Lightmeter + Pulsemeter + Brightnessmeter “TKA-PKM” (09)

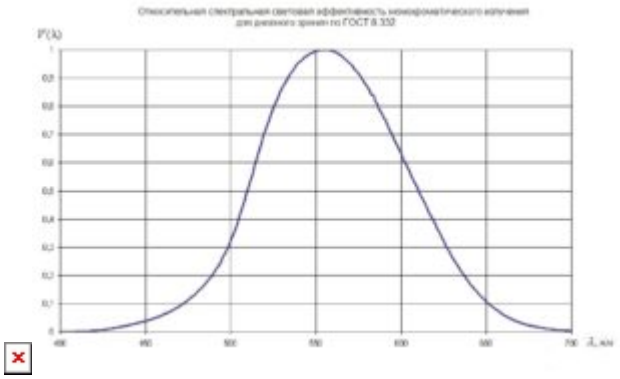


Main technical characteristics

Illumination measurement range	10 ÷ 200,000 lx
Limits of the basic relative error of illumination measurements	± 8.0%
Brightness measurement range	10 ÷ 200,000 cd / m2
Limits of the basic relative error of brightness measurements	± 10.0%
Illumination ripple coefficient measurement range	1 ÷ 100%

Limits of the permissible basic relative measurement error of the ripple coefficient	± 10%
The limits of the additional relative error of the device when measuring optical quantities, due to the change in the sensitivity of the photometric head when the air temperature in the measurement zone changes by every 10 ° C in the range from -30 ° C to 15 ° C and from + 25 ° C to 60 ° C	± 3.0%

The difference in the function of the relative spectral sensitivity of photodetectors is corrected to match the function of the relative spectral luminous efficiency of monochromatic radiation for daytime vision in accordance with GOST 8.332.



Overall dimensions of the device

Information processing unit	160 x 86 x 31 mm
Measuring head	Ø50 x 30 mm

Device weight (no more)	0.34 kg
Battery – Krona battery standard size	9 in

Significant advantages of the device Luxmeter “TKA-PKM” (09) over analogues

The device has an automatic range change, a HOLD function, and reduced power consumption. The device has a unique ability to determine the illumination values □□in real time and calculate the exact values □□of the illumination pulsation coefficient according to a special program protected by the Certificate of Official Registration of the Computer Program No. 2003612397 . The device implements an integral method for calculating the average illumination value for calculating the illumination pulsation coefficient. The readings on the device screen are calculated once a second, while the signal from the photosensor is digitized at a frequency of 3 kHz, the processor clock frequency is 4 MHz, an active low-pass filter at 1000 Hz is in front of the 12-bit ADC, a digital filter is implemented to suppress “reflections” during digitization LF at 400 Hz.
The device Luxmeter + Pulsemeter + Brightness meter “TKA-PKM” (09) can be connected via a half-duplex synchronous serial interface USB – virtual COM-port (under Windows XP / 7/10) to a computer or other controller. The device transmits information to the serial port in text format using OEM 866

encoding, with standard port settings (9600 bps, 8 bits, no parity, 1 stop bit).
To receive data, you can use any terminal program under Windows (HyperTerminal, terminal v.1.9b, Putty); to receive data on Android, you need a USB host, a USB HARDWARE connection and a terminal program with FT232RL support. Simple dump and CDC format – the device allows you to use any terminal program on various operating systems.

Research in laboratory conditions, checking work areas for suitability and safety for life and health, studying the state of industrial premises – all these processes require measuring the lighting parameters: the coefficient of pulsation of illumination created by light sources, the illumination of the area, as well as the level of brightness of objects. A device that combines a light meter, a brightness meter and a pulse meter is ideal for this. You can buy it on our website as a single copy or a batch of goods. This model has a friendly interface and can be directly connected to a computer.

Buy a pulse meter separately or take a model with more features?

This question can be answered with confidence: a device that combines a light meter, a pulse meter and a brightness meter is better suited for work and laboratory research, since it essentially combines three devices in one case. Together, these functions will allow you to study the state of the room in as much detail as possible by the nature, degree of intensity and distribution of light. The device has been verified, and the build quality, as well as the accuracy of the calculated parameters, are factory-guaranteed. That is why the device Luxmeter + Pulsemeter + Brightness meter “TKA-PKM” (09) is the best for a comprehensive and objective study.