 279.4 mm $\emptyset$
<i>Shipping weight</i>	5.5 kg
<i>Shipping size</i>	38 cm x 38 cm x 48 cm

### Standard Package

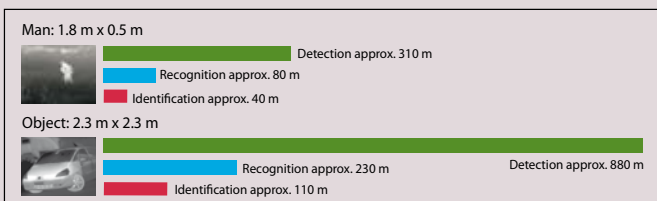
Thermal imaging camera, complete ceiling mount kit (trim ring and back housing) user manual

\* 30 Hz NTSC or 25 Hz PAL available. Subject to approval of the US Department of Commerce for use outside the USA.

### D-6 : range performance 6.3 mm lens



### D-19 : range performance 19 mm lens



Actual range may vary depending on camera set-up, environmental conditions, user experience and type of monitor or display used.

#### Assumptions:

50 % probability of achieving objective at specified distance given 2°C temperature difference and 0.85 / km atmospheric attenuation factor.



SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

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### Thermal imaging:

#### numerous security applications

*In complete darkness. See through smoke.*

Thermal imaging cameras produce clear, crisp images in total darkness. A thermal imaging camera can also see through smoke.

Contrary to other technologies, thermal imaging does not need any light whatsoever to produce an image on which the smallest of details can be seen.

#### FLIR Commercial Vision Systems B.V.

Charles Petitweg 21  
4847 NW Teteringen - Breda  
The Netherlands

Phone : +31 (0) 765 79 41 94  
Fax : +31 (0) 765 79 41 99  
e-mail : flir@flir.com

#### FLIR Systems, Inc

CVS World Headquarters  
70 Castilian Drive  
Santa Barbara, CA 93117  
USA

Phone : +1 805 964 9797  
Fax : +1 805 685 2711  
e-mail : sales@flir.com

#### FLIR Systems Ltd.

United Kingdom

Phone : +44 (0) 1732 220 011  
Fax : +44 (0) 1732 220 014  
e-mail : flir@flir.com

#### FLIR Systems

##### Advanced Thermal Solutions

France

Phone : +33 (0)1 60 37 01 00  
Fax : +33 (0)1 64 11 37 55  
e-mail: flir@flir.com

#### FLIR Systems AB

Spain

Phone : +34 915 73 48 27  
Fax : +34 915 73 58 24  
e-mail : flir@flir.com

#### FLIR Systems AB

Sweden

Phone : +46 (0) 8 753 25 00  
Fax : +46 (0) 8 753 23 64  
e-mail : flir@flir.com

#### FLIR Commercial Vision Systems

China

Phone : +86 10 5869 9786/8762  
Fax : +86 10 5869 8763  
e-mail : flir@flir.com

#### FLIR Systems Middle East, FZE

Dubai - United Arab Emirates

Phone : +971 4 299 6898  
Fax : +971 4 299 6895  
e-mail : flir@flir.com

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