



**SPECTRONIGHT**

Master The Dark

**DIGITAL LOW LIGHT NIGHT VISION  
PRODUCT CATALOG**

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T  
N  
E  
T  
N  
O  
C

# CONTENTS



## GOGGLES

Page 1 Advanced Digital  
Low Light Monocular  
**D2L-14L**

Page 3 Advanced Digital  
Low Light Monocular  
**D2L-14**

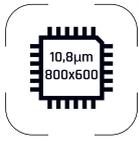
Page 5 Advanced Fusion Sight Digital  
Night Vision Goggle-Binocular  
**D2L-31F**

## HANDHELD DEVICE

Page 7 Advanced Digital Handheld  
Night Vision Device  
**D2L-10H**

# D2L-14L

## Advanced Digital Low Light Monocular



10,8µm CMOS



High Sensitivity



Dark Starlight  
0,0001 Lx



100 FPS  
Ultra-low Latency



Day and Night



IR Anti-Reflection



Water & Dust Proof



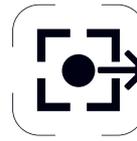
HDR



OLED Micro-Display



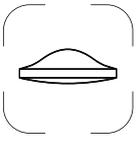
iOS & Android



Video Output



Fast lens F/1.2



Aspherical lens



Refractive index lens



No light Compensation

### I Product Introduction

The advanced digital low-light monocular D2S-14L adopts a 2/3-inch second-generation high-performance BSI CMOS solid-state image sensor, featuring ultra-high sensitivity and outstanding reliability. It is capable of low-latency, high-speed, clear and continuous imaging under starlight conditions. Thanks to its excellent performance even in strong-light environments, it works reliably both day and night and can output real-time low-light images at any time.

### I Product Features

- 10.8µm large pixel size with super-sensitivity
- Clear imaging with 800x600 resolution
- Compact structure, lightweight body
- All-weather use, suitable for various environments
- Real-time video streaming
- Monocular alternative to PVS-14
- Binocular alternative to PVS-31
- ASIC-based control, high frame rate, low latency, low power consumption
- many more

# D2L-14L

## Advanced Digital Low Light Monocular



### Applications

- Outdoor night vision
- Police enforcement
- Safety rescue
- Forest monitoring
- Camping adventure

#### Main Technical Parameters

##### Device parameters

Image sensor dimension	2/3 inch
Spectral response range	400nm ~ 1100nm
Image resolution	800×600
Pixel size	10.8μm
Minimum Illumination (No light compensation)	0.0001Lx
OLED resolution	800×600
Frame rate	50Hz/100Hz <sup>[1]</sup>

##### Optical Parameters

Objective lens focal length	12mm
F/#	F1.2
FOV	50° ( > 40° ×30° )
Exit pupil	8mm
Exit relief	23mm
Magnification	1 <sup>x</sup>
Min. Objective focus	250mm
Diopter	-4D ~ +4D

##### The parameters of the entire machine

Boot time	< 4s
Battery	One 16340 rechargeable lithium battery Compatible with CR123A disposable lithium battery and 18650 rechargeable lithium battery <sup>[2]</sup>
Operation time	> 16hours <sup>[3]</sup>
Size	109×57×66 (mm) Battery 18650 90×57×66 (mm) Battery 16340 /CR123A
Mechanical interface	Helmet mounting with a standard wilcox interface
Extensible electrical interface	9-core aviation socket
Degree of protection	IP67
Weight (Including battery, excluding holder)	< 286g (Magnesium-Aluminum Alloy,Battery 18650) / < 250g (Magnesium-Aluminum Alloy,Battery 16340 /CR123A)
Environmental adaptability	Operating Temperature: -20°C~ 55°C (Expandable to -40°C~ 60°C )
	Storage Temperature: -25°C~ 55°C (Expandable to -45°C~ 70°C )
DRI for Human	633m (Detection) /312m (Recognition) /156m (Identification)
DRI for Vehicle	843m (Detection) /422m (Recognition) /211m (Identification)

Note:

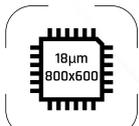
[1] Customizable at 60Hz/120Hz;

[2] The product image shows a short battery cap for a 16340 battery. When using an 18650 battery, a longer battery cap needs to be replaced;

[3] Normal temperature 25°C ,default working frame rate 100Hz, 18650 rechargeable lithium battery (voltage 3.7V,capacity 3400mAh) continuous working time >16 hours; normal temperature 25°C default working frame rate 100Hz, CR123A disposable lithium battery continuous working time > 5hours;normal temperature 25°C ,default working frame rate 100Hz, 16340 rechargeable lithium battery (voltage 3.7V, capacity 900mAh) continuous working time > 5hours. When the working frame is 50Hz, the power consumption will decrease and the continuous working time will increase.

# D2L-14

## Advanced Digital Low Light Monocular



18µm BSI CMOS



High Sensitivity



Dark Starlight  
0,0001 Lx



100 FPS  
Ultra-low Latency



Day and Night



IR Anti-Reflection



Water & Dust Proof



HDR



OLED Micro-Display



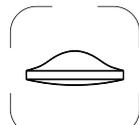
iOS & Android



Video Output



Fast lens F/1.2



Aspherical lens



Refractive index lens



No light Compensation

### I Product Introduction

The advanced digital low-light monocular D2L-14 adopts 1-inch second-generation high-performance BSI CMOS solid-state image sensor, featuring super sensitivity and high reliability. It's capable of low-latency, high-speed, clear and continuous imaging under starlight conditions. By well-functioning also in strong light environment, it works day and night, and can output low-light images in real time.

### I Product Features

- 18µm large pixel size with super-sensitivity
- Clear imaging with 800x600 resolution
- Compact structure, lightweight body
- All-weather use, suitable for various environments
- Real-time video streaming
- Monocular alternative to PVS-14
- Binocular alternative to PVS-31
- ASIC-based control, high frame rate, low latency, low power consumption
- many more

# D2L-14

## Advanced Digital Low Light Monocular

### Applications

- Outdoor night vision
- Police enforcement
- Safety rescue
- Forest monitoring
- Camping adventure

#### Main Technical Parameters

Device parameters	
Image sensor dimension	1 inch
Spectral response range	400nm ~ 1100nm
Image resolution	800×600
Pixel size	18μm
Minimum Illumination (No light compensation)	0.00005Lx
OLED resolution	800×600
Frame rate	50Hz/100Hz <sup>[1]</sup>
Optical Parameters	
Objective lens focal length	19.8mm
F/#	F1.05
FOV	50° ( > 40° × 30° )
Exit pupil	8mm
Exit relief	23mm
Magnification	1 <sup>x</sup>
Min. Objective focus	250mm
Diopter	-4D ~ +4D
The parameters of the entire machine	
Boot time	< 4s
Battery	One 16340 rechargeable lithium battery Compatible with CR123A disposable lithium battery and 18650 rechargeable lithium battery <sup>[2]</sup>
Operation time	> 18hours <sup>[3]</sup>
Size	113×57×66 (mm) Battery 18650 95×57×66 (mm) Battery 16340 /CR123A
Mechanical interface	Helmet mounting with a standard wilcox interface
Extensible electrical interface	9-core aviation socket
Degree of protection	IP67
Weight (Including battery, excluding holder)	< 299g (Magnesium-aluminium alloy,Battery 18650) / < 263g (Magnesium-aluminium alloy,Battery 16340 /CR123A)
Environmental adaptability	Operating Temperature: -20°C~ 55°C (Expandable to -40°C~ 60°C )
	Storage Temperature: -25°C~ 55°C (Expandable to -45°C~ 70°C )
DRI for Human	935m (Detection) /468m (Recognition) /234m (Identification)
DRI for Vehicle	1265m (Detection) /633m (Recognition) /316m (Identification)

Note:

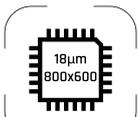
[1] Customizable at 60Hz/120Hz;

[2] The product image shows a short battery cap for a 16340 battery. When using an 18650 battery, a longer battery cap needs to be replaced;

[3] Normal temperature 25°C ,default working frame rate 100Hz, 18650 rechargeable lithium battery (voltage 3.7V,capacity 3400mAh) continuous working time >18 hours; normal temperature 25°C default working frame rate 100Hz, CR123A disposable lithium battery continuous working time > 6hours;normal temperature 25°C ,default working frame rate 100Hz, 16340 rechargeable lithium battery (voltage 3.7V, capacity 900mAh) continuous working time > 5hours. When the working frame is 50Hz, the power consumption will decrease and the continuous working time will increase.

# D2L-31F

## Advanced Fusion Sight Digital Night Vision Goggle-Binocular



18 $\mu$ m BSI CMOS



High Sensitivity



Dark Starlight  
0,0001 Lx



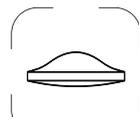
100 FPS  
Ultra-low Latency



Day and Night



IR Anti-Reflection



Aspherical lens



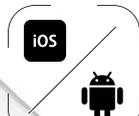
Water & Dust Proof



HDR



OLED Micro-Display



iOS & Android



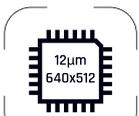
Mission Record



Fast lens F/1.2



Refractive index lens



12 $\mu$ m LWIR



Compass



Stereoscopic



Wireless



Wireless Videostream



No light Compensation

### I Product Introduction

The advanced fusion sight digital night vision goggle-binocular D2L-31F is a binocular fusion goggle that combines digital low-light and thermal (infrared) observation, as well as target positioning functions. It features high sensitivity, digital fusion, compatibility for day and night use, high refresh rate, and low latency. It can be quickly connected to a helmet with a helmet bracket. This product can achieve fusion of lowlight and infrared images, fully combining their respective advantages in the field of night vision, and has stronger image capture capability.

### I Product Features

- 18 $\mu$ m large pixel size with super-sensitivity
- 640 $\times$ 512 infrared thermal imaging
- Real-time fusion of low-light and thermal (infrared) digital pixel-level imagery, with no misalignment
- Automatic power off when side flipped
- Real-time image storage and transmission to the rear
- Receive and display external image sources
- ASIC controller, ultra-low power consumption, extended working time
- Intelligent recognition of personnel targets, automatic selection,

# D2L-31F

## Advanced Fusion Sight Digital Night Vision Goggle-Binocular



### Applications

- Outdoor night vision
- Police enforcement
- Safety rescue
- Forest monitoring
- Camping adventure

### Main Technical Parameters

#### Device parameters

	Low light	Thermal / Infrared
Image sensor dimension	1 inch	-
Spectral response range	400nm ~ 1100nm	8μm ~ 14μm
Image resolution	800×600	640×512
Pixel size	18μm	12μm
Minimum illumination (No light compensation)	0.00005 Lx	-
OLED resolution	800×600	
Frame rate	50Hz/100Hz	

#### Optical parameters

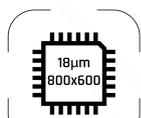
Objective lens focal length	19.8mm	10.6mm
F/#	F1.05	F1.0
FOV	50° ( > 40° × 30° )	
Exit pupil	8mm	
Exit relief	23mm	
Magnification	1 <sup>x</sup>	
Min. Objective focus	250mm	
Diopter	-4D ~ +4D	

#### The parameters of the entire machine

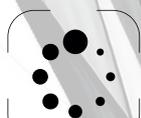
Boot time	< 4s	
Battery	Four 18650 rechargeable lithium batteries	
Max. Operation time	> 32hours	
Size	107×105×89 (mm)	
Mechanical interface	Standard wilcox interface	
Extensible electrical interface (Battery compartment)	Type-C	
Degree of protection	IP67	
Weight (Goggle only)	< 535g (Magnesium-aluminium alloy)	
System weight (Including battery and holder)	< 1080g (Magnesium-aluminium alloy、 composite resin)	
Environmental adaptability	Operating Temperature: -20°C~ 55°C (Expandable to -40°C~ 60°C )	
	Storage Temperature: -25°C~ 55°C (Expandable to -45°C~ 70°C )	
DRI for Human	935m (Detection) /468m (Recognition) /234m (Identification)	751m (Detection) /375m (Recognition) /188m (Identification)
DRI for Vehicle	1265m (Detection) /633m (Recognition) /316m (Identification)	1016m (Detection) /508m (Recognition) /254m (Identification)

# D2L-10H

## Advanced Digital Handheld Night Vision Device



18µm BSI CMOS

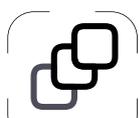


High Sensitivity



Dark Starlight

0.0001 Lx



100 FPS

Ultra-low Latency



Day and Night



IR Anti-Reflection



Water & Dust Proof



HDR



OLED Micro-Display



iOS

iOS & Android



Mission Record



Fast lens F/1.2



Compass



No light Compensation



Refractive index lens



Aspherical lens

### I Product Introduction

The D2L-10H Advanced Digital Handheld Night Vision Device utilizes a high-performance 1-inch target surface solid-state low-light imaging device, featuring high sensitivity, high reliability, resistance to bright light, and suitability for both day and night use. It can achieve low-latency, high-speed, clear continuous imaging under starlight conditions, and is capable of real-time output of low-light images.

### I Product Features

- 18µm large pixel, ultra-high sensitivity
- Clear imaging with 800x600 resolution
- Compact structure, lightweight body
- All-weather use, suitable for various environments
- Real-time video streaming
- Monocular alternative to PVS-14
- Binocular alternative to PVS-31
- ASIC-based control, high frame rate, low latency, low power consumption
- Supports photo taking and video recording, with an external micro SD

# D2L-10H

## Advanced Digital Handheld Night Vision Device

### Applications

- Outdoor night vision
- Police enforcement
- Safety rescue
- Forest monitoring
- Camping adventure



#### Main Technical Parameters

##### Device parameters

Image sensor dimension	1 inch
Spectral response range	400nm ~ 1100nm
Image resolution	800×600
Pixel size	18μm
Minimum Illumination (No light compensation)	0.00005Lx
OLED resolution	800×600
Frame rate	25Hz/50Hz <sup>[1]</sup>

##### Optical Parameters

Objective lens focal length	19.8mm
F/#	F1.05
FOV	50° ( > 40° ×30° )
Exit pupil	8mm
Exit relief	23mm
Magnification	1×
Min. Objective focus	250mm
Diopter	-4D ~ +4D

##### The parameters of the entire machine

Boot time	< 4s
Battery	One 18650 rechargeable lithium battery, Compatible with two CR123A/16340 disposable lithium batteries in series for temporary use (Not waterproof in this case)
Operation time	> 7hours
Size	115×48×81 (mm)
Mechanical interface	1/4-20 UNC thread (for use with tripod)
Extensible electrical interface	Type-C
Degree of protection	IP67
Weight (Including battery, excluding holder)	< 365g (Magnesium-Aluminum Alloy, Battery 18650) / < 355g (Magnesium-Aluminum Alloy, Battery 16340 /CR123A)
Environmental adaptability	Operating Temperature: -20°C~ 55°C (Expandable to -40°C~ 60°C )
	Storage Temperature: -25°C~ 55°C (Expandable to -45°C~ 70°C )
DRI for Human	935m (Detection) /468m (Recognition) /234m (Identification)
DRI for Vehicle	1265m (Detection) /633m (Recognition) /316m (Identification)

Note:

【1】 Customizable at 30Hz/60Hz;



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