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The Pulsar Quantum XD19S handheld thermal imager is designed for day and night observation in conditions where ordinary binoculars and even night vision devices turn out to be ineffective. Pulsar Quantum XD19S is an improvement of the HD19S thermal imager. In contrast to the Pulsar Quantum HD19S thermal imager, the Pulsar Quantum XD19S has many new features: 

- refresh the image up to 50 Hz!
- digital zoom increased from 2x to 4x - the maximum magnification is up to 4.4x
- 6 color modes, including the valued red mode for selecting the hottest parts of the picture!
- stadiometric rangefinder with occupying silhouette, wild boar and moose for quick evaluation of the distance of the target.
- "display off" function immediately switching on / off the display without switching the device off

It is now possible to detect the target from a distance of up to 500 m! Thanks to the new lens, the image detail is also increased, which makes it easier to recognize the target at distances of 50-150m. In addition, the method of refreshing image noise is achieved by using an electronic shutter. The user can choose one of three image calibration modes - automatic, semi-automatic or stay in manual mode. The Imager has the same pre-defined picture modes as in HD38 S: 

- forest mode
- target identification mode
- city mode

In each mode, the device adjusts the image display algorithm to the specific application. This thermal imager can detect objects in difficult weather conditions, in fog, in smoke and even hidden behind obstacles such as bushes. The basic elements of the device are a microbolometer with a resolution of 384 x 288 pixels, a germanium lens with a focal length of 19mm and a frostproof OLED display with a resolution of 640 x 480 pixels. The magnification of the Imager is 1.1x and can be increased to as much as 4.4x (digital zoom). In addition, as the only manufacturer on the market, Pulsar provides in its Imagers the frequency of image refreshment up to 50Hz, enabling the observation of fast-moving objects. The Pulsar Quantum range of thermal imagers is an alternative to much more expensive competition devices, using the same microbolometers with the same optoelectric parameters. It starts in less than 10 seconds, it switches off immediately after pressing the power switch. It is lightweight, durable and handy, easily fits into the pocket of the jacket. Calibration of the microbolometer is carried out quickly during the observation, with a dedicated button on the casing. Another important asset of Pulsar is, among others, an excellent viewfinder that uses the next-generation OLED display. Its values 

- contrast
- eye adaptation

will be appreciated by users working in night conditions, where the standard LCD backlight undervalues 

- contrast
- eye adaptation

the contrast, displaying the black color as gray and disabling eye adaptation for night vision. The predominance of the OLED matrix also applies to working at a negative temperature, which has a negative effect on the refreshment speed of the LCD viewfinder image and in extreme cases leads to complete immobilization of the image. Pulsar is fast in operation and intuitive, it works perfectly in a dynamic

working environment and can be used in all weather conditions. The principle of image formation in thermal imaging is based on the detection of temperature differences of observed objects that "shine" in the far infrared range (heat radiation penetrating all air pollutants and fog). Image after processing is transferred to the OLED display where it can be presented in 6 modes "White Hot", "Black Hot", rainbow, "Red Hot", "sepia". All controls are placed in easily accessible places on the upper surface of the housing. The buttons are large, allow you to operate the device with gloves. The Imager has sockets - a power outlet and a video output socket that allows you to record images on external devices. The picture is free from distortion and vignetting. The equipment is adapted to work in temperatures from -20 to + 50 ° C. The housing is made of carbon fiber and covered with rubber. The Weaver rail is placed on the body, allowing additional accessories to be connected Usage forestry hunting sailing nature fishing Technical parameters

- detector: uncooled microbolometer UL 03 16 2
- refreshment: 50 Hz
- magnification: 1.1x
- digital zoom: 4x
- resolution: 384 x 288
- display: OLED 0.31 "
- sharpening distance: 2 m
- spectral range: 7.7 um - 13.2 um
- field view: 28.3 x 21.6 degrees
- linear field of view @ 100 m: 50 x 38 m
- dioptric correction: + 5 / -5 diopters
- detection range: 450 m
- start time: 10 s
- power supply: 4 x AA
- external power supply: 8.4 V - 15 V
- working time (4xAA) hours: 9
- working time (EPS3): 9
- working time (EPS5): 20
- degree of protection: IPX4
- temperature: -20 to +50 degrees
- max. Humidity: 90%
- degree of protection: IPX 4
- video output: CCIR / EIA
- dimensions: 177x86x58 mm
- weight with batteries: 490 g
- weight without batteries: 400 g

Warranty 3 years >> FREQUENTLY ASKED QUESTIONS << Question : What is the difference between a night vision device and the thermal imager? Answer: Night vision enhances visible light (380 - 780 nm) and slightly near infrared. The thermal imager is sensitive to electromagnetic waves of greater length, on the order of a few or a dozen microns, that is, several dozen times longer. EM waves, to which the typical thermal imager is sensitive, correspond to thermal (thermal) radiation. Night vision requires light that can strengthen (that's why in the dark we need IR radiators), the thermal imager also works in total darkness, in fog, smoke, etc. The advantage of night vision, apart from simply other imaging and in connection with this other perception of details is higher resolution and lower price. The advantage of thermovision is to work in all conditions and to easily detect heat sources, which is of fundamental importance in rescue, and is useful, among others hunting, property protection, sea navigation, and natural observation.