

This LED illuminated ring potentiometer is best suited for knob design of various set devices



■ Typical Specifications

| Items                       | Specifications                        |                                       |
|-----------------------------|---------------------------------------|---------------------------------------|
|                             | RK45B                                 | RK45C                                 |
| Contact resistance          | ±20%                                  |                                       |
| Maximum operating voltage   | 50V AC, 30V DC                        |                                       |
| Detent torque               | 180° ±5°<br>(Customizable up to 270°) | 220° ±5°<br>(Customizable up to 290°) |
| Operating life              | 30,000 cycles                         |                                       |
| Operating temperature range | -40°C to +85°C                        |                                       |

■ Product Line

| Total resistance | Resistance taper | Number of positions | Rotational angle | Detent torque (mN · m) | LED | Minimum order unit (pcs.) |          | Product No.         | Drawing No. |
|------------------|------------------|---------------------|------------------|------------------------|-----|---------------------------|----------|---------------------|-------------|
|                  |                  |                     |                  |                        |     | Japan                     | Export   |                     |             |
| 5kΩ              | B                | 8                   | 180° ±5°         | 55±20                  | Red | 200                       | 200      | <b>RK45B1A00001</b> | 1           |
|                  |                  | 17                  |                  | 40±16                  |     |                           |          | <b>RK45B1A00002</b> |             |
|                  |                  |                     |                  |                        |     |                           | 220° ±5° |                     | 400         |

Notes

1. Other varieties are also available. Please inquire.
2. We can also provide LED colors other than the above mentioned. Please contact us if required.


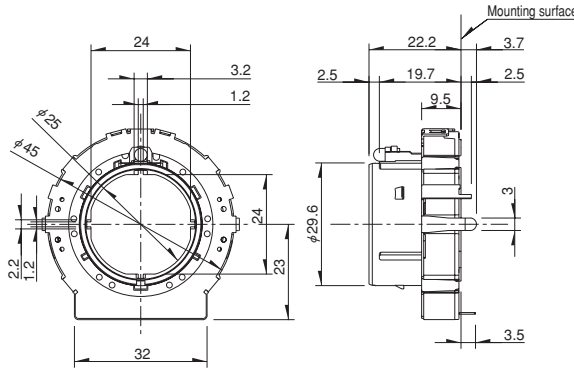
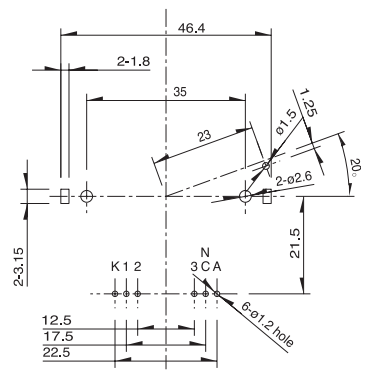

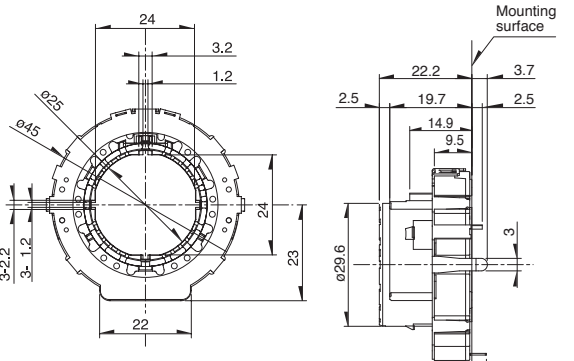
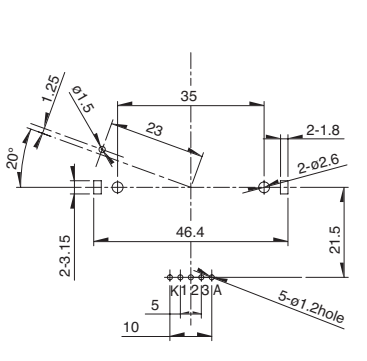
■ Packing Specifications

Tray

| Products No. | Number of packages (pcs.) |                         | Export package measurements (mm) |
|--------------|---------------------------|-------------------------|----------------------------------|
|              | 1 case / Japan            | 1 case / export packing |                                  |
| <b>RK45B</b> | 200                       | 200                     | 540×360×205                      |
| <b>RK45C</b> | 200                       | 400                     | 540×360×380                      |

■ Dimensions

Unit:mm

| No. | Photo  | Style   | PC board mounting hole dimensions<br>(Viewed from mounting side)                     |
|-----|--|---|--|
| 1   | <p><b>RK45B<br/>(With LED)</b></p>        |   |   |
| 2   | <p><b>RK45C<br/>(With chip LED)</b></p>  |  |  |

Ring Type Potentiometers Soldering Conditions

■ Reference for Manual Soldering







| Series                     | Tip temperature | Soldering time | No. of solders |
|----------------------------|-----------------|----------------|----------------|
| <b>RK39A, RK45B, RK45C</b> | 350°C max.      | 3s max.        | 1 time         |

■ Reference for Dip Soldering

| Series                     | Preheating                    |              | Dip soldering         |                | No. of solders |
|----------------------------|-------------------------------|--------------|-----------------------|----------------|----------------|
|                            | Soldering surface temperature | Heating time | Soldering temperature | Soldering time |                |
| <b>RK39A, RK45B, RK45C</b> | 100°C max.                    | 2min. max.   | 260°C max.            | 5s max.        | 2 time max.    |

# Ring Type Potentiometers

## List of Varieties

| Type                        |                        | 39mm size  | 45mm size  |   |
|-----------------------------|------------------------|--|--|---|
| Series                      |                        | <b>RK39A</b>   | <b>RK45B</b>   | <b>RK45C</b>  |
|                             |                        | Single-unit  | Single-unit  | Single-unit   |
| Photo                       |                        |   |  |  |
| Features                    |                        | LED illuminate   |  |   |
| Dimensions (mm)             | W                      | 39   | 45   |   |
|                             | D                      | 39.5   | 45.5   |   |
|                             | H                      | 8.5  | 9.5  |   |
| Operating temperature range |                        | -40°C to +85°C   |  |   |
| Operating life              |                        | 30,000 cycles  |  |   |
| Automotive use              |                        | ●  | ●  | ●   |
| Life cycle                  |                        |   |  |  |
| Electrical performance      | Total resistance (k Ω) | 5  |  |   |
|                             | Resistance taper       | B  |  |   |
|                             | Rated power            | 0.05W  |  |   |
|                             | Insulation resistance  | 10MΩ min. 50V DC   |  |   |
|                             | Voltage proof          | 50V AC for 1minute   |  |   |
| Mechanical performance      | Detent torque          | 40±16mN·m<br>50±20mN·m   | 55±20mN·m<br>40±16mN·m   | 40±16mN·m   |
|                             | Number of positions    | 6, 17  | 8, 17  | 17  |
|                             | Stopper strength       | 1N·m   |  |   |
|                             | Push-pull strength     | 100N (Push), 50N (Pull)  |  |   |
|                             | Vibration              | 10 to 55 to 10Hz/min., the amplitude is 1.5mm for all the frequencies, in the 3 direction of X, Y and Z for 2 hours respectively |  |   |
| Terminal type               |                        | Insertion  |  |   |
| Page                        |                        | 384  | 385  |   |

|   |     |
|---|-----|
| Ring Type Potentiometers Soldering Conditions | 386 |
| Potentiometers Cautions                       | 427 |
| Potentiometers Measurement and Test Methods   | 429 |
| Potentiometers Resistance Taper               | 431 |

### Notes

- The operating temperature range for automotive applications can be raised upon request. Please contact us for details.
- Indicates applicability to all products in the series.