



The CMS-50DL is a compact fingertip pulse oximeter that accurately measures SpO₂ (35-99%) and pulse rate (30-250 bpm) with an LED display, bargraph, and over 30 hours of continuous battery life. Its lightweight, self-contained design makes it suitable for hospital, homecare, community health, and sports settings. CE certified.

The CMS-50DL fingertip pulse oximeter is a compact, self-contained device that integrates the SpO₂ probe, processing module, and display into a single fingertip unit. Its lightweight construction and simple one-step operation make it accessible for use across hospital wards, home healthcare, community medical treatment programmes, and sports performance monitoring ? wherever a quick, accurate SpO₂ and pulse rate reading is required without the complexity or cost of a larger handheld device.

SpO2 and Pulse Rate Measurement

The CMS-50DL measures oxygen saturation across a range of 35%–99% with a resolution of 1% and an accuracy of $\pm 2\%$ in the clinically relevant range of 70%–99%. Pulse rate is measured from 30 to 250 bpm with a resolution of 1 bpm and an accuracy of ± 2 bpm or $\pm 2\%$ (whichever is larger), covering the full range from bradycardia through high-intensity exercise heart rates. Both SpO2 and pulse rate are displayed simultaneously on the LED screen, with a bargraph providing a visual representation of pulse strength.

Display and Usability Features

The LED display presents SpO2 percentage, pulse rate, and a pulse bargraph in a clear, easy-to-read format. Low battery voltage indication alerts the user before power is fully depleted, and an automatic power-off function conserves battery when the device is not in use. The integrated design – with the probe, processor, and display in one unit measuring just 57 × 33 × 32 mm – means no cables or separate sensors to manage.

Battery Life and Power

The CMS-50DL runs on a standard DC battery (2.6V–3.6V) with a continuous use time exceeding 30 hours, making it one of the more battery-efficient fingertip oximeters available and practical for sustained monitoring across a shift or extended home use without frequent battery replacement.

Technical Specifications