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**Lightweight construction device
of an optical miniature sight with
high-strength ceramic coating,
digital eye-physiological adjusted
brightness control**

Lightweight construction device with digital brightness control with a low level of intrinsic current consumption (approx. 5 μ A), eye-physiological adjusted digital miniature sensor and calculated characteristic with microcontroller especially for optical devices. It is constructed with lightweight materials with decorative wear-resistant, water- and dirt-repellent ceramic coating in different colours.

Advantages:

- Very low level of intrinsic current consumption of about 5 μ A.
- Dirt-repellent ceramic coating.
- Illuminated dot – adjustable to different brightness characteristics.
- Miniature sensor for the adjustment of the illuminated dot.
- Brightness control according to available ambient light with a dynamic range of 1:10000.
- Battery alert is realised user-friendly with flash-mode.

Innovation:

The mechanics exist of a high-strength body out of aluminium alloy. A photodiode serves as a sensor. It has a sensitivity characteristic, which is spectral ad-



apted to the eye. According the scarce energy budget of a battery-powered device, active components with a very low current consumption were chosen. The brightness is perfectly adjusted eye-physiological and automatically, without any user intervention, to the surrounding light. For digital control of the characteristic, a miniature resistor network with influence on the analogue control circuit is used. The microcontroller is typically in the "Idle-Mode". He can be awoken any second to check battery voltage and if necessary display an under voltage via signal led. The decorative and wear-resistant, water-and dirt-repellent ceramic-coating is available in various colours, depending on the client's requirements and the intended purpose. The micro sight for sports and hunting purpose can be used in the extended temperature range between -40 °C and +85 °C. The miniature sight follows the megatrend of our time, it combines mechanics, optics and digital electronic control. The miniaturisation consumes very less raw materials, resources and energy with maximum user benefit.

Team of inventors:

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