

NEWS RELEASE

PR0609E

ALPS Offers 45mm Hollow Shaft-Type, LEDilluminated Potentiometer

Built-in-Chip LED Enables Multiple Color Illumination

Duesseldorf, Germany, March 10, 2009 – ALPS ELECTRIC has completed the development of its new RK45C 45mm hollow shaft-type, LED-illuminated potentiometer. The new potentiometer is intended for such uses as the operating parts in car air-conditioning and audio systems.

Recently, operating parts in car air-conditioning and audio systems have been increasingly designed to incorporate dual functions such as an outer dial-type, adjustable knob with an inner switch or operating icon. These operating parts use potentiometers with hollow shafts to accommodate switches and other devices. In addition, these parts have illuminated icons to make the controls more easily visible in low-light conditions during nighttime driving and to enable more fashionably designed systems. These trends have boosted demand for built-in-LED, hollow-shaft potentiometers.

In response to this increased demand, Alps Electric has developed its new built-in-LED potentiometer to have a central hollow measuring 25.0mm in diameter-equivalent to that of existing potentiometers without built-in LEDs.

The fine-graded illuminating LED color variations differ depending on the automotive or electronic product application. As a solution for such market needs, Alps Electric has adopted a chip LED for the new RK45C potentiometer. Characterized by its capability to emit light with wider color variation than conventional bullet LEDs, the chip LED used on the RK45C potentiometer is capable of emitting neutral-colored light, which has been





extremely difficult to achieve with conventional bullet LEDs. Furthermore, embedding the chip LED in a higher position on the potentiometer results in higher luminance and brightness.

The feel of operating parts in car air-conditioning and audio systems has become an increasingly important design element. Accordingly, it is now necessary to accommodate the varying needs of automakers producing a wide range of models. On the RK45C potentiometer, the number of dial-type knob positions as well as the knob's detent torque can be customized, contributing to a realistic, precise operating feel.

Loose operating shafts are commonplace on larger operating dials. By optimizing the potentiometer structure and resin utilization through the application of its simulation technology, Alps Electric has successfully minimized looseness around the shaft, perfecting the RK45C potentiometer to produce a high-quality device with an excellent operating feel.

The maximum rotational angle of the RK45C potentiometer's dial-type knob has been increased to 290 degrees from the 270 degrees on conventional potentiometers. This feature allows for increased freedom of set design.

Features

Development and mass production of the RK45C hollow shaft-type, built-in-chip LED potentiometer capable of emitting light with greater color variation

- 1. Built-in-chip LED enables light emission with greater color variation.
- 2. Number of dial-type knob positions as well as knob's detent torque can be customized for a realistic operating feel.
- 3. Looseness around the operating shaft minimized to achieve excellent operating feel.
- 4. Dial-type knob's maximum rational angle (290 degrees) allows increased freedom of set design.





Principal Applications

Operating parts of car air-conditioning and audio system control panels

Specifications

Product name RK45C

Dimensions (W x D x H)/

Hollow diameter

45.0mm x 45.5mm x 9.5mm / φ25.0mm

Operating temperature

range

-40°C to +85°C

Rating 0.05W Total resistance $5k\Omega$

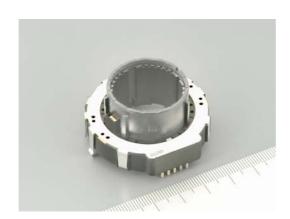
Operating life 30,000 cycles

Rotational angle/Positions 220°/17 (Maximum rotational angle: 290°)

Detent torque 40mN·m

LED Red, ice blue, green, white

For more information on the new the product please visit http://www3.alps.com/e/npv_product/081211_RK45C/RK45C_E.PDF







ALPS Electric Co., Ltd.

Since its establishment in 1948 ALPS has grown as a comprehensive manufacturer of electronic components. At present ALPS is creating innovative high-value-added products in its main business segments — Components, Magnetic Devices, Communications, Peripheral Products, and Automotive Electronics — which are contributing to the advance of a digital society. ALPS is a global company that carries out its operations with 23 production bases in 9 countries as well as 57 sales bases in 14 countries. Consolidated net sales in the year ended March 31, 2008 amounted to YEN 693 billion.

ALPS ELECTRIC EUROPE GmbH, a subsidiary of ALPS Electric Co., Ltd., was established in 1979. Since 1989, the European Head Office has been located in Düsseldorf, where a team of specialists works in Sales, Marketing, and Product Engineering. The activities of our branch offices in Munich, Paris and Milton Keynes, Stockholm, Gothenburg, our sales office in Milan and our European distribution work are co-ordinated from Düsseldorf.

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