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The Pulsar Quantum XQ50 hand-held thermal imager has been designed for daytime and nighttime observations in conditions where ordinary binoculars and even night vision devices turn out to be ineffective. The Pulsar Quantum XQ50 is an improvement of the XD50S and HD50S Imagers. It was made using the most modern uncooled thermo-sensitive matrix in the world, using 17 micrometres technology. This translates into 50% higher magnification, 50% more range, super fast start in 2 seconds and increases battery life! Moreover, the new XQ series has features known from XD: 

- refresh the image up to 50Hz!
- digital zoom increased from 2x to 4x - the maximum magnification is 16.4x
- 7 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

Let us add that the set includes a wireless remote control to control the basic functions remotely, it is easier to access the rangefinder function with an additional button, and the price has not increased since the previous version of XD. It is now possible to detect the target from a distance of up to 1800 m! Thanks to the new lens, the detail of the image is also increased, which makes it easier to recognize the target at distances up to 250 m. In addition, the method of refreshing the picture 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 thermostat has the same pre-defined picture modes as in HD50 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 38 mm and a frostproof OLED display with a resolution of 640 x 480 pixels. The magnification of the Imager is 3.1x and can be increased to as much as 12.4x (digital zoom). This is the largest magnification in thermovision that is available to a civil user, eg hunter! In addition, as the only manufacturer on the market, Pulsar provides in its Imagers the frequency of image refreshment up to 50 Hz, 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 just 2 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
- brightness

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

- contrast
- brightness

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 -25 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: an uncooled microbolometer ∅ refreshment: 50 Hz ∅ magnification: 4.1x ∅ digital zoom: 4x ∅ zoom with digital zoom: 16.4x ∅ resolution: 384 x 288 display: OLED 0.31 "640 x 480 pixels (VGA) ∅ spectral range: 8 um - 14 um ∅ field of view: 7.5 ° x 5.6 ° ∅ linear field of view @ 100 m: 13 m ∅ dioptic correction: +5 / -5 D ∅ detection range: 1800 m ∅ start time: 2s ∅ power supply: 4 x ∅ external power supply: 8 V - 16 V ∅ degree of protection: IPX4 ∅ temperature: -25 to + 50 ° C ∅ max. Humidity: 90 ∅ degree of protection: IPX 4 ∅ video output: CCIR / EIA ∅ dimensions: 207 x 86 x 59 mm ∅ weight with batteries: 500 g ∅ weight without batteries: 430 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.