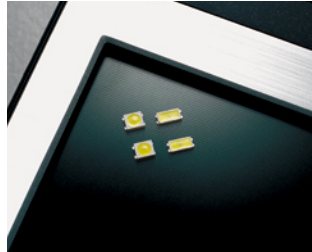


### ROHM White LEDs for Backlighting and Illumination: World Class Brightness in the Medium Current Range

LEDs are used as light sources for LCD backlights in virtually all current compact portable devices. Car navigation systems and portable DVD players in particular require higher brightness, increasing demand for medium current range LEDs (50 to 150mA).



ROHM PSML1 and PSML2 package white LEDs offer ultra-high brightness (7cd at 100mA) in the medium current range. A high thermal conductivity Cu frame with exposed backside provides a thermal dissipation pathway to the substrate for significantly improved heat dissipation characteristics: 70°C/W and 60°C/W for PSML1 and PSML2, respectively (when mounted on a standard FR4 glass epoxy resin board), making them ideal for backlight sources in a wide variety of devices such as car navigation systems, illumination sets, interior lighting, indicator displays and entertainment systems.

In addition, improved processes and construction eliminate temperature dependency and prevent both brightness and temperature degradation in the medium current range, even during long-term, continuous use and under high temperatures.

### 1.5V drive MOSFET reduces power consumption by up to 85%

The current trend in portable devices is towards greater sophistication. In addition to standard phone and music playback a number of functions are being continually added, including TV, camera, and GPS capability. At the same time, device drive voltage continues to fall due to refinements in the IC manufacturing process and increasingly low voltage operation. Extending the battery life of portable devices will largely depend on how efficiently single-cell Li-ion batteries (3.6V) can be used.



ROHM's ECOMOS™ series utilizes a proprietary low-voltage operation process to provide stable operation in the low-voltage range ( $V_{GS}=1.5V$ ). ON-resistance is much lower than 2Ω during 1.5V operation, helping to conserve energy by reducing power consumption by up to 85%. Optimized for energy savings in compact portable devices such as digital cameras and mobile phones, the units feature halogen-free packaging in a variety of form factors (e.g. TSMT8, TSST8, WEMT6), minimizing the impact on the environment.

### The industry's first wireless LAN baseband IC with built-in IEEE802.11X protocol

In this age of wireless broadband high-speed wireless LAN communication is no longer limited to PC peripherals, but is increasingly finding its way into consumer and industrial devices. This raises security issues that are difficult to address in devices with a large CPU load.



ROHM's wireless LAN IC is the first in the industry to feature hardware-based encryption protocols, making it possible to transmit data without placing a load on the system CPU when running encrypted wireless LAN. The result: added security without increased power consumption. In addition, ROHM offers the BW9419 2.4GHz wireless LAN module with integrated baseband processor for embedded applications.

Expertise gleaned from years of experience as a manufacturer of passive, discrete, and IC products has allowed ROHM to develop high reliability, easy-to-use wireless module solutions optimized for virtually any application.

Conventional manufacturers develop wireless LAN modules based on a particular baseband processor. ROHM, on the other hand, customizes the baseband chip to conform with firmware changes, resulting in greater flexibility and more efficient operation.

### Compact, high-speed contact image sensor head for card reading

Card and business card scanners need to be compact, maintenance-free, and operate at high speeds. Contact image sensor (CIS) heads are small, reduce power consumption, and eliminate the need for optical system design, making them the ideal solution.



ROHM CIS products, developed using high efficiency engineering design, utilize in-house LEDs and sensor chips, resulting in stable, high performance operation over a wide range of temperatures and under continuous load.

A novel prism design that utilizes proprietary optical technology for uniform light distribution with minimal intensity loss throughout the entire range is combined with an RGB LED light source that enables compatibility with color scanning, resulting in more stable operation and longer life than CCD systems using cold cathode tubes.

In addition, low voltage operation (3.3V) contributes to greater energy savings, while bi-directional scanning capability allows scanning in both the forward and reverse directions, enabling greater design flexibility free of constraints imposed by carrier direction.