



THALES

www.thalesgroup.com

THE LIGHTEST AND MOST COMPACT NIGHT VISION GOGGLE EVER.

- ▶ Ultra low-profile
- ▶ Ultra-compact and lightweight (340 g)
- ▶ Wide field of view (51°)
- ▶ Outstanding long use comfort



MINIE

Ultra-compact night vision goggle





MINIE

Ultra-compact night vision goggle

OVERVIEW

MINIE is an innovative and rugged image intensified night vision bi-ocular. Based on the success of LUCIE (more than 50,000 units currently in operation all over the world), Thales designed the most compact and lightweight goggle available on the market.

AN ULTRA-COMPACT DESIGN

MINIE only weighs 340 g, which is even lighter than many monoculars available on the market.

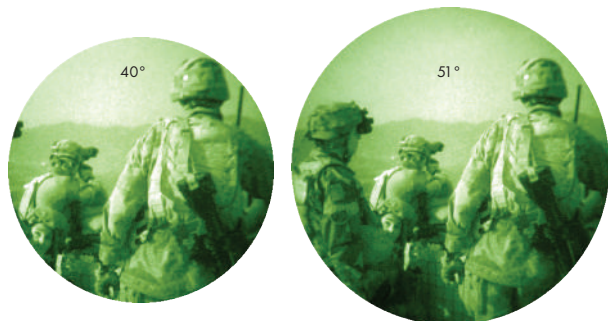


MINIE also offers a very compact and low-profile design, with a short distance between the eyes and the goggle's center of gravity.

This design decreasing torque of the helmet-mounted equipment and allowing for long wearing comfort.

A WIDE FIELD OF VIEW

MINIE's wide field of view (51°) drastically improves user awareness and mobility, increasing by 70% the observed scene compared to conventional goggles. The example below shows how this difference will help soldiers to have a better vision of the situation.



MINIE can also be associated with a 3.8x or 5x magnifier for long-distance surveillance.

Building on 80 years of experience in high precision optics, Thales offers a comprehensive range of night vision devices. Thales has a customer-focused approach and develops innovative and lightweight products which significantly reduce the soldier's burden while displaying greater situational awareness. With 80,000 devices in operation worldwide, Thales is the leading manufacturer of night vision devices for pilots and dismounted soldiers in Europe. Thales night vision devices were chosen by the armed forces of many countries, including France, the United Kingdom and Germany.

TYPICAL DATA

Magnification	1x
Field of view	51°
with 3.8x magnifier	9°
with 5x magnifier	10°
Focus range	20 cm to infinity
Diopter adjustment	-6 to +3 diopters
Eye relief	20 mm
Interpupillary distance	56 mm to 74 mm
Weight with battery	340 g
Dimensions	112(L) x 75(W) x 79(H) mm
I² Tube	Gen. II or Gen. III
Autogating	Optional
Brightness gain	Manually adjustable
Power source	1x 1.5V or 3.6V AA battery or 1x 1.2V AA rechargeable battery
Battery life	50 h at 20°C (1.5V AA battery + standard tube)
Operating temperature	-40°C to +49°C
Storage temperature	-46°C to +71°C
Water immersion	1 m for 2 h "Navy" version on request

Others

- Built-in infrared illuminator with "IR-on" indicator
- Automatic cut-off in high light conditions
- Automatic cut-off in stowed position
- "Low battery" indicator

"The most compact and lightweight goggle available on the market"



AVAILABLE ACCESSORIES

MINIE accessories are compatible with LUCIE.



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ALREADY IN SERVICE WITH SEVERAL SOLDIER SYSTEMS PROGRAMS.

- ▶ Ultra-compact and lightweight goggle, allowing for remote aiming, I²-IR optical fusion and data display
- ▶ Compliant with all types of soldier systems
- ▶ Large video display field of view (42.5°)
- ▶ Connectivity to C4I systems:
 - Display of external video feeds (UAVs, sight, ...)
 - Display of data from soldier system (maps ...)



MINIE-D

Connected night vision goggle with integrated video display





MINIE-D

Connected night vision goggle with integrated video display

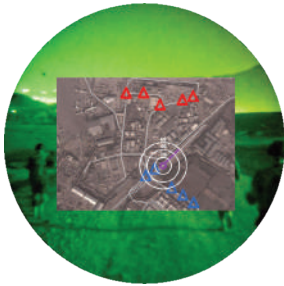
OVERVIEW

MINIE-D is an image intensified night vision goggle with integrated microdisplay which allows to superimpose data or video feed to the intensified image. This innovation by Thales offers to the soldier new functions essential to modern warfare.

DATA DISPLAY

Augmented reality display of position, orientation and tactical informations

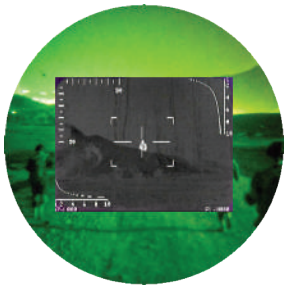
Map enriched with symbology (Blue/Red forces position)



VIDEO DISPLAY

Remote aiming capability (from Thermal Weapon Sight, Remote Weapon Sight ...)

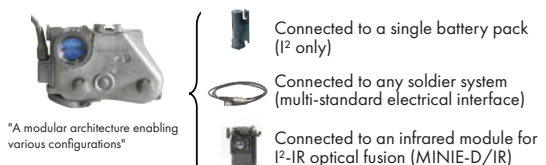
Live tactical situational awareness (from any EO/IR sensor)



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TYPICAL DATA

Magnification	1x
Field of view	51°
Focus range	20 cm to infinity
Diopter adjustment	-6 to +3 diopters
Eye relief	20 mm
Interpupillary distance	56 mm to 74 mm
Video field of view	42.5° (diagonal)
Microdisplay	800x600 pixels
Com' interface	RS232 serial link
Video compliance	RS170, VGA, SVGA, CCIR
Weight without cable	370 g
Dimensions	125(L) x 77(W) x 76(H) mm
I² Tube	Gen. II or Gen. III
Autogating	Optional
Brightness gain	Manually adjustable
Power source	
Single battery	1x 1.5 V AA battery
Power supply pack	5x 1.5 V AA batteries (for video display feature) By soldier system
Battery life	50 h at 20°C (1.5V AA battery standard tube)
Operating temperature	-32°C to +44°C
Storage temperature	-46°C to +71°C
Water immersion	1 m for 2 h
Others	
	- Built-in infrared illuminator with "IR-on" indicator
	- Automatic cut-off in high conditions and stowed position
	- "Low battery" indicator



AVAILABLE ACCESSORIES



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A MAJOR BREAKTHROUGH IN DISMOUNTED SOLDIER NIGHT OPERATION.

- ▶ Ultimate sensors combination enabling decamouflage of potential threats while preserving mobility
- ▶ Fast and easy mounting of the IR plug-in onto MINIE-D – in less than 5 s – to obtain genuine thermal imaging capability
- ▶ Improved situational awareness in any battlefield conditions
- ▶ 4 available configurations – IL or IR only, fused IL/IR and video feeds display – according to every mission requirements
- ▶ Various IR image display modes (Full IR, Threshold, Contours) to enhance target detection



MINIE-D/IR

Connected fused sensors night vision goggle





MINIE-D/IR

Connected fused sensors night vision goggle

OVERVIEW

MINIE-D/IR is an image intensified (I²) night vision goggle associated to an uncooled thermal (IR) imaging module which allows to fuse thermal and intensified images. This innovation by Thales offers to the soldier new capabilities essential to modern warfare.

IR IMAGE IN 3 POSSIBLE MODES

Display of IR image in 3 available modes: "Full IR", "Threshold" or "Contours", with distinct colors for IR and I² allowing a more accurate interpretation of the fused image.



A UNIQUE DECAMOUFLAGE CAPABILITY



OPTIMAL SITUATIONAL AWARENESS



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TYPICAL DATA

Magnification	1x
Field of view I²	51°
Focus range	20 cm to infinity
Dioptr adjustment	-6 to +3 diopters
Eye relief	20 mm
I² Tube	Gen. II or Gen. III
Autogating	Optional
Brightness gain	Manually adjustable
Field of view IR	36° (diagonal)
IR sensor	Microbolometer
IR sensor resolution	336 x 256 pixels
Spectral band	7.5 - 13.5 µm
IR Output Standard	SVGA 800 x 600 @ 60 Hz (color)
Field of view (data)	42.5° (diagonal)
Video Input Standards (video feeds)	CCIR, RS170, VGA, SVGA
Video Input Standard (overlay of data on IR image)	SVGA 800 x 600 @ 60Hz (color)
Weight	500 g (with single battery pack and 1.5 V AA lithium battery included)
Dimensions	142(L) x 77(W) x 76(H) mm
Power source	
Single battery pack	1x 1.5V AA battery
Power supply pack	5x 1.5V AA batteries
Battery life at 20°C (I² only / I²+IR)	
with single battery pack	40 h / 2.5 h
with power supply pack	150 h / 18 h
Operating temperature	-32°C to +44°C
Storage temperature	-46°C to +70°C
Water immersion	1 m for 2 h
Others	
	- Built-in infrared illuminator with «IR-on» indicator
	- Automatic cut-off in high light conditions and stowed position
	- "Low battery" indicator
	- Video setting mode (brightness, contrast, IR superimposing ...)

AVAILABLE ACCESSORIES



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WIDE FIELD OF VIEW. LIGHTWEIGHT AND COMPACT. THE REFERENCE IN NIGHT VISION.

- ▶ Wide field of view (51°)
- ▶ Compact and lightweight (435 g)
- ▶ Ultra low-profile
- ▶ More than 50,000 units in operation worldwide



LUCIE

Compact night vision goggle





LUCIE

Compact night vision goggle

OVERVIEW

LUCIE is a compact and rugged image intensified night vision bi-ocular. LUCIE weighs only 435 g, one of the lightest goggles available.

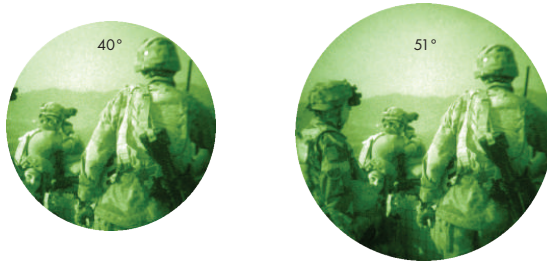
A UNIQUE LOW-PROFILE DESIGN

LUCIE also offers a very compact and low-profile design, with a short distance between the eyes and the goggle's center of gravity. This design decreases torque of the helmet-mounted equipment and allows for long wearing comfort.

A WIDE FIELD OF VIEW

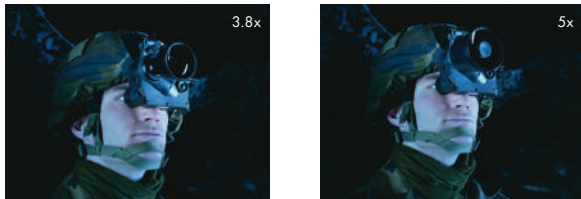
LUCIE's wide field of view (51°) drastically improves user awareness and mobility, increasing by 70% the observed scene compared to conventional goggles.

The example below shows how this difference will help soldiers to have a better vision of the situation.



MAGNIFIERS FOR LONG DISTANCE OBSERVATION

LUCIE can also be associated with a 3.8x or 5x magnifier for long-distance surveillance.



TYPICAL DATA

Magnification	1x
Field of view	51°
with 3.8x magnifier	9°
with 5x magnifier	10°
Focus range	20 cm to infinity
Diopter adjustment	-5 to +3 diopters
Eye relief	17 mm
Weight with battery	435 g
Dimensions	127(L) x 69(W) x 79(H) mm
I² Tube Autogating	Gen. II or Gen. III Optional
Power source	1x 1.5V AA standard battery or 1x 3.6V AA standard battery or 1x 1.2V AA rechargeable battery
Battery life	45 h at 20°C (1.5V AA battery + standard tube)
Operating temperature	-40°C to +45°C
Storage temperature	-40°C to +65°C
Water immersion	1 m for 2 h "Navy" version on request

Others

- Built-in infrared illuminator with "IR-on" indicator
- Automatic cut-off in high light conditions
- Automatic cut-off in stowed position
- "Low battery" indicator

"More than 50,000 units in operation all over the world"



AVAILABLE ACCESSORIES

LUCIE accessories are compatible with MINIE.



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THE LIGHTEST AND MOST COMPACT NIGHT VISION MONOCULAR.

- ▶ Wide field of view (51°)
- ▶ Ultra-compact and lightweight (280 g)
- ▶ Hands-free use when mounted on a face-mask, helmet or weapon
- ▶ Left eye or right eye use
- ▶ Better depth perception in Bi-MONIE configuration (driving, special forces)



MONIE

Ultra-compact night vision monocular





MONIE

Ultra-compact night vision monocular

OVERVIEW

MONIE is an innovative and rugged image intensified night vision monocular. Its wide field of view (51°) drastically improves user awareness and mobility, increasing by 70% the observed scene compared to conventional monoculars. Thanks to its revolutionary design, MONIE is the most compact and lightweight (280 g) monocular available on the market.

VARIOUS OPERATIONAL CONFIGURATIONS

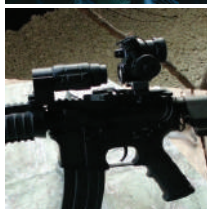
MONIE features a highly modular design, allowing for various operational configurations.



Configuration #1: Head- or helmet-mounted monocular configuration (left or right eye), leaving a dark-adapted eye with large peripheral vision (patrol, combat situations...).



Configuration #2: Head- or helmet-mounted binocular configuration for better depth perception, ideal for vehicle driving, parachute jumps and special forces operations.



Configuration #3: Weapon-mounted, associated with a red dot sight or laser pointer.

MONIE can also be associated with a 3.8x or 5x magnifier for long-distance surveillance.

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TYPICAL DATA

Magnification	1x
Field of View	51°
with 3.8x magnifier	9°
with 5x magnifier	10°
Dioptric adjustment	-6 to +3 diopters
Eye relief	17 mm
Focus range	20 cm to infinity
Weight (with battery)	280 g
Dimensions	81 (L) x 69 (W) x 72 (H) mm
I² tube	Gen. II or Gen. III
Autogating	Optional
Brightness gain	Manually adjustable
Power supply	1x 1.5V or 3.6 V AA battery 1x 1.2V rechargeable AA battery
Battery life	35 h at 20°C (1x 1.5 V AA lithium battery)
Operating temperature	-40°C to +49°C
Storage temperature	-40°C to +65°C
Water immersion	1 m for 2 h "Navy" version on request
Others	- Built-in infrared illuminator with "IR-on" indicator - Automatic cut-off in high light conditions - Automatic cut-off in stowed position

"The most compact and lightweight monocular available on the market"



AVAILABLE ACCESSORIES

Face mask, helmet- and weapon mount are designed to quickly and simply change from one configuration to another, with no additional part required.



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