

DOMINUS-55 DOMINUS-80

LONG RANGE THERMAL IMAGING BINOCULAR

OPERATION MANUAL

IMPORTANT: Please read this manual in its entirety **PRIOR** to using this device!



WARNING: NEVER
POINT THIS DEVICE
DIRECTLY AT THE SUN OR
ANY FIRE / HEAT SOURCE
WITH TEMPERATURE OF
OVER 500C/930F! DOING SO
WILL PERMANENTLY

DAMAGE THE THERMAL SENSOR AND WILL VOID ANY WARRANTY CLAIMS! SEE PAGE-14 FOR MORE DETAILS AND FOR VERY IMPORTANT CARE WARNINGS!

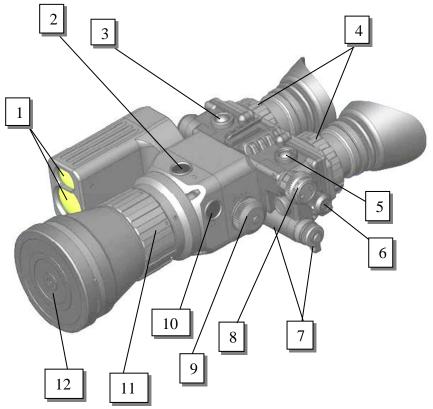
THERMAL IMAGING:

Let's try to understand how this device works and what it can and cannot do:

- 1. Your thermal device works on the principle of detecting infrared radiation, also known as energy. Instead of operating in a visible light spectrum of 400-700nm (such as regular binoculars or scopes), thermal imagers detect waves as high as 17,000nm or 17 μ m, which are beyond our capability to observe with naked eye. The infrared signal is received by the thermal device and is then converted into an electrical signal by the thermal sensor (called microbolometer), located inside the unit and that electrical signal is then displayed on the micro display located near the ocular (eyepiece).
- 2. Your device operates with batteries. Unlike a daylight scope, where you see the image due to light traveling through the glass and the prisms, the thermal imaging device works by projecting the image onto a screen. While the thermal sensor is the crucial component of any thermal device, the image display quality is also very important to have the best possible image clarity and widest field of view. Since the image is projected on the screen, it has certain limited resolution...so please do not expect your device to provide the same crystal clear and full-color image as you would see through your daylight scope. The main advantage of this thermal device is that it detects heat signatures in the conditions where seeing your target is virtually impossible with your naked eye.

OPERATION:

DOMINUS-80 BINOCULAR (DOMINUS-55 features same body design, but with smaller objective lens)



Glossary:

- 1 Laser Rangefinder Lens
- 2 LRF (Laser Rangefinder) ON/Range Button
- 3 Invert Button
- 4 Eyepiece (Ocular) Focusing Rings
- 5 Zoom Button
- 6 Super Controller / MENU Button
- 7 Battery Compartment Tube / 9V External Power Input
- 8 Power ON/OFF/Standby Switch
- 9 Micro-USB Connector (5V Power Bank Input)
- 10 REC (Video Recording) Button
- 11 Distance Focusing Ring
- 12 Germanium Objective Lens (Protective Lens Cover)

INSTALLING THE BATTERIES:

Your thermal binocular operates on commonly available 3V Lithium batteries, CR123-type. You need 3 batteries to operate the device. Rechargeable batteries are OK, but their peak voltage cannot exceed 4.2V each.

To install the batteries, unscrew the battery compartment cover (Battery Compartment Tube (7) runs underneath the binocular body and the compartment cover is located on the opposite end of the 9V External Power Input (7)) and install the batteries inserting the positive (+) end first. Once the batteries are inside, replace the cover closing it tightly.

TURNING THE UNIT ON AND OFF:

Your binocular unit has a rotating Power ON/OFF Switch (8). To turn the unit ON, first remove the objective lens cover (12) and rotate the Power Switch (8) forward (or counter-clockwise) one step. Look through the eyepieces – the unit will become operational within approximately 4-5 seconds. To turn the unit OFF rotate the same switch backwards (or clockwise) one step. Please note that you can enter Standby mode where the unit remains on, but the image display is turned off by rotating the Power Switch one extra step forward. Depending on the model, you may need to slightly pull the switch (8) outward from the body and then rotation forward will be possible for this Standby Mode step. The red LED power indicator located between the eyepieces will remain lit during the standby mode. To return to the ON mode simply rotate the switch (8) one step backward (no pulling outward is necessary during backward rotation). Always replace the objective lens cover after the unit is turned off and is no longer is in use.

FOCUSING THE UNIT:

To obtain the sharp image, you must first rotate Ocular Focusing Rings (4) in either direction, until you notice in which position the image is at its best. Focus one eye at a time. Since you are looking at a display, it will be easier to adjust the oculars focus by simply focusing your attention on the display letters and numbers. After that, rotate the Distance Focusing Ring (11) also until the image is at its best. You may have to repeat the process again, until the image is sharp and clear. Once the clear image is obtained, you no longer need to adjust the Eyepiece Rings, just rotate the Distance Focusing Ring to adjust the distance to the object you are viewing.

SUPER CONTROLLER FUNCTIONS:

Your thermal binocular comes with a unique Super Controller (6), which allows for nearly instant image adjustment to the best possible brightness and clarity without having to enter the menu settings. This feature is extremely useful when atmospheric conditions change rapidly, especially during high humidity and/or rapid temperature changes.

The super controller has the following sequence when short-pressed:

- 1. IMAGE GAIN (GAIN)
- 2. DISPLAY BRIGHTNESS (BRGT)
- 3. SENSITIVITY (SENS)
- 4. IMAGE DETAIL ENHANCEMENT (IDE)
- To adjust the IMAGE GAIN, rotate the Super Controller either clockwise or counterclockwise while viewing the image you will see word GAIN and either positive or negative number appear on the bottom left corner of the image display. There are 10 negative and 10 positive Gain levels and a Zero level. Lowering the Image Gain will allow for better facial and detail recognition. Increasing the Image Gain will allow for better target detection and recognition of surroundings, such as houses/buildings, trees and bushes and so on, allowing you to better see the target surroundings and to better orient in the terrain.
- To adjust the Display Brightness level short-press the Super Controller once and letters BRGT will appear in the display you can now rotate the same switch and Display Brightness will change. There are 30 levels of display brightness. During nighttime use, brightness level is optimal between 10 and 20, depending on the ambient conditions. Keep in mind that higher brightness levels drain the batteries faster.
- To adjust the Thermal Sensitivity (Sensor's Brightness Output) short-press the GAIN switch twice and letters SENS will appear in the display – you can now rotate the same switch and Sensitivity will change. There are 40 levels of sensitivity (min sensitivity is 40 and max is 80)
- To activate the Image Detail Enhancement (IDE) shortpress the GAIN switch three times and letters IDE will appear in the
 display you can now rotate the same switch and image details will be
 enhanced. There are 7 levels of enhancement and a Zero level. Each
 IDE level incrementally increases the level of the detail, similar to the
 TV resolution upscaling, allowing user to greatly enhance the image
 resolution and level of image detail. This feature is especially useful
 during high humidity, where normally level of image detail is poor. It is
 also useful when observing object at long distances and when utilizing
 Zoom function.

DEVICE MENU NAVIGATION – IMPORTANT!

- 1. When long-pressed, the Super Controller activates the Main Menu
- 2. Once Menu is activated, rotating controller will highlight each menu chapter from top to bottom.
- 3. Once the particular menu chapter is highlighted in green color, the selection can be initiated by short-pressing the Super Controller, after which the menu chapter will highlight in red color. Now rotate the Super Controller in either direction to select desired setting. Confirm the setting by short-pressing the Super Controller, which will change the highlight from red back to green color. Now the chapter is out of the selection mode and next menu chapter can be selected by rotating the Super Controller.
- 4. Exit back to the main menu by either short-pressing or longpressing the Super Controller (depends on the menu function)
- Main menu can then be turned off by long-pressing the Super Controller again, or, alternatively the menu automatically turns off after 15 seconds of inactivity.

Main Menu Selections (from top to bottom):

1. User Profile

There are 3 Custom User Profiles, which can be saved and deployed when necessary. Each user profile covers variety of settings, such as Color Palette, sensor gain and sensitivity, display brightness, Image Detail Enhancement and other settings. We recommend finding best settings for a particular terrain or weather conditions and then saving it as a User Profile, so that next time you are in a same/similar terrain or weather pattern, you can quickly activate the settings without having to adjust them all individually. There are 3 customized User Profiles and 3 factory pre-set profiles (Woods, City & Mountains). Customized profile settings are automatically saved once adjustments are made and in order to start a new profile enter the main menu and switch the User Profile from 1 to 2 or 3, then perform new adjustments according to your preference.

2. Color Palette

This setting allows user to select the image Color Palette. Please refer to page-10 IMAGE POLARITY INVERSION / COLOR PALETTES for more information

3. Thermal Image Gain

See page-5 for GAIN adjustment. NOTE: this function is available via Super Controller and is normally adjusted without getting into Menu.

4. Display Brightness

See page-5 for BRGT adjustment. NOTE: this function is available via Super Controller and is normally adjusted without getting into Menu.

5. Thermal Sensitivity

See page-5 for SENS adjustment. NOTE: this function is available via Super Controller and is normally adjusted without getting into Menu.

6. Image Detail Enhancement (IDE)

See page-5 for IDE adjustment. NOTE: this function is available via Super Controller and is normally adjusted without getting into Menu.

7. Image Polarity Inversion

See page-10 for IMAGE POLARITY INVERSION. <u>NOTE:</u> this function is available via INVERT Button (5) and is normally done without getting into Menu.

8. USB Transfer Mode

This setting allows you to transfer the video recorded data through USB connection to your computer or tablet. Enter this selection by short-pressing the Super Controller. Please note that this mode disables most of the scope functions in order to allow the most reliable USB connection. See more details on page-12

9. Wi-Fi

This menu setting allows user to turn Wi-Fi function on or off

10. Video Record Mode (Video Start Mode)

This setting allows you to select how soon video recording starts. There are two options:

- Normal start the video recording module is completely off until you press REC button (8), then the module starts, taking approximately 15-20sec between pressing the REC button and actual start of video recording. This mode allows you to save the batteries when video recording is not desired, such as simple terrain orientation.
- 2. Quick start the video recording module starts as soon as you power the scope and enters the standby mode. When REC button is pressed, video recording starts within 5 seconds during the first recording and within 3 seconds thereafter. This mode allows you to start recording almost instantly and is useful when frequent shots are taken during hunt, or any time when video recording is frequently used. Please note during this mode additional battery power is used.

11. Date and Time Stamp Position

This setting allows user to select the on-screen position of the date and time during video recording. Four positions are available: Right Down – Left Down – Right Up – Left Up in addition OFF

position is available, which removes date/Time Stamp from video recordings.

12. Super Contrast Display Mode

This setting allows user to enter the Super Contrast mode, which is helpful during extremely humid weather conditions, where targets will appear "washed out" against the background, as well as during the situations where target heat is waning. This is especially useful during search and rescue operations where quick location of the heat source may be very important, as well as when tracking wounded or expired game. Please note that Super Contrast Mode is only seen on the scope' image display, therefore, if you are recording video in the Super Contrast Mode, during video recording playback only normal mode will be visible. Super Contrast Mode can be utilized with any of the 10 color palettes.

13. Auto Bad Pixel Correction

This function allows the scope computer to automatically correct any bad pixel. For manual bad pixel correction, please refer to the next menu function and also to the BAD PIXEL CORRECTION instructions on page-11.

IMPORTANT: DURING ANY BAD PIXEL CORRECTION PROCESS YOU MUST KEEP THE LENS COVER ON AT ALL TIMES AND WE STRONGLY RECOMMEND PLACING A DARK TAPE OVER THE PINHOLE IN THE LENS COVER. THIS IS NECESSARY FOR A COMPLETELY UNIFORM DARK SCREEN DURING THE PROCEDURE.

14. Bad Pixel Correction

This function allows the user to correct any bad pixel that may appear during the use of the device, without having to return the scope to the factory. Please see page-11 for BAD PIXEL CORRECTION instructions

15. LRF Reading Position

This setting allows user to select where on screen the Laser Rangefinder reading is displayed. Two positions are available: Up and Down.

16. Status Bar Position

This setting allows user to select where on screen the status bar is displayed. Two positions are available: Up and Down

17. Status Bar Delay Time, s

This setting allows user to select whether the status bar can remain visible constantly, or will be turned off after a short delay. Delay time is available between 2 and 7 seconds (in 1 second increments), as well as OFF position, which allows the status bar to remain visible constantly. NOTE: scope is shipped with status bar hide time in OFF position.

18. Menu Position

This setting allows user to select on screen display menu position. 3 settings are available: Up / Center / Down

19. OSD Transparency

This setting allows user to select the transparency of the On Screen Display Menu, as well as reticle and status bar transparency. 5 levels of transparency are available along with Zero transparency. Each higher level of transparency makes menu more transparent when activated. Higher levels of transparency prevent developing burn marks, common with OLED displays, when used over a long period of time. We recommend setting transparency level on 3 or higher to maximize the longevity of the OLED display.

20. Auto Power OFF, Minutes

This setting allows the monocular to automatically power down after a certain time of inactivity. Default setting is OFF, meaning the monocular will continue to work until manually shut down, however you can choose an option when the unit will power down by itself if you have not pressed any button between 10 minutes and 60 minutes (in 10 minute increments). This feature is automatically disabled when active video-recording is in process.

21. Language

This setting allows user to select menu language. 4 languages are available: ENGLISH – GERMAN – SPANISH - RUSSIAN

22. Date Set

This setting allows user to set the date, as it would appear on the video recording stamp. The date appears in YYYY-MM-DD sequence. Rotate the Super Controller to change the year, then switch to month by short-pressing the Super Controller and repeat the same for day. Once day is adjusted, short-pressing the Controller returns to the main menu.

23. Time Set

This setting allows the user to set the time, as it would appear on the video recording stamp. Switch between HH:MM:SS by short-pressing the Super Controller and adjust the time by rotating the Super Controller. Please note the time is displayed in military units, so 1pm = 13:00, 6pm = 18:00, 11pm = 23:00 and so on.

24. Distance Unit

This function allows to switch Rangefinder distance reading between Meters and Yards

25. Hardware Version

This selection displays the current software version and cannot be edited. This information may become useful if customer support is required.

26. Software Version

This selection displays the current software version and cannot be edited. This information may become useful if customer support is required.

27. Settings Reset

This selection allows user to reset all settings to factory levels. We do not recommend using this function, unless you feel that the scope is not functioning as it should. If this happens and you need to reset the settings to factory levels and after the reset you have any troubles navigating the menu, please e-mail us at: FullMoonOptics@gmail.com or call us at 478-954-2721 with any questions you may have.

IMAGE ZOOM FUNCTION:

The standard (optical) magnification of your thermal binocular is 3.5x (6x on Dominus-80 model) (you will see the objects approximately 3.5 times closer than if looking with the naked eye). It is possible to increase the magnification by applying a digital zoom function. There are two zoom levels (2x and 4x) meaning your combined system magnification will be either 7x or 14x (12x or 24x on Dominus-80 model). To utilize zoom function press the ZOOM Button (5) once to achieve 2x zoom or twice to achieve 4x zoom. To return to standard optical image press the Zoom Button once more. Please note the image display will show either 1x, 2x or 4x, depending on how many times you press the Zoom Button.

IMAGE POLARITY INVERSION / COLOR PALETTES:

It is possible to change the way the heat signatures are displayed - the default image is "WHITE HOT" meaning the heat signatures will appear in white or light color with most of the background appearing in black or dark color. You may switch (invert) this setting by pressing the INVERT Button (3) once and then heat signatures will appear in dark color "BLACK HOT" on otherwise light color background. In addition, the unit also has options of 10 color palettes, each with invert option, which highlight heat signatures in various colors. To change between the Color Palettes, longpress the Super Controller (6) to enter main menu, then rotate Super Controller until word "Palette" is highlighted. Then short-press Super Controller to select this function and then rotate the Super Controller to switch between various color palettes. There are 9 color palettes + default black & white mode. You should try each color setting to see which one renders images best during various atmospheric conditions and humidity levels, as well as for the particular task at hand. Once finished selecting the color palette, short-press the Super Controller to return to the main menu and then long-press the same Controller to exit the menu. Your color and invert setting is automatically saved and will appear next time you turn on the device.

USING LASER RANGEFINDER:

Your thermal binocular comes with fully integrated Laser Rangefinder allowing you to accurately and quickly measure the distance to the viewing object up to approximately 1,500m (760yds).

To measure the distance you must first activate the feature by pressing once the Rangefinder Button (4). You will see the shutter box appear in the display. At this point you can aim at the viewing object and press the Rangefinder Button once more while aiming – the distance will appear after a brief pause and it will look like this "25m", which is displayed in Meters (1m=1.09yds), so 25m is approximately 27yds and so on. You can switch to display distance in yards through the main menu. Should you see "---" message it may be because you are aiming at an object that is beyond 1500m or too close (closest measured range is approximately 10m). The rangefinder function will be disabled after approximately 5 seconds of inactivity.

IMPORTANT: just like any laser rangefinder, the ability to accurately read distance will depend on the reflective characteristics of the object, as well as its size and ability to view it unobstructed. We suggest to measure distance 3 times for the same object to determine the most precise reading.

VIDEO RECORDING:

In order to start video recording simply press REC button (8) once. If the video record mode is set to "Normal Start" the actual video recording will start in approximately 15-20sec. in the following succession: letters REC appear on the screen menu - then red dot appears - then counter appears and starts counting immediately. If the video record mode is set to "Quick Start" letters REC will remain on the screen menu and the recording will start in approximately 3-5sec. in the following succession: Red dot appears – then counter appears and starts counting. The actual video recording starts when counter appears and starts counting. Please note that video recording increases battery consumption, therefore expect batteries to discharge faster during active recording. If you plan to do extensive video recording during operation, it is advised to use an external 5V power bank with large capacity (over 10,000mA) and each USI output rated at least at 2V. Should the battery power get too low the video recording will automatically stop and warning message will appear advising that battery power is too low for video recording. The unit may still be operated for some time in normal non-video recording mode. See more details on Video Record Modes selection on Page-7

IMPORTANT: when finished recording you must always press REC button once again to save the recording.

EXTERNAL POWER SUPPLY OPTIONS:

It is possible to connect an optional external 5V power bank to the binocular through the micro-USB connector (9) or an external power supply through the external power supply connector (7) in order to operate it for a longer periods of time. Please make sure only 5V power bank is used through the USB connector and output power should be at least 2A. For the External Power Supply connection please make sure the output power is not higher than 9V. To connect an external power supply, remove the safety cap by unscrewing it counter-clockwise and either connect the micro-USB cable directly into the input (9), or external power supply to the input (7). Once the external power supply is no longer needed, remove the connection and replace the metal safety cap before you take the unit to the field

MANUAL BAD PIXEL CORRECTION:

IMPORTANT: DURING ANY BAD PIXEL CORRECTION PROCESS YOU MUST KEEP THE LENS COVER ON AT ALL TIMES AND WE STRONGLY RECOMMEND PLACING A DARK TAPE OVER THE PINHOLE IN THE LENS COVER. THIS IS NECESSARY FOR A COMPLETELY UNIFORM DARK SCREEN DURING THE PROCEDURE.

Your device comes with a unique feature allowing you to manually correct any bad pixels that may develop during the course of time. To do that, press and hold Super Controller (6) to enter the main menu. Then rotate the Super Controller counter-clockwise until "Bad Pixel Correction" is highlighted. Then short-press the Super Controller to enter the pixel correction mode. The white crosshairs with flashing dot in the center will be displayed. Now you can rotate the Super Controller to direct the flashing dot to the bad pixel (to change between horizontal movement and vertical movement short-press the Super Controller. Once the flashing dot is over the bad pixel, press ZOOM button (5) and bad pixel will be corrected. You may need to press ZOOM more than once. Should you have a bad spot larger than one pixel, you must work each pixel one at a time, starting from outside pixels and then moving to the inside pixels. After all bad pixels are corrected, long-press the Super Controller until it enters Main Menu. NOTE: if you do not perform this function, bad pixel corrections will not be saved and you will have to perform the corrections again next time you start the scope. NOTE: newer models come with Automatic Bad Pixel Correction function, which does the process automatically.

USB TRANSFER MODE:

Pease read carefully!

- Power the binocular.
- Enter the main menu and select "USB Transfer Mode" (see also page-7) – USB Transfer Mode turns OFF all other functions of the monocular – it should only be used during actual data transfer.
- 3. Remove the Micro-USB Connector cover (9).
- 4. Connect the micro-USB side of the cable to the Connector output. We recommend using short length USB cable and if possible a USB3.0 cable for faster and more reliable operation. Take care during the connection to eliminate possibility of breaking the connector points. Do not use excessive force when plugging the micro-USB connector and never try to rock the connector from side to side during connection this may break the connector points and render the USB connection inoperable. NOTE: broken USB connector is not covered under warranty.

4a. IF SUPPLIED WITH FACTORY USB ADAPTER CUP AND CABLE use the factory USB adapter cup and the factory cable for this task.

- 5. Connect the USB side of the cable to your computer.
- 6. Once the pop-up window appears, select "Open Files"
- 7. Transfer any video files you may have.
- 8. When finished you may keep the files recorded on the device, or you may delete them from the internal storage to make space for new recordings.
- 9. Always follow the safe connection exit by asking to eject the USB drive.

Wi-Fi CONNECTION:

Please read and follow each step carefully!

- Download VLC app on your smartphone or tablet (available for IOS and Android devices). For Android install VLC for Android version. For iOS install VLC for Mobile version.
- 2. Power the thermal device.
- Press REC button. Once the video recording counter starts working it is now possible to view the streaming video on your mobile device.
- 4. Now connect your mobile device to the thermal device:
 - a) On your mobile device enter the Wi-Fi menu and find the serial number of your thermal device" – for example: "B190001". Select this connection. (Note:

- letters may not be engraved on your device, but the number will match the serial number of your device).
- b) Enter default password: 12345678
- c) Make sure your mobile device is disconnected from the usual Wi-Fi signal (such as home or office), which it normally connects automatically, as it may cause interruptions in video stream.
- d) Connection inside the buildings where multiple Wi-Fi signals are always present may not be reliable – if you are unable to connect inside your home or work office, please try it again when outside or outdoors where other Wi-Fi signals are scarce.
- 5. Once mobile device is connected to the binocular, open the VLC app and select "Stream" from the menu.
- 6. Enter this exact address: **rtsp://192.168.0.110** once prompted in the app and press Enter or click on the arrow mark, or click on "open stream", whichever option is currently showing on the app.
- 7. For iOS smartphones in the lower left corner you will find a miniature screen click on this screen and it will open up full-screen.
- 8. In order to reduce the image streaming delay between the thermal device and the mobile device, you may need to reduce the cache level in VLC app settings.
- NOTE: the video stream may not work reliably on older iPhone models (6 and lower) and Android (7.0 and lower) versions.

TROUBLESHOOTING:

- Unit does not turn on: please check if the batteries are inserted correctly or if they are fresh.
- 2. Unable to obtain sharp and clear image:
 - -You may need to repeat the process of rotating the ocular and distance knob several times until you get a good feel of it

-You may be viewing an object that it too close – the minimum focusing distance is approximately 3m or 9 feet

3. Unable to see heat signatures behind visible barriers, such as glass: IMPORTANT PLEASE NOTE: THERMAL DEVICES ARE UNABLE TO SEE HEAT SIGNATURES IF THE OBJECT IS BEHIND ANY BARRIER THAT HAS REFLECTIVE NATURE, SUCH AS GLASS, THEREFORE YOU WILL NOT BE ABLE TO SPOT PEOPLE INSIDE A VEHICLE UNLESS THE WINDOWS ARE LOWERED DOWN, OR A PERSON STANDING BEHIND THE WINDOW IN A HOUSE OR IN SIMILAR SITUATIONS. LIKEWISE YOU WILL NOT BE ABLE TO SEE ANY HEAT SIGNATURES WHILE OBSERVING FROM BEHIND A WINDOW – YOU MUST HAVE UNOBSTRUCTED VIEW.

4. <u>Image appears to be washed out, especially the surrounding areas:</u>

You may be operating device in particularly humid conditions and need to increase either **GAIN**, or **IDE** functions (or both). Refer to manual page 5.

WARNINGS:



1. NEVER point this device directly at the sun or any heat source over 500 degrees Celsius (930 degrees Fahrenheit) even if the device is not turned on! Doing so



turned on! Doing so will permanently damage the sensor with random light glare (similar to pictured here). Such damage is not covered by the warranty and will void any warranty claims. Always have the protective cover on the scope when transporting it during daylight, particularly during sunny days! Always transport your scope during sunny day pointed downwards.

- 2. <u>NEVER</u> try to disassemble the unit by yourself or by anyone who is not our authorized technician. Doing so may result in injury and will void any warranty claims
- 3. <u>NEVER</u> leave the batteries inside the unit for a long period of time during extremely hot temperatures the batteries may overheat, which may render the unit inoperable and will void the warranty
- **4. NEVER** submerse the unit into water or use during heavy rain.

TECHNICAL SPECIFICATIONS: Dominus Series

Imaging Sensor Hybrid Resolution	n 17µm with Image Enhancement
Frame Rate	50 Hz Shutter-free / NUC-free
Spectral Response	8-14μm
Image Display	1,024x768 Micro-OLED
Number Of Color Palettes	10
Optical Magnification	
Digital Zoom	2x & 4x
Focusing Distance	10m - ∞
Objective Lens	F55/1.0 (F80/1.0)
Field Of View	6.8° x 6.3° (5.2° x 4.6°)
Detection range (human size object)	1,500m (2,000m)
Laser Rangefinder max. distance	1500m
Video recording resolution	
Video File Type	AVI
Power Supply	3 x CR123 Lithium / or 5V USB
Working time	3.5-4hrs (CR123 batteries)
Working Temperature Range	
Weight	900g (1,500g)

FULL MOON OPTICS

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