NEWCON OPTIK

TACTICAL EQUIPMENT CATALOGUE

LASER RANGEFINDERS

NIGHT VISION SYSTEMS

THERMAL SYSTEMS

TACTICAL OPTICS

ISO 9001 SGS

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Company Profile

Newcon Optik is a world leader in the design and manufacture of laser rangefinders, image-intensified night vision systems, thermal imagers, and other professional-grade tactical optics.

Headquartered in Toronto, Canada, Newcon Optik's dealer network is present on six continents and its products are relied upon by military, government and commercial customers in more than 70 countries.

Since 1992 we have worked closely with our customers and partners to consistently produce technologically-advanced products that meet and exceed the needs of the professionals they serve.

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All specifications shown in this catalogue are indicative for marketing purposes only and are subject to change at any time

LASER RANGEFINDERS

SPOTTING SCOPES WITH BUILT-IN LRF

The SPOTTER LRF and SPOTTER LRF PRO are the first of their kind: A combined spotting scope/laser rangefinder system that enables faster, easier and more accurate acquisition of range, inclination and azimuth data of long-distance targets.

Both models are built to MIL-STD-810G standards and are fully ruggedized to handle real-world military deployment. With 15-45x variable magnification, fully multi-coated optics, an etched mil-dot reticle, USB output, and LED display, the SPOTTER LRF and SPOTTER LRF PRO are among the most versatile optics you can bring with you to the field. Both are compatible with an Android™-based application, ballistic calculators and other peripheral devices.

Optics	SPOTTER LRF	SPOTTER LRF PRO
Magnification (x)	15 - 45	15 - 45
Objective lens (mm)	60	60
Exit pupil diameter (mm)	4.17 - 1.34	4.17 - 1.34
Eye relief (mm)	25-26	25-26
Field of view (°)	3.4 (15x) - 1.2 (45x)	3.4 (15x) - 1.2 (45x)
Axial resolution (center), (arcsec)	3.0	3.0
Diopters adjustment range, dpt	±5	±5
Device focusing range (m)	8 - ∞	8 - ∞
Laser Rangefinder		
Eye safety	Class 1, eye-safe	Class 1, eye-safe
Peripheral Compatibility	-	PLGR, Bal Comp, AFS, PC, Android™ BT[1] and CivTAK/ATAK[1]
Wavelength (nm)	905	1550
1064 nm laser protection	Optional	Optional
Specified measuring range (m)[2]	10 - 2,000	10 - 3,000
Display		
Aiming reticle type	Etched reticle (MIL Dot)	
Display type	Customized matrix OLED	
Display brightness control	Manual (8 levels)	Manual (8 levels)
Mechanics, Electronics & Environmental		
Dimensions (mm)	280x140x105	280x140x105
Weight with battery (g)	1,590	1,590
Operational temperature (°C)	-35 to +55	-35 to +55
Storage temperature (°C)	-45 to +65	-45 to +65
Waterproof	1m/30min	1m/30min
Environmental conditions	MIL-STD-810G	MIL-STD-810G
Tripod mounting pad	Yes	Yes
3-axis digital compass	Yes	Yes
Internal power supply	2x CR123 Lithium	2x CR123 Lithium
Battery life (# of measurements)	5,000	5,000
Nitrogen filled	Yes	Yes
Interface	USB	USB, Bluetooth[1]

1. Optional
2. 2.3m x 2.3m NATO standard target

This device compatible with: Android™ Bluetooth™ Ballistic apps NC Cronus™ CivTAK/ATAK

MOUNTABLE LASER RANGEFINDERS

The SEEKER S and SEEKER M represent Newcon Optik's next generation of laser rangefinders. Both of these devices are mountable LRFs that can be boresighted to any optical system. Whether mounted on a rifle, spotting scope, binoculars or thermal imager, these powerful devices instantly add long-distance rangefinding capability in a compact, lightweight package. With a built-in display that can be used in tandem with an Android™-based application, the SEEKER S and SEEKER M provide real-time distance, azimuth, inclination and GPS target data, and allow for real-time mapping and friendly force communication.

With NATO-standard target ranges of 2,000m and 3,000m respectively, the SEEKER S and SEEKER M allow for fast and accurate target data acquisition while maintaining positive weapons control.

Rangefinder	SEEKER S	SEEKER M
Laser safety	Class 1, eye-safe	Class 1, eye-safe
Peripheral Compatibility	-	Bal Comp, AFS, PC, BT, Android™, CivTAK/ATAK[1]
Wavelength (nm)	905	1550
Measuring range, (m)[2]	10 - 2,000	10 - 3,000
Distance measuring accuracy (m)	±1	±1
Azimuth measuring range (°)	360	360
Azimuth measuring accuracy (°)	±1	±1
Inclination measuring range (°)	±60	±60
Inclination measuring accuracy (°)	±0.5	±0.5
First/Last target logic	Yes	Yes (via port)
Interface	USB, Bluetooth[1]	USB, Bluetooth
Visible Laser		
Laser safety	Class 3R	Class 3R
Wavelength (nm)	635±10	635±10
Optical Output Power (mW)	<5	<5
Display		
Integrated display	OLED	OLED
Display color	Red	Red
Mechanics, Electronics & Environmental		
Dimensions without mount (mm)	115x76.3x52	115x76.3x52
Dimensions with mount (mm)	115x76.3x74	115x76.3x74
Weight without batteries or mount (g)	325	330
Weight with mount (g)	443	450
Weapon mountable	MIL-STD-1913	MIL-STD-1913
Power Supply	2x CR2	2x CR2
Battery life (# of measurements)	3,500	3,500
Operating temperature range (°C)	-30 to +50	-30 to +50
Storage temperature range (°C)	-35 to +60	-35 to +60
Waterproofing	MIL-STD-810G	MIL-STD-810G

1. Optional
2. 2.3m x 2.3m NATO standard target

This device compatible with:

Android™ Bluetooth™ Ballistic apps NC Cronus™ CivTAK/ATAK

ULTRA LONG-RANGE LASER RANGEFINDER BINOCULARS

The LRB 12K is built to outperform all other handheld laser rangefinder binoculars. With a high number of performance features fit into a MIL-SPEC form factor, the LRB 12K can handle anything professional operators can throw its way.

Features include a 12,000m (NATO target) measuring range, built-in digital magnetic compass, built-in GPS receiver and a crystal-clear LED display.

Optics	LRB 12K	LRB 12KNIGHT
Magnification (x)	7	7 / 5 (night)
Objective lens diameter (mm)	42	42
Field of view (°)	6	6 / 7
Eye relief (mm)	20	20
Diopter adjustment range	±5	±5
Interpupillary distance (mm)	58 - 72	58 - 72
Rangefinder		
Eye safety	Class 1, eye-safe	Class 1, eye-safe
Wavelength (nm)	1550	1550
Measuring distance range (m)[1]	10 - 12,000	20 - 12,000
Distance measurement accuracy (m)	±1	±1
Azimuth measurement accuracy (°)	±1	±1
Inclination measurement accuracy (°)	±0.5	±0.5
Speed detection	Yes	Yes
First/last target logic	Yes	Yes
Gating capability	Yes	Yes
Gating step (m)	≥100	≥100
Scan mode	Yes	Yes
Peripheral compatibility	PLGR, Bal Comp, PC, BT[2], Android ™	
Distance between objects	Yes	Yes
Horizontal distance between objects	Yes	Yes
Azimuth difference between objects	Yes	Yes
Inclination difference between two objects	Yes	Yes
Height difference between objects	Yes	Yes
User GPS coordinates	Yes	Yes
Target GPS coordinates	Yes	Yes

1. 2.3m x 2.3m NATO standard target
2. Optional

(Specifications continued on next page)

ULTRA LONG-RANGE LASER RANGEFINDER BINOCULARS

The LRB 12K requires virtually no maintenance, and very little operational training. Through USB and RS-232 interfaces, the LRB 12K can be operated remotely, have its stored data exported, and communicate with external GPS systems and ballistic computers.

Display	LRB 12K	LRB 12KNIGHT
Meters/yards display	Yes	Yes
Computer output, type	RS-232, USB, NMEA	RS-232, USB, NMEA
Last 10 readings recall	Yes	Yes
Reticle pattern selection	Yes	Yes
Low battery indicator	Yes	Yes
Mechanics, Electronics & Environmental		
Dimensions (mm)	210x178x85	210x178x85
Weight without batteries (g)	1,580	1,900
Tripod mountable	Yes	Yes
Power Supply	2CR5 non-magnetic	2CR5 non-magnetic
Battery life (# of measurements)	5,000	5,000
Operating temperature range (°C)	-40 to +60	-25 to +60
Storage temperature range (°C)	-40 to +60	-40 to +60
Waterproofing	MIL-STD-810G	MIL-STD-810G
IIT		
Generation	-	3
Photocathode material	-	GaAs
IIT resolution, minimum (lp/mm)	-	64
Signal to noise ratio, minimum	-	25
Auto-gating	-	Optional

This device compatible with: Android™ NC Cronus™

With tablet running NC Cronus™ app for realtime target data acquisition

LRB 12K • LRB 12KNIGHT

MEDIUM-RANGE LASER RANGEFINDER MONOCULAR

The LRM 3500M is the most advanced laser rangefinder monocular we have ever produced. This device builds on years of experience designing and manufacturing professional-grade LRFs, with a feature set never before found in a pocket-sized unit.

Optics	**NC-35BT**	**NC-35C**
Magnification (x)	6.5	6.5
Objective lens diameter (mm)	30	30
Field of view (°/mil)	7/124	7/124
Eye relief (mm)	20	20
Diopter adjustment range	±5	±5
Rangefinder		
Eye safety	Class 1, eye-safe	Class 1, eye-safe
Peripheral Compatibility	PLGR, Bal Comp, AFS, PC, BT, Android™,CivTAK/ATAK[1]	
Wavelength (nm)	1550	1550
Measuring distance range (m)	10 - 6,000	10 - 6,000
Specified measuring distance range (m)[2]	10 - 3,500	10 - 3,500
Inclinometer range (mils)	±1420	±1420
Distance measurement accuracy (m)	±1	±1
Azimuth measurement accuracy (mils)	17.5	±10
Inclination measurement accuracy (mils)	±8.8	±5
Magnetic declination correction (mils)	--	1
Compass & inclinometer units	°/mils	°/mils
Power-on time (sec)	< 1	< 1
FOS (Fall of shot)	--	Yes
First/last target logic	Yes	Yes
Target discrimination (m)	50	50
Scan mode	Yes	Yes
Last 10 readings recall	Yes	Yes
Distance between objects	Yes	Yes
Horizontal distance between objects	Yes	Yes
Azimuth difference between objects	Yes	Yes
Inclination difference between two objects	Yes	Yes
Height difference between objects	Yes	Yes
Etched reticle step (mils)	1	1
User GPS coordinates	Yes	--
Target GPS coordinates	Yes	--
GPS coordinates format	Dec Degs Micro	--
Mechanics, Electronics & Environmental		
Display type	Customized Matrix Red OLED	
Interface	USB, Bluetooth	USB, RS232, Bluetooth
DAGR communication	--	Yes
Dimensions with no sleeve (mm)	118x107x54	118x107x54
Weight without batteries (g)	460	460
Power supply	Non-magnetic 2x CR123 lithium batteries	
Battery life (# of measurements)	5,000	5,000
Low battery indicator	Yes	Yes
Tripod mountable	Yes	Yes
3-axis digital compass	Yes	Yes
Compass calibration & validation	Yes	Yes
Operating temperature range (°C)	-35 to +65	-35 to +65
Storage temperature range (°C)	-40 to +85	-40 to +85
Waterproofing	MIL-STD-810 G (1m/30min)	

1. Optional
2. 2.3m x 2.3m NATO standard target

This device compatible with:

Android™ Bluetooth™ Ballistic apps NC Cronus™ CivTAK/ATAK

MEDIUM-RANGE LASER RANGEFINDER BINOCULARS

The LRB provides accurate distance, azimuth, inclination and speed measurements out to maximum distances of 6,000m (NATO standard target).
These binoculars pack premium optical quality and Newcon Optik's most advanced rangefinding system into a housing that is built to last.

Optics	LRB 6K	LRB 6KNIGHT
Magnification (x)	7	7/5
Objective lens diameter (mm)	42	42
Field of view (°)	6	6/7
Eye relief (mm)	20	20
Diopter adjustment range	±5	±5
Interpupillary distance (mm)	58 - 72	58 - 72
Rangefinder		
Eye safety	Class 1, eye-safe	Class 1, eye-safe
Peripheral Compatibility	PLGR, Bal Comp, AFS, PC, Android™ BT[1] and CivTAK/ATAK[1]	Bal Comp, Android™
Wavelength (nm)	1550	1550
Measuring distance range (m)[2]	6,000	6,000
Distance measurement accuracy (m)	±1	±1
Azimuth measurement accuracy (°)	±1 / 17	±1
Inclination measurement accuracy (°)	±0.5 / 8.8	±0.5
Speed detection	Yes	Yes
First/last target logic	Yes	Yes
Gating capability	Yes	100-5,500m
Gating step (m)	≥ 100	variable
Scan mode	Yes	--
Distance between objects	Yes	Yes
Horizontal distance between objects	Yes	Yes
Azimuth difference between objects	Yes	Yes
Inclination difference between two objects	Yes	Yes
Height difference between objects	Yes	Yes
Display		
Meters/yards display	Yes	Yes
Display type	OLED	OLED
Interface	RS-232, USB, Bluetooth[1], NMEA	
Last 10 readings recall	Yes	Yes
Reticle pattern selection	Yes	Yes
Low battery indicator	Yes	Yes
Mechanics, Electronics & Environmental		
Dimensions (mm)	210x178x85	210x178x85
Weight without batteries (g)	1,580	1,900
Tripod mountable	Yes	Yes
Power supply	1x 2CR5 non-magnetic	1x 2CR5 non-magnetic
Battery life (# of measurements)	5,000	5,000
Operating temperature range (°C)	-40 to +60	-25 to +60
Storage temperature range (°C)	-40 to +60	-40 to +60
Waterproofing	MIL-STD-810G	MIL-STD-810G

1. Optional
2. 2.3m x 2.3m NATO standard target

This device compatible with:

Android™ Bluetooth™ Ballistic apps NC Cronus™ CivTAK/ATAK

LRB 6K • LRB 6KNIGHT

LRB 6K NSN# 1240-20-010-6217

LRB 3000PRO

NSN# 1240-20-004-5448

MEDIUM-RANGE LASER RANGEFINDER BINOCULAR

Designed with professional operators in mind, the LRB 3000PRO combines compact, clear 7x40 binocular optics with a 3,000m (NATO target) ranging capability.

A built-in digital magnetic compass provides accurate readings of azimuth, inclination, and target speed. With a matte black housing, rubberized body and scratch-resistant optical surfaces, the LRB 3000PRO is built to perform and last in the harsh, foreboding environments in which our customers operate.

The LRB 3000PRO is now available with an optional high-definition OLED display.

Optics	**LRB 3000PRO**
Magnification (x)	7
Objective lens diameter (mm)	40
Field of view (°)	6
Eye relief (mm)	18
Diopter adjustment range	±4
Interpupillary distance (mm)	60 - 70
Rangefinder	
Eye safety	Class 1, eye-safe
Wavelength (nm)	905
Measuring distance range (m)[1]	10 - 3,000
Azimuth measurement accuracy (°/mils)	±2 / 35
Inclination measurement accuracy (°/mils)	±1 / 17
Speed detection	Yes
First/last target logic	Yes
Scan mode	Yes
Display	
Meters/yards display	Yes
Computer output, type	None
Last 10 readings recall	Yes
Reticle pattern selection	Yes
Target quality indicator	Yes
Low battery indicator	Yes
Mechanics, Electronics & Environmental	
Dimensions (mm)	158x145x69
Weight without batteries (g)	970
Power supply	9V
Battery life (# of measurements)	5,000
Operating temperature range (°C)	-25 to +50
Storage temperature range (°C)	-30 to +55
Waterproofing	IP66

1. 2.3m x 2.3m NATO standard target

LASER RANGEFINDER MONOCULARS

Newcon Optik's bestselling line of laser rangefinder monoculars feature a compact, sturdy design well-suited to conditions in the field. The LRM 2K is for users requiring basic functionality and high reliability. It features a true measurement range of 2,000m (NATO target) and can recall 10 measurements from device memory.

For border patrol, law enforcement and other professionals tasked with perimeter control, the LRM 1800S features a true measurement range of 1,800m (NATO target), and performs accurate speed measurement. The LRM 2200SI features a true measurement range of 2,200m (NATO target) and is reliable in practically all weather conditions. A built-in digital magnetic compass and inclinometer enable accurate azimuth and inclination measurements.

In combination with an NVS 14 series night vision monocular, each device in the LRM line can operate 24 hours a day.

Optics	**LRM 1800S**	**LRM 2K**	**LRM 2200SI**
Magnification (x)	7	7	7
Objective lens diameter (mm)	25	24	25
Field of view (°)	8	7.5	8
Eye relief (mm)	15	16	15
Diopter adjustment range	±4	±5	±4
Rangefinder			
Eye safety	Class 1, eye-safe	Class 1, eye-safe	Class 1, eye-safe
Wavelength (nm)	905	905	905
Measuring distance range (m)[1]	10 - 1,800	10 - 2,000	10 - 2,200
Distance measurement accuracy (m)	±1	<500m ±1m (≥500m ±2m)	±1
Azimuth measurement accuracy (°/mils)	-	-	±2 / 35
Inclination measurement accuracy (°/mils)	-	±1	±1 / 17.5
Speed detection	Yes	-	Yes
First/last target logic	-	-	Yes
Scan mode	Yes	-	Yes
Interface	-	Bluetooth	Bluetooth
Display	LCD	TOLED	TOLED
Meters/yards display	Yes	Yes	Yes
Computer output, type	None	None	None
Last 10 readings recall	Yes	-	Yes
Reticle pattern selection	Yes	-	Yes
Target quality indicator	Yes	-	Yes
Low battery indicator	Yes	Yes	Yes
Mechanics, Electronics & Environmental			
Dimensions (mm)	127x125x60	106x76x39	127x125x60
Weight without batteries (g)	445	235	445
Power supply	1x 9V	1x CR 123 Lithium	1x 9V non-magnetic
Battery life (# of measurements)	5,000	5,000	5,000
Operating temperature range (°C)	-25 to +50	-20 to +50	-25 to +50
Storage temperature range (°C)	-45 to +65	-30 to +65	-45 to +65
Waterproofing	IP63	IP67	IP66

1. 2.3m x 2.3m NATO standard target

LRM 2K and LRM 2200SI compatible with: Bluetooth™ NC Cronus™

LRM SERIES

LRM 2K

LRM 2200SI NSN# 1240-20-009-0287

LRF MICRO SERIES • LRF MOD 25HFLC

LRF MICRO SERIES

LRF MOD 25HFLC

DEM LASER RANGEFINDER MODULES

The LRF MICRO 1550 and 1550 (CI) utilize a 1550nm laser that cannot be seen by image-intensified night vision systems. Each 'CI' variant incorporates a digital magnetic compass and inclinometer for vector measurement and enhanced spatial data collection.

Rangefinder	LRF MICRO CI	LRF MICRO 1550	LRF MICRO 1550 CI
Eye safety	Class 1, eye-safe	Class 1, eye-safe	Class 1, eye-safe
Wavelength (nm)	905	1550	1550
Specified measurement range (m):			
Vehicle size NATO target, 2.3x2.3m, albedo 0.3	2,000	3,000	3,000
Human size NATO target, 1.0x1.0m, albedo 0.1	1,000	1,000	1,000
Conditions: Visibility ≥15km			
Distance measurement accuracy (m)	±1	±1	±1
Azimuth measurement accuracy (°)	±1	-	±1
Inclination measurement accuracy (°)	±1	-	±1
Beam divergence, mrad	3.2x0.8	1.6x0.4	1.6x0.4
Speed detection	Yes	Yes	Yes
Measuring time, distance (seconds)	0.1	0.1 - 0.7	0.1 - 0.7
Simultaneously-detected targets	Multiple	Multiple	Multiple
First/last target logic	Yes	Yes	Yes
Gating capability	Yes	Yes	Yes
Gating step (m)	100	100	100
Mechanics, Electronics & Environmental			
Dimensions without compass (mm)	88x48x30	88x48x30	88x48x30
Weight (g)	120 (CI)	107	120 (CI)
Interface	UART, USB	UART, USB	UART, USB
Power source	5 - 15V DC	5 - 15V DC	5 - 15V DC
Operating temperature range (°C)	-40 to +50	-40 to +50	-40 to +50
Storage temperature range (°C)	-40 to +60	-40 to +60	-40 to +60

The LRF MOD 25HFLC enables highly-accurate range acquisition of low-reflection targets at ranges of up to 30 km. The module can be effectively used in marine navigation, long-range reconnaissance, naval and coast guard patrols.

Rangefinder	LRF MOD 25HFLC
Wavelength (nm)	1,570
Min distance (m)	150
Max distance (m)	30,000
Range measurement accuracy, instrumental (m)	±1
Simultaneously-detected targets	3
First/last target logic	Yes
Gating capability	Yes
Pulse repetition rate (Hz)	1 to 12.5
Continuous running time	
1 Hz	continuously
1 to 10 Hz	5 min operation, 2 min pause, 10 cycles, 20 min between cycles
11 to 12.5 Hz	60 sec operation, 60 sec pause, 10 cycles, 20 min between cycles
Mechanics, Electronics & Environmental	
Dimensions without viewfinder (mm)	240x140x70
Weight (kg)	≥2.4
Interface	RS-422
Range of supply voltage (V)	22-32
Warm-up time, max (sec)	60
Operating temperature range (°C)	-40 to +55

NIGHT VISION SYSTEMS

AG SERIES

The AG series consists of advanced Generation 3 IITs with world-leading GaAs photocathode sensitivity and high FOM. This series of IIT, like the AGBW series, incorporates an auto-gating system that automatically adjusts itself to limit the impact of changing light conditions—the effect of muzzle flash, vehicle lights, and other intermittent battlefield light sources is significantly reduced by auto-gating technology.

AGBW SERIES

The AGBW series consists of advanced Generation 3 IITs with world-leading GaAs photocathode sensitivity and high FOM. This series of IIT, like the AG series, incorporates an auto-gating system that automatically adjusts itself to limit the impact of changing light conditions—the effect of muzzle flash, vehicle lights, and other intermittent battlefield light sources is significantly reduced by auto-gating technology. The black-&-white image produced by the AGBW series reduces eye strain and provides better contrast in certain light conditions.

NVS 14 SERIES

NIGHT VISION MONOCULARS

The NVS 14 series of night vision monoculars has been proven by deployments in conflict zones and by peacekeepers around the world. All models utilize advanced Gen 3 image intensifier tubes with minimum, exportable FOM >1600, and have a manual gain control system. The newly-improved NVS 14-3AG and NVS 14-3AGBW models are now the lightest night vision monoculars utilizing full-sized IITs available today. Both systems are auto-gated while the NVS 14-3AGBW produces a black-&-white image rather than the traditional green.

Each NVS 14 series device can be handheld, weapon-, head- or helmet-mounted. With optional lens attachments that turn either model into a 3x or 5x night vision sight, and a full range of additional accessories, the NVS 14 series is among the world's most versatile night vision devices.

IIT	**NVS 14-3AG**	**NVS 14-3AGBW**
Generation	3	3
Photocathode material	GaAs	GaAs
IIT resolution, minimum (lp/mm)	64	64
Signal to noise ratio, minimum	25	25
Figure of merit (minimum)	1600	1600
Auto-gating	Yes	Yes
Black & white phosphor	No	Yes
Optics		
Magnification (x)	1	1
Field of view (°)	40	40
Objective F#	1.2	1.2
Objective focal length (mm)	25	25
Focus range (m)	0.25 - ∞	0.25 - ∞
Eye relief (mm)	25	25
Diopter adjustment range	-6 to +5	-6 to +5
Mechanics, Electronics & Environmental		
Dimensions (mm)	114x68x49	114x68x49
Weight without batteries (g)	287	287
Built-in IR illuminator	Yes	Yes
Battery type	1x AA or 1xCR123	1x AA or 1xCR123
Reverse Polarity Protection	Yes	Yes
IR Operation Indicator	Yes	Yes
Automatic Shut-off System	Yes	Yes
Upright Shut-off System	Yes	Yes
Battery life (hours)	40	40
Operating temperature range (°C)	-50 to +55	-50 to +55
Storage temperature range (°C)	-50 to +70	-50 to +70
Waterproofing, standard	MIL-STD-810G	MIL-STD-810G

DUAL-TUBE NIGHT VISION GOGGLES

The NVS 15 series of night vision goggles has been proven by deployments in conflict zones and by peacekeepers around the world. All models utilize two advanced Gen 3 image intensifier tubes, with minimum, exportable FOM >1600, have a manual gain control system, built-in IR illuminator, auto shutoff mechanism and are fully MIL-SPEC. All systems are auto-gated while the NVS 15-3AGBW produces a black-&-white image rather than the traditional green.

The NVS 15 series provides users with full depth perception, and is ideal for vehicle operation and any other dark-environment task requiring acute situational awareness. The modular design of the NVS 15 allows for the detachment of the left or right device, while the proprietary bridge mount provides for interpupillary adjustments.

Each monocular module in the NVS 15 can be handheld, weapon-, head- or helmet-mounted. With optional lens attachments that convert the NVS 15 into 3x or 5x binoculars, and a full range of additional accessories, the NVS 15 series is among the world's most versatile night vision devices.

IIT	NVS 15-3AG	NVS 15-3AGBW	NVS 15-M
Generation	3	3	3
Photocathode material	GaAs	GaAs	GaAs
IIT resolution, minimum (lp/mm)	64	64	64
Signal to noise ratio, minimum	25	25	25
Auto-gating	Yes	Yes	Yes
Black & white phosphor	No	Yes	Optional
Optics			
Magnification (x)	1 (3x option available)		1
Field of view (°)	40	40	50±2
Objective F#	1.2	1.2	1.18
Objective focal length (mm)	25	25	22.5
Focus range (m)	0.25 - ∞	0.25 - ∞	0.25 - ∞
Eye relief (mm)	25	25	30
Diopter adjustment range	-6 to +5	-6 to +5	-6 to +4
Mechanics, Electronics & Environmental			
Dimensions (mm)	114x150x66	114x150x66	115x105x81
Weight without batteries (g)	676	676	516
Interpupillary distance (mm)	52 - 74	52 - 74	50 - 80
Flip up	No	No	Yes
Flip to side	No	No	Yes
Built-in IR illuminator	Yes	Yes	Yes
Battery type	2x AA or 2x CR123	2x AA or 2x CR123	2x CR123
Battery life (hours)	40	40	40
Startup time (seconds)	<2	<2	<1
Auto shutoff	No	No	Yes
Operating temperature range (°C)	-50 to +55	-50 to +55	-40 to +55
Storage temperature range (°C)	-50 to +70	-50 to +70	-40 to +60
Humidity	up to 95% non-condensing		
Waterproofing, standard	MIL-STD-810G	MIL-STD-810G	MIL-STD-810G

NVS 15 SERIES

NVS 15-AG/NVS 15-AGBW

NVS 15-M

NVS 7 SERIES

NIGHT VISION GOGGLES

The NVS 7 series of night vision goggles has been proven by deployments in conflict zones and by peacekeepers around the world. All models utilize advanced Gen 3 image intensifier tubes with minimum, exportable FOM >1600; have a built-in IR illuminator; auto shutoff mechanism; and are fully MIL-SPEC. The NVS 7-3AG is an auto-gated unit while the NVS 7-3AGBW is auto-gated and produces a black-&-white image rather than the traditional green.

Fitted with an optional 3x, 4x, 5x or 8x lens, this advanced goggle can be easily converted to a long-range night vision binocular. With full range of additional accessories, the NVS 7 series is among the world's most versatile night vision devices.

IIT	NVS 7-3AG	NVS 7-3AGBW
Generation	3	3
Photocathode material	GaAs	GaAs
IIT resolution, minimum (lp/mm)	64	64
Signal to noise ratio, minimum	25	25
Auto-gating	Yes	Yes
Auto-gating with black & white phosphor	No	Yes
Optics		
Magnification (x)	1	
Field of view (°)	40	
Objective F#	1.2	
Objective focal length (mm)	27.5	
Focus range (m)	0.25 - ∞	
Eye relief (mm)	25	
Diopter adjustment range	-6 to +5	
Mechanics, Electronics & Environmental		
Dimensions (mm)	150x120x55	
Weight without batteries (g)	480	
Interpupillary distance (mm)	57-73	
Built-in IR illuminator	Yes	
Battery type	2x AA	
Reverse Polarity Protection	Yes	
IR Operation Indicator	Yes	
Low Battery Indicator	Yes	
Automatic Brightness control	Yes	
Automatic shut-off system	Yes	
Battery life (hours)	80	
Operating temperature range (°C)	-50 to +55	
Storage temperature range (°C)	-55 to +60	
Waterproofing	MIL-STD-810G	

NIGHT VISION BINOCULARS

Based on the popular NVS 7-3AG night vision goggles series, the NVS 7 binocular series models are suitable for defence, marine and SAR operations that take place in the world's darkest tactical environments. Available in 4x, 5x and 8x magnification configurations, there is a binocular model for virtually any detection, recognition, or identification requirement. All models are auto-gated.

The NVS 7-3/4xAG is the smallest and lightest handheld night vision binocular in its class, while the NVS 7-3/5xAG provides an excellent visibility range while remaining compact and functional. The NVS 7-3/8xAG incorporates a unique catadioptric lens with a large aperture, making it indispensable for long-range observation at night. The 8x model is equipped with a ¼" tripod socket in the lens for added stability.

NVS 7-3/4xAG

NVS 7-3/5xAG

NVS 7-3/8xAG

IIT	NVS 7-3/4xAG	NVS 7-3/5xAG	NVS 7-3/8xAG
Generation	3	3	3
Photocathode material	GaAs	GaAs	GaAs
IIT resolution, minimum (lp/mm)	64	64	64
Signal to noise ratio, minimum	25	25	25
Auto-gating	Yes	Yes	Yes
Auto-gating with black & white phosphor	Optional (AGBW)	Optional (AGBW)	Optional (AGBW)
Optics			
Magnification (x)	4	5	8
Field of view (°)	10	8	5
Objective F#	2.0	2.3	2.0
Objective focal length (mm)	115	130	240
Focus range (m)	10 - ∞	10 - ∞	10 - ∞
Eye relief (mm)	25	25	25
Diopter adjustment range	-6 to +5	-6 to +5	-6 to +5
Mechanics, Electronics & Environmental			
Dimensions (mm)	165x127x65	190x127x80	220x127x135
Weight without batteries (g)	640	791	1,609
Interpupillary distance (mm)	57-73	57-73	57-73
Built-in IR illuminator	Yes	Yes	Yes
Battery type	2x AA	2x AA	2x AA
Battery life (hours)	80	80	80
Operating temperature range (°C)	-50 to +55	-50 to +55	-50 to +55
Storage temperature range (°C)	-55 to +60	-55 to +60	-55 to +60
Waterproofing	MIL-STD-810G	MIL-STD-810G	MIL-STD-810G

Newcon Optik's NVS accessories multiply the usefulness of NVS devices by protecting them from the elements, by allowing them to be head-, helmet-, or weapon-mounted, and by permitting the combination of multiple devices.

NVS S Mount

Shroud-compatible helmet mount
for monoculars and goggles

NVS H Mount

PASGT-compatible helmet mount
for monoculars and goggles

NVS HMA

Lightweight Tactical Head Gear for NVS S mount
with all Night Vison Monoculars and Goggles;
One size fits all: three adjustment dials allow for
comfort adjustments to any head size or shape.

NVS DS and NVS SW

Demist shield to prevent eye-piece fogging
and sacrificial window to protect objective lens
of monoculars and goggles

NVS Bridge

Connecting bridge for conversion
of two monoculars into dual tube goggles

Quick Release flip-to-side
MIL-STD-1913 Weapon Mount.

NIGHT VISION ACCESSORIES

Newcon Optik offers accessories for device transport, to add magnification, or to attach to day-optics for a night vision conversion.

Hard Case (various sizes)

MIL-SPEC case to protect devices during transportation and storage

NVS Lens 3x

Afocal 3x magnification add-on lens for monoculars and goggles

NVS Lens 4x

Catadioptric 4x magnification add-on lens for goggles

NVS U Coupler

Connects monoculars and goggles to any Newcon Optik LRF or day optic for night operation

NVS Lens 5x

Catadioptric 5x magnification add-on lens for goggles

NVS Lens 8x

Catadioptric, tripod mountable 8x magnification add-on lens for goggles

NVS 27M

NIGHT VISION CLIP-ON

The NVS 27M is Newcon Optik's most advanced night vision clip-on series to date-- and represents a significant improvement on other clip-on systems currently available.

These high-resolution units are designed to mount in front of virtually any daytime riflescope and are compatible with day sight magnifications between 1x and 20x. As military and police shooters continue to use higher-magnification day sights, this compatibility range provides a significant advantage in the field, enabling the use of most, if not all, of a given day sight's magnification capability.

The NVS 27M was designed by shooters. Its extra-wide field of view, manual gain control system, and extended target-detection range make it the world's most complete night vision clip-on system.

IIT	NVS 27M
Generation	3
Photocathode material	GaAs
IIT resolution, minimum (lp/mm)	68
Figure of merit, minimum	2000
Signal to noise ratio, minimum	28
Mean time to failure (hours)	10,000
Photocathode sensitivity, minimum, (µA/lm)	1800
Auto-gating	Yes
Auto-gating with black & white phosphor	Optional
Automatic brightness control	Yes
Optics	
Magnification (x)	1
Field of view (°)	13
Objective F#	1.5
Objective focal length (mm)	78
Focus range (m)	10 to ∞
Magnification compatibility, recommended (x)	1 - 20
Mechanics, Electronics & Environmental	
Dimensions (mm)	220x95x73
Weight without batteries (g)	934 (without objective lens cap)
Mount system	QR Mount
Height from the rail to the optical axis (mm)	42
Height from the rail to the optical axis (inches)	1.65
IR illuminator	Optional
Battery type	1x AA or 1x CR123
Battery life (hours)	50
Low battery indicator	Yes
Operating temperature range (°C)	-45 to +65
Storage temperature range (°C)	-50 to +70
Waterproofing	MIL-STD 810G
MIL-STD-810G compliant	Yes
Boresight retention	Permanent
Boresight adjustment	Not required

NIGHT VISION RIFLESCOPE

DN 463 • DN 493_6x

The DN 463 and DN 493_6x are members of Newcon Optik's next-generation night vision riflescope series. These riflescopes feature a manual gain control adjustment, an advanced Gen 3 image intensifier tube, a MIL-DOT, LED-lit reticle with adjustable brightness, a Picatinny rail mount, removable infrared illuminator, and tactile windage and elevation adjustments. These scopes are easy to service and maintain, and present among the lowest lifetime costs of ownership among riflescopes in their class.

The DN 463 and DN 493_6x are battle-hardened and ready for deployment in combat or peacekeeping, as well as in public and private infrastructure security.

IIT	DN 463	DN 493_6xAG/AGBW
Generation	3	3
Photocathode material	GaAS	GaAS
IIT resolution, minimum (lp/mm)	64	64
Signal to noise ratio, minimum	25	25
Auto-gating	Optional	Yes
Auto-gating with black & white phosphor	Optional	AGBW
Optics		
Magnification (x)	4	6
Field of view (°)	10.0	6.3
Objective F#	1.68	2.00
Objective focal length (mm)	101.5	165.0
Focus range (m)	10 to ∞	20 to ∞
Eye relief (mm)	50	50
Diopter adjustment range	±3 .5	-3 to +4
Mechanics, Electronics & Environmental		
Dimensions (mm)	275x95x105	300x98x90
Weight with mount (g)	1,230	1,400
Standard mount system	MIL-STD-1913	MIL-STD-1913
Built-in IR illuminator	Yes (removable)	Yes (removable)
Battery type	1x AA or 1x CR123A	2x AA
Battery life without IR (hours)	15 with AA, 24 with CR123A	60
Low battery indicator	--	Yes
Operating temperature range (°C)	-30 to +40	-40 to +50
Storage temperature range (°C)	-40 to +50	-45 to +55
Waterproofing	IP67	MIL-STD-810G
Ballistics		
Reticle pattern	Mil-Dot	Mil-Dot
Lit reticle	Yes	Yes
Adjustable reticle brightness	Yes	Yes
Windage adjustment step (MOA)	0.42	0.34
Elevation adjustment step (MOA)	0.42	0.34

AVIATOR NIGHT VISION IMAGING SYSTEMS

The NVS 6-3XT and NVS 9-3AG ANVIS goggles enable pilots to operate their aircraft in the darkest flight environments. These goggles allow aviators to navigate at the nap of the earth, take off, land, and perform other operations that are otherwise impossible at night without the use of a light source.

Adjustable 25mm eyepieces provide improved eye relief enabling excellent viewing regardless of the eyepiece positioning. Ergonomically-designed interface controls, including interpupillary adjustments and vertical, fore-aft, and tilt adjustments allow improved viewing of the entire system field of view. The lightweight goggles can be mounted on a variety of aviator helmets. Newcon Optik's expert team is able to ensure you select the right goggle for your aircraft and its cockpit lighting system.

IIT	NVS 6-3XT	NVS 9-3AG
Generation	3	
Photocathode material	GaAs	
IIT resolution, minimum (lp/mm)	64	
Signal to noise ratio, minimum	25	
Auto-gating	No	Yes
Optics		
Magnification (x)	1	
Field of view (°)	40	
Objective F#	1.2	
Objective focal length (mm)	27.5	
Focus range (m)	0.25 to ∞	
Eye relief (mm)	25	
Diopter adjustment range	-5 to +2	
Filter (Available)	Leaky green (Class C filter) included, Minus blue optional	
Mechanics, Electronics & Environmental		
Dimensions (mm)	128x120x55	
Weight without batteries (g)	575	
Battery type	2x AA	
Battery life (hours)	≥40	
Operating temperature range (°C)	-32 to +52	
Storage temperature range (°C)	-40 to +60	

NO EXPORT PERMIT REQUIRED

The NV 207-G2 and NV 66-G2 provide optical advantage in a variety of situations in which a night vision capability is required. These Gen 2+ systems do not require an export permit.

The NV 207-G2 uses the same approach to night vision as the NVS 14 night vision monocular series, while the NV 215-G2 features many of the advantages of the NVS 15 night vision goggle series.

A large variety of available accessories allow both units to be applied to a number of real-world applications including game-reserve management, private and public infrastructure security and, where allowed by law, hunting and other outdoor activities.

IIT	NV 207-G2	NV 215-G2
Generation	2+	2+
Photocathode material	S-25	S-25
IIT resolution, minimum (lp/mm)	53	56
Signal to noise ratio, minimum	18	18
Optics		
Magnification (x)	1	1
Field of view (°)	40	40
Objective F#	1.17	1.2
Objective focal length (mm)	27.5	27.5
Focus range (m)	0.25 - ∞	0.25 - ∞
Eye relief (mm)	25	25
Diopter adjustment range	-6 to +5	-6 to +5
Mechanics, Electronics & Environmental		
Dimensions (mm)	118x69x48	118x150x66
Weight without batteries (g)	300	725
Interpupillary distance (mm)	-	52 - 74
Built-in IR illuminator	Yes	Yes
Reverse Polarity Protection	Yes	Yes
IR Operation Indicator	Yes	Yes
Low Battery indicator	Yes	Yes
Automatic Brightness Control	Yes	Yes
Automatic shut-off system	Yes	Yes
Battery type	1x AA or 1xCR123	1x AA or 1xCR123
Battery life (hours)	40	40
Operating temperature range (°C)	-50 to +55	-50 to +55
Storage temperature range (°C)	-50 to +70	-50 to +55
Waterproofing	IP67	IP67

Thermal imagers give users the ability to detect incredibly small thermal gradients regardless of external light conditions. Using a high-performance, uncooled microbolometer, thermal imagers can be used in a variety of situations, including detecting a foe behind concealment, locating a victim under an avalanche, pointing out recently operated vehicles or even to detect a bad contact in a high-voltage powerline.

Thermal imagers are fast becoming an essential piece of equipment for military and professional law enforcement units as they offer true 24/7 detection capability, as well an alternative to traditional image intensified night vision systems. Newcon Optik's line of lightweight, high-performance thermal devices are purpose built to offer MIL-SPEC ruggedness, extreme distance performance, enhanced operational duration (via commercially available batteries), and to be virtually maintenance-free.

THERMAL IMAGING SYSTEMS

THERMAL MONOCULAR

TVS 11M is the next generation of Newcon Optik's field-proven thermal imaging product line. Designed as a multipurpose thermal imager, the extremely lightweight and compact TVS 11M can be deployed in handheld, helmet or weapon-mounted configuration. Using a state-of-the-art uncooled thermal sensor, the TVS 11M delivers incredibly clear images while achieving continuous operation of over 4 hours.

The TVS 11M is fully MIL-SPEC and features a built-in 2x and 4x digital zoom for enhanced distance performance. With video-output as a standard feature, internal video/photo storage (TVS 11M-640) and a built-in IR laser pointer, the TVS 11M is the ideal thermal monocular for military, police, and search & rescue applications.

Sensor	**TVS 11M**	**TVS 11M-640**
Resolution (pixels)	384x288	640x512
Operating wavelength (µ)	8 - 14	7.5 - 13.5
Sensitivity (mK @F1.0)	<70	<40
Video output	PAL	PAL
DRI range (m)		
Human	576/142/71	1,167/292/146
Vehicle	1,530/385/190	3,157/789/395
Multiple color options	Yes	Yes
Optics		
Objective focal length (mm)	17	35
Field of view (°)	22x16.5	17.7 x14.2
Eye relief (mm)	25	26
Dioptric correction	±5	±5
Zoom	2x, 4x	Continuous zoom from 1x to 4x
Mechanics, Electronics & Environmental		
Dimensions (mm)	145x72x50	150x72x50
Weight without batteries (g)	375	410
Battery type	1x 3.7V 1800mAh Li-on or 2xCR123 Lithium batteries	1x 18650 rechargeable battery or 2xCR123 Lithium batteries
Battery life (hours)	4	4
Operating Temperature range (°C)	-35 to +55	-35 to +60
Operating Temperature range (°C)	-45 to +70	-40 to +65
Waterproofing	MIL-STD-810G	MIL-STD-810G
Optional weapon-mounting systems	S Mount, QR Mount	S Mount, QR Mount
Weapon compatibility	Assault rifles, RPG	Rifles, Machine guns & Anti-armour systems (RPG, Carl-G)
Aiming reticle	Yes	Yes
Internal video/photo recording	No	64 GB (4h/10,000 shots)

SENTINEL MLRF

Mounted on TACT-3S Tripod

THERMAL IMAGING BINOCULARS

The SENTINEL MLRF is the most effective handheld multi-functional thermal laser rangefinder binocular available. It serves a wide variety of tactical, law enforcement, border security and special forces applications. SENTINEL MLRF binoculars use a high-resolution uncooled thermal sensor to perceive differences in the thermal signature of objects within the field of view. The unit can detect objects at remote distances 24 hours a day, through smoke, fog or camouflage. The unit's eye-safe laser rangefinder and digital magnetic compass instantly measure distance, azimuth and inclination of far-off targets. Data is displayed inside the field of view and can be exported via the computer output to a variety of peripheral devices.

Infrared Sensors	**SENTINEL MLRF**
Detector type	Vox
Resolution (pixels)	640x512
Spectrum (µm)	8-14
NETD (mK @F1.0)	<40
Frequency (Hz)	50
Signal to noise ratio (DB)	56
Objective focal length (mm)	50 @ F1.0
Field of view (°)	12.4 x 9.0
Non-uniformity correction	Manual/Auto
Image processing	Digital image detail enhancement (DDE)
Detection/Recognition of tank target (km)	6.0/2.0
Detection/Recognition of human target (km)	2.0/0.5
Zoom	1-8x
Day channel	
Detection/Recognition of tank target (km)	6.0/2.0
Detection/Recognition of human target (km)	2.0/0.5
Objective focal length (mm)	35
Field of view (°)	12.4 x 7.0
Zoom	1-4x
LRF	
Laser type	Semiconductor laser, Class 1
Laser wavelength (µm)	1,550
Detection range (m)	10-3,000 (5km option available)
Ranging accuracy (m)	±1
GPS	
Type	GPS, Galileo (GNSS)
Target locating error	±10M (target<1km)
Magnetic compass	
Azimuth resolution/accuracy	1°/ 1°
Elevation resolution/accuracy	1°/ 1°
Mechanics and environmental	
Interpupillary distance (mm)	64
Eyepiece diopter adjustment (dpt)	±4
Internal video & photo recording	Yes
Connectivity	Power input, RS232 (remote control), USB (output videos and images), PAL video
Continuous working time (hours)	5
Dimensions with eyepiece (mm)	182.5 x 180.2 x 82.8
Weight without battery (kg)	1.35
Power	DC 7V-12V
Temperature range (°C)	-40 to +60
Mechanical interface/mounts	1/4' tripod mount

THERMAL IMAGING BINOCULARS

The SENTINEL and SENTINEL LRF are advanced thermal imaging binoculars with a wide variety of tactical, law enforcement, border security and special forces applications. The SENTINEL and SENTINEL LRF utilize a high-resolution uncooled thermal sensor to perceive differences in the thermal signature of objects within the field of view, and a large-diameter Germanium lens to extend their observation range.

The SENTINEL and SENTINEL LRF can detect objects at remote distances 24 hours a day, through smoke, fog or camouflage, and do not produce any audible sounds while in operation.

The SENTINEL contains the same detection features as the SENTINEL LRF without the laser rangefinder capability.

Sensor	**SENTINEL (640)**	**SENTINEL LRF**
Resolution (pixels)	640x512	640x512
Pixel size (PI)	17	17
Operating wavelength (µ)	8 - 14	8 - 14
Sensitivity (mK @F1.0)	<70	<55
Video output	PAL	PAL
DRI range (m)[1]	2,500/625/313	2,500/625/313
Optics		
Objective focal length (mm)	75	75
Field of view (°)	5.0x3.7	8.3x6.2
Eye relief (mm)	25	25
Dioptric correction	-6 to +2	-6 to +2
Zoom	2x, 4x	2x, 4x
Internal recording module	Optional	Optional
Mechanics, Electronics & Environmental		
Dimensions (mm)	208x146x90	210x146x89
Weight without batteries (g)	1,030	1,307
Battery type	6x AA	6x AA
Battery life (hours)	4 (rechargeable) / 6 (Lithium battery)	4 (rechargeable) / 6 (Lithium battery)
Operating Temperature (°C)	-40 to +50	-40 to +50
Waterproofing	MIL-STD-810G	MIL-STD-810G
Laser Rangefinder		
Laser Wavelength (nm)	-	1,550
Measurement distance to 2.3x2.3m NATO (m)	-	3,000
Distance measuring accuracy (m)	-	±1
Device measurement capability (m)	-	5,000
Azimuth measuring range (°)	-	360
Elevation measuring range (°)	-	±60

1. 2.3m x 2.3m NATO standard target

TVS 13M (640)

TVS 13M (640-75)

THERMAL IMAGING RIFLESCOPES

The TVS 13M thermal riflescope series is designed to act as a force multiplier in the most demanding situations faced by border patrol, law enforcement, tactical teams and special operations forces. Advanced built-in ballistics software allows for accurate firing on virtually any weapon platform, while a video output port and internal storage capability enable the capture of video and still images.

These riflescopes come with a M1913 quick-release mount and can also be used as hand-held observation tools. Unlike traditional night vision devices, these can operate 24 hours a day without any degradation in performance in daylight, smoke or fog; they can also penetrate camouflage. Other features include image-polarity selection, sepia, rainbow and other colour options, a proximity sensor, and full MIL-SPEC design. **All TVS 13M models are now available with inclinometer and stability sensor.**

Sensor	TVS 13M (640)	TVS 13M (640-75)
Resolution (pixels)	640x480	640x480
Pixel size (µ)	17	17
Operating wavelength (µ)	8 - 14	8 - 14
Full Frame Rates, PAL (Hz)	50	25
Display AMOLED	800x600	800x600
Sensitivity (mK @F1.0)	<55	<55
Video Output	PAL	PAL
DRI range (m)[1]	1,800/450/225	2,500/625/313
Optics		
Objective focal length (mm)	54	75
Field of view (°)	11.5x8.6	8.3x6.2
Eye relief (mm)	30	30
Dioptric correction	-6 to +2	-6 to +2
Zoom	2x, 4x	2x, 4x
Mechanics, Electronics & Environmental		
Dimensions (mm)[2]	270x75x102	285x90x112
Weight without batteries (g)[2]	1,194 (with mount)	1,320 (with mount)
Battery type	6x AA or battery cassette	6x AA or battery cassette
Battery life (hours)	8	8
Operating Temperature (°C)	-40 to +55	-40 to +55
Waterproofing	MIL-STD-810G	MIL-STD-810G
Shock resistance (G)	300	500
Ballistics		
# of preprogrammed reticles	8	8
Programmable ballistic profiles	4	4
Automatic reticle color inversion	Yes	Yes
Proximity sensor	Yes	Yes

1. Detection/Recognition/Identification to human-sized target
2. Due to frequent updates in design and manufacturing, some specifications are subject to change.

THERMAL CLIP-ON SIGHT

The TVC 60 is a clip-on thermal weapon sight designed to be used in conjunction with a magnified day optic. When in use, the shooter relies on the zeroing of the day optic and does not need to re-zero when attaching or detaching the unit.

The TVC 60 utilizes an uncooled thermal sensor that allows for the detection of camouflaged targets at long range. Equipped with a video output, the image captured by the TVC 60 can be viewed in real time by friendly forces, recorded and transmitted.

Multiple image polarities and colour schemes, adjustable contrast and variable digital magnification all contribute to making the TVC 60 a valuable addition to any sniper's kit.

Sensor	**TVC 60**
Resolution (pixels)	640x480
Operating wavelength (µ)	8 - 14
Display	AMOLED 800x600
Sensitivity (mK @F1.0)	<55
Video Output	PAL
DRI Range(m)[1]	1330/330/170
Optics	
Objective focal length (mm)	40
Objective F number	1.0
Field of view (°)	15.5x11.7
Focus range	10m - ∞
Eye Relief	50mm
Mechanics, Electronics & Environmental	
Dimensions (mm)	155x95x88
Weight without batteries (g)	780
Battery type	4 x AA
Battery life (hours)	4
Operating Temperature (°C)	-40 to +55
Waterproofing	MIL-STD-810G
Weapon mounting system	MIL-STD-1913
Weapon compatibility	Assault rifles, Sniper rifles

1. Detection/Recognition/Identification to human-sized target

TACTICAL OPTICS

ILLUMINATED TACTICAL VARIABLE-ZOOM RIFLESCOPES

The NC 4-24x56 and NC 5-30x56 are daytime riflescopes which feature variable magnification and are designed for use on a variety of weapon platforms. The riflescopes feature a Mil-Dot reticle positioned in the first focal plane of the eyepiece, ensuring a consistent reticle size, regardless of the magnification being utilized.

Ideal for acquiring small targets at long distances, the riflescopes are equipped with a central system parallax adjustment effective for ranges of 50 metres to infinity. The riflescopes incorporate windage adjustment (the multi-revolving scheme) and elevation adjustment (single-revolving scheme). The units have tactile/audible step adjustments.

Optics	NC 3-12x56	NC 4-24x56	NC 5-30x56
Minimum magnification (x)	3	4	5
Maximum magnification (x)	12	24	30
Objective lens diameter (mm)	56	56	56
Tube diameter (mm)	30	30	30
Exit pupil diameter @ min magnification (mm)	18.6	7	7
Exit pupil diameter @ max magnification (mm)	4.7	1.85	1.55
Field of view @100 y @ min magnification (m)	36	23.9	21.6
Field of view @100 y @ max magnification (m)	9	2.7	3.67
Eye relief (mm)	100	100	100
Diopter adjustment range	±3	±2	±2
Ballistics			
Reticle pattern	Mil-Dot	MOA or Mil-Dot	
Lit reticle	Yes	Yes	
Windage adjustment step (MOA)	0.25	0.25	
Windage adjustment range (MOA)	120	60	
Elevation adjustment step (MOA)	0.25	0.25	
Elevation adjustment range (MOA)	340	60	
Mechanics, Electronics & Environmental			
Dimensions (mm)	328x69x65	386x70x70	391x70x70
Weight (g), (w/o mount)	695	<800	795
Shock resistance (g)	500	1,000	1,000
Battery type	CR 2032 (3 V)	CR 2032 (3 V)	CR 2032 (3 V)
Battery life, maximum (hours)	100	100	100
Operating temperature range (°C)	-50 to +50	-30 to +50	-30 to +50
Storage temperature range (°C)	-52 to +55	-35 to +60	-35 to +60
Humidity (%)	98	98	98
Waterproofing	MIL-STD-810G	MIL-STD-810G	MIL-STD-810G

NC 3-12x56 • NC 4-24x56 • NC 5-30x56

NC 5-30x56

NC 3-12x56

NC 1x21

HDS 3AA

RED DOT SIGHTS

The NC 1x21 and HDS 3AA red dot sights were designed and built for tactical law enforcement and military applications. Both sights allow rapid, accurate target acquisition for close-quarters battle (CQB) and are built with rugged, durable single-piece frames. The extremely compact NC 1x21 is ideal for use in confined spaces or as a backup optic. It has a variety of brightness settings and is fully compatible with magnifiers and night vision devices.

The tried-and-tested HDS 3AA is a perfect standard-issue red dot sight. Its multiple brightness settings and precise step adjustments make it well-suited for use with any assault rifle. Fully compatible with night vision devices, the HDS 3AA can also be used with a 3x or 5x magnification flip-to-side add-on lens, allowing for extended viewing and engagement capability.

Optics	**NC 1x21**	**HDS 3AA**
Magnification (x)	1	1 (3 or 5 with add-on)
Objective lens diameter (mm)	21	30
Parallax free	Yes	Yes
Eye relief (mm)	Unlimited	Unlimited
Diopter adjustment range	-	±3 (with add-on)
Ballistic Specifications		
Reticle pattern	Red Dot	Red Dot
Red dot size (MoA)	4	4
Lit reticle	Yes	Yes
Lit reticle colour	Red	Red
Adjustable reticle brightness	11 Settings	11 Settings
Windage adjustment step (MoA)	0.5	0.5
Elevation adjustment step (MoA)	0.5	0.5
Night vision compatible	Yes	
Mechanics, Electronics & Environmental		
Housing material type	Extruded High Strength Aluminum	
Co-witness with iron sights	Yes	-
Dimensions (mm)	69x45x40	128x55x70
Weight (g)	107	332
Shock resistance (G)	500	500
Battery type	1x CR2032	1x AA
Battery life, minimum (hours)	160	800
Operating temperature range (°C)	-40 to +50	-40 to +60
Storage temperature range (°C)	-40 to +63	-55 to +75
Humidity (%)	95	95
Waterproofing	Standard 1m/ 30min Optional 10m/ 60min	10m / 60min
Mounting	MIL-STD-1913	MIL-STD-1913

MAGNIFIED DAY SIGHTS

With crystal-clear lenses, the NC 4x32 and NC 6x50 are highly sought-after weapon-mounted riflescopes. These devices feature 4x and 6x fixed-magnification respectively and are therefore ideal for short- to medium-range target acquisition. Both units feature an LED-lit Mil-Dot ranging reticle with multiple brightness settings. These units can be used in conjunction with night vision devices and are compatible with virtually all assault rifles.

The NC 4x32 and NC 6x50 are highly precise, ruggedized sights and have been battle-tested in a wide variety of environmental conditions. These are the right choice for military and police professionals requiring a fixed-magnification weapon sight for assault rifles. Compatibility with Newcon's optional Back-Up Red Dot sight (NC BURD) or NC 1x21 enable rapid target acquisition even at close range.

Optics	NC 4x32	NC 6x50	NC BURD
Maximum magnification (x)	4	6	1
Objective lens diameter (mm)	32	50	-
Eye relief (mm)	72	72	-
Exit Pupil Diameter (mm)	8	-	-
Field of view (°)	4.5	3	unlimited
Diopter adjustment range	±3	±3	-
Anti-reflective lenses	Yes	Yes	-
Ballistic Specifications			
Reticle pattern	Rangefinding reticle	Rangefinding reticle	Red dot
Lit reticle	Yes	Yes	Yes
Lit reticle colour	Red/Green	Red/Green	Red
Adjustable reticle brightness	Yes	Yes	Yes
Windage adjustment step (MoA)	0.33	0.25	-
Elevation adjustment step (MoA)	0.33	0.25	-
Mechanics, Electronics & Environmental			
Dimensions (mm)	137x48x79	168x75x81	46x38x35
Weight (g)	467	583	63
Shock resistance (G)	500	500	-
Battery type	1x CR2032	1x CR2032	1x CR2032
Battery life, minimum (hours)	150	160	60 max
Operating temperature range (°C)	-30 to +50	-40 to +50	-40 to +60
Storage temperature range (°C)	-30 to +55	-40 to +50	-
Humidity (%)	95	95	-
Waterproofing	Standard 3m/ 30min (20m waterproofing available)	Standard 1m/ 30min Optional 10m/ 2h	1m/ 30min
Night vision / thermal compatible	Yes	Yes	-
Mount type	MIL-STD-1913	MIL-STD-1913	MIL-STD-1913

NC 4x32 • NC 6x50 • NC BURD

NC 4x32

NC 6x50

SPOTTER ED

SPOTTER M

SPOTTING SCOPES

On the range or in the field, Newcon Optik spotter scopes will bring your targets into clear, consistently sharp and high-contrast focus. Both our Spotter ED and Spotter M are fully MIL-SPEC and feature etched reticles which allow for highly accurate adjustments.

The Spotter ED features an 85mm objective lens with Extra-low Dispersion glass, ensuring high clarity along the 20-60x magnification range. Designed with a low-profile straight eyepiece, the Spotter ED comes standard with eyepiece/objective covers, an all-weather case and table-top tripod. The Spotter ED can be paired with night vision devices via Newcon Optik's proprietary NVS U Coupler set, allowing users 24 hour observation and shot correction capability.

Newcon Optik's Spotter M is a handheld pocket scope with an 8x magnification and unsurpassed clarity in an extremely small size. In situations where a pair of binoculars may be too bulky, the Spotter M and its internal M22 reticle are the perfect solution for medium-range observation.

Optics	SPOTTER ED	SPOTTER M
Magnification (x)	20 - 60	8
Objective lens diameter (mm)	85	42
Focus range (m)	7 - ∞	3 - ∞
Exit pupil (mm)	4.25 - 1.4	5.25
Eye relief, (mm)	20 - 18	17.5
Field of view @ 1,000yd min mag/ max mag (feet)	105 / 53	1008.0
Field of view @ 1,000m (m)	35.0 / 17.7	336
Diopter adjustment range	±5	±3
Twilight factor	41.2 / 71.4 (min mag / max mag)	18.3
Relative brightness	18 / 2 (min mag / max mag)	27.6
Reticle type	Mil-Dot	M22
Mechanics & Environmental		
Weight (g)	1,300	336
Dimensions (mm)	432x105x174	142x60x57
Eyepiece type	Straight	Straight
Operating temperature range (°C)	-30 to +60	-30 to +60
Storage temperature range (°C)	-40 to +65	-30 to +60
Nitrogen purged	Yes	Yes
Waterproofing	IP67	IP67

MULTI-FUNCTIONAL LASER SYSTEM

Newcon Optik's LAM series of weapon-mounted laser aimers and illuminators are used by professional military and police organizations worldwide. These military-grade devices utilize powerful visible and infrared lasers to provide accurate aiming and bright night vision illumination for any weapon system or optical platform.

The LAM 3G is a triple-channel device featuring a green visible laser aimer, IR laser aimer, and an IR illuminator. The LAM 4G is a next-generation multifunctional Laser Aiming Module featuring a visible green laser aimer, IR laser aimer, variable-focus IR (InfraRed) laser illuminator and tactical 300-lumen white LED flashlight condensed in a lightweight, compact housing. The LAM 3G and LAM 4G are designed for extreme ruggedness and longevity, featuring unsurpassed operating time and temperature ranges. Both units have solid audible/tactile step adjustment mechanisms that are easy to use and hold position after thousands of shots. Built for modularity, either unit can be activated via the integral push-button or by a remote cable switch. The LAM 3G and LAM 4G feature a low-power "training" setting for safe use among friendly forces.

Laser Aimer	**LAM 3G**	**LAM 4G**
Eye safety	IIIb	IIIb
Distance, low/high (m)	150/500	500
Beam divergence, FWHM (mrad)	0.5	1.2
Spot size @ 100m (mm)	50	60
Wavelength (nm)	532 ±10	530 ±20
Laser colour	Green	Green
Output power, low/high (mW)	<4/≥8	<5
Infrared Laser Aimer		
Eye safety	IIIb	IIIb
Distance, low/high (m)	400/2,000	400/2,000
Beam divergence, FWHM (mrad)	0.5	1.2
Wavelength (nm)	830 ±15	830 ±20
Output power, low/high (mW)	<2/≥20	<2/<20
Flashlight		
Bulb	-	CREE, V6HD
Light output (lumens)	-	300
Infrared Laser Illuminator		
Eye safety	IIIb	IIIb
Distance, low/high (m)	200/2,000	200/2,000
Beam divergence, FWHM (mrad)	1 - 105	1.3 - 60
Wavelength (nm)	830 ±15	830 ±20
Output power, low/high (mW)	<2/≥25	<2/<20
Ballistics		
Windage adjustment step (mrad)	0.25	0.5
Windage adjustment range (mrad)	60	40
Elevation adjustment step (mrad)	0.25	0.5
Elevation adjustment range (mrad)	60	40
Retention after 1,000 shots (mrad)	1	1
Mechanics, Electronics & Environmental		
Dimensions (mm)	102x72x42	116x90x34
Weight without batteries (g)	315	285
Weight with batteries (g)	330	
Shock resistance (G)	300	300
Quick release	Yes	-
Battery type	CR 123	CR 123
Battery life, high / low (hours)	8 / 16	8 / 16
Operating temperature range (°C)	-20 to +50	-40 to +60
Waterproofing	MIL-STD 810G	IP67

LAM 3G • LAM 4G

LAM 3G

LAM 4G

NCFL SERIES

NCFL 9 RI shown in photo

TACTICAL LED FLASHLIGHTS

The NCFL Series is comprised of compact, mountable illumination/aiming systems that can be utilized on a wide variety of weapons including handguns and assault rifles. Each model in this series has a distinctly unique feature set, ensuring there is an NCFL unit perfectly suited to every application.

Optics	NCFL 9	NCFL 9 RI	NCFL 9 GI
Modes	OFF, Flashlight, Infrared Aimer	OFF, Flashlight, Red Laser Aimer, Infrared Aimer, Flashlight+ Red Laser	OFF, Flashlight, Green Laser Aimer, Infrared Aimer, Flashlight +Green Laser
Material	6061 Aviation Grade Aluminum and high-strength Zytel polymer		
Color	Hard anodizing, matte black, black		
Flashlight			
Bulb	C4 LED	C4 LED	C4 LED
Light output (lumens)	>180	>225	>225
Visible Laser			
Visible laser distance (m)	-	75	75
IR distance (m)	250	250	250
Visible laser / IR laser	830±10nm, <15mW	650±10nm at <5mW / 835±10nm at <10mW	530±10nm at <5mW / 835±10nm at <10mW
Laser beam size (mm @ 10m)	<Ø10	<Ø10	<Ø10
Mechanics, Electronics & Environmental			
Mounting	MIL-STD-1913 Picatinny Mount		
Battery	2 x CR 123 Lithium	2 x CR 123 Lithium	2 x CR 123 Lithium
Hours of operation (hours)	40 (IR mode) 1.7 (Flashlight)	≥5	≥5
Operating temperature range (°C)	-20 to +50	-20 to +50	-20 to +50
Storage temperature range (°C)	-40 to +60	-40 to +60	-40 to +60
Dimensions (mm)	87x41x50	80x55x51	80x55x51
Weight w/o batteries (g)	106	115	115
Waterproofing	IP67 / 1m / 30min	IP67 / 1m / 30min	IP67 / 1m / 30min

HIGH-POWERED VISIBLE AND INFRARED AIMER/ILLUMINATOR

The IRIL 1000M long-range infrared aimer and illuminator now features a high-powered visible laser aiming channel. This device is designed to reach out to extreme distances to aid in target identification and engagement from ground- and air-based platforms. Equipped with a Picatinny quick release mount, the IRIL series of illuminators can be mounted on virtually any rifle or crew-served weapon system. The IRIL 1000M has 5 in-built laser patterns to select from to aid in laser identification.

The IRIL 1000M has an adjustable beam divergence between 1 and 20 mrad, allowing for immediate transition between wide-area spot scene illuminator and accurate IR laser aimer. Its extremely long maximum range provides significant optical advantage to professional operators in all environmental conditions.

Visible Laser Aimer	**IRIL 1000M**
Eye safety	3R
Distance, high (m)	500 (night)
Beam divergence, FWHM (mrad)	1
Spot size @ 100m (cm)	100
Wavelength (nm)	532 ±10
Infrared laser Illuminator	
Eye safety	4
Distance, high (m)	30,000
Beam divergence, FWHM (mrad)	2 - 60
Spot size @ 100m, min divergence / max divergence (mm)	200-6000
Wavelength (nm)	810 ±10
Ballistics	
Windage adjustment step (MOA)	1.6
Windage adjustment range (MOA)	±120
Elevation adjustment step (MOA)	1.6
Elevation adjustment range (MOA)	±120
Retention after 1,000 shots (MOA)	2
Mechanics, Electronics & Environmental	
Dimensions (mm)	154x65x57
Weight without batteries (g)	425
Shock resistance (G)	500
Quick release	Yes
Battery type	1x 18650 Lithium
Battery life, high / low (hours)	2 / 4
Operating temperature range (°C)	-20 to +50 (IR) -10 to +50 (Green)
Storage temperature range (°C)	-40 to +60
Waterproofing	IP67

IRIL 1000M mounted on M134 Minigun

AN 10x50M22 shown in photo

TACTICAL DAY BINOCULARS

The AN series of binoculars incorporates Porro prisms and multi-coated lenses, delivering impressive light transmission and resolution for brilliantly clear vision.

Non-slip UV-resistant rubber armouring makes these binoculars comfortable to operate even in cold weather. They are waterproof and shockproof, feature an M-22 reticle and compass (AN 7x50 MC only) and adhere to the latest military standards while remaining light and compact.

Optics	AN 8x30M22	AN 7x50MC	AN 7x50M22	AN 10x50M22	AN 20x80M22
Magnification (x)	8	7	7	10	20
Objective lens diameter (mm)	30	50	50	50	80
Focus range (m)	3 - ∞	5 - ∞	5 - ∞	6 - ∞	18 - ∞
Exit pupil (mm)	4	7	7	5	4
Eye relief (mm)	17	23	23	19	16
Field of view - Angular (°)	8	7.2	8	7	3.3
Apparent field of view (°)	64	50.4	56	70	66
Field of view @ 1,000yd (feet)	421	379	421	368	173
Field of view @ 1,000m (metres)	140	126	140	123	58
Diopter adjustment range	±5	±5	±5	±5	±10
Twilight factor	15.5	19	19	22.4	40
Relative brightness	16	49	49	25	16
Transmission (%)	90	95	95	95	95
Resolution (Center) (inches)	-	-	-	-	≤3
Lens & Prism coating	FMC	FMC	FMC	FMC	FMC
Prism Type	Porro	Porro	Porro	Porro	Porro
Prism Glass Material	BAK-4	BAK-4	BAK-4	BAK-4	BAK-4
Reticle type	M22	M22	M22	M22	M22
Mechanics & Environmental					
Interpupillary distance (mm)	56-74	56-74	56-74	56-74	56-74
Weight (g)	595	1,046	1,363	1,309	2,498
Dimensions	110x160x54	152x190x83	195x195x75	180x190x73	298x230x95
Illuminated compass	No	Yes	No	No	No
Tripod mountable	Yes	Yes	Yes	Yes	Yes
Battery type	n/a	LR44	n/a	n/a	n/a
Operating temperature range (°C)	-30 to +60	-30 to +60	-40 to +70	-40 to +70	-40 to +80
Storage temperature range (°C)	-45 to +75	-45 to +75	-45 to +75	-45 to +75	-45 to +85
Nitrogen purged	Yes	Yes	Yes	Yes	Yes
Waterproofing	MIL-STD-810G				6m / 30 min

ULTRA LONG-RANGE OBSERVATION BINOCULAR

The BIG EYE 28x100ED is designed to meet the most demanding specifications and is capable of withstanding extreme maritime weather. It is useful as a marine binocular, a border-guarding instrument, or for other observational applications where long-range viewing is required.

The BIG EYE 28x100ED has massive 100mm objective lenses, BAK-6 prisms, and precision-ground, multi-coated optics. Optical quality is extraordinary with true edge-to-edge image clarity. Oversized, individually-focusing ocular lenses are set at an angle for comfortable viewing and have foldable eyecups. The mounted device swivels a full 360° horizontally and 135° vertically. The BIG EYE 28x100ED is nitrogen-filled to prevent fogging and is supplied with a hard case equipped with a lock. It can also be coupled with one or two NVS 14 series night vision monoculars for night operation.

Optics	**BIG EYE 28x100 ED**
Magnification (x)	28
Objective lens diameter (mm)	100
Focus range (m)	30 - ∞
Exit pupil (mm)	3.6
Eye relief (mm)	16
Apparent field of view (°)	70
Real field of view (°)	2.5
Field of view @ 1000m (m)	43.7
Interpupillary distance (mm)	53-76
Relative brightness	13
Diopter adjustment range	-5 to +2
Lens coating	FMC, ED Glass
Mechanics & Environmental	
Weight, g	6,800
Dimensions	553x270x172
Tripod mountable	Yes
Operating temperature range (°C)	-35 to +50
Storage temperature range (°C)	-50 to +60
Humidity (%)	90
Nitrogen purged	Yes
Waterproofing	MIL-STD-810G

BIG EYE 28x100ED

Newcon Optik's accessories multiply the usefulness of tactival devices by protecting them from glare, and/or by allowing them to be tripod- or weapon-mounted. Newcon Optik also offers optional magnifying lenses for use with the HDS 3AA and NC 1x21.

HDS 3x Lens

Flip-to-side 3x magnification add-on lens for use with HDS 3AA

HDS 5x Lens

Flip-to-side 5x magnification add-on lens for use with HDS 3AA

Tripods

Series of optional tripods for use with all tripod-mountable devices

NC500-W

Wi-fi camera for use with SPOTTER LRF and other communications-enabled devices

NC 4x32 ARF, NC 6x50 ARF, & HDS 3AA ARF

Anti-reflection filter for use with NC 4x32, NC 6x50, and HDS 3AA

30mm QR Scope Mount & 34mm QR Scope Mount

Quick-release Picatinny sniperscope mounts

VISION IS OUR MISSION

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