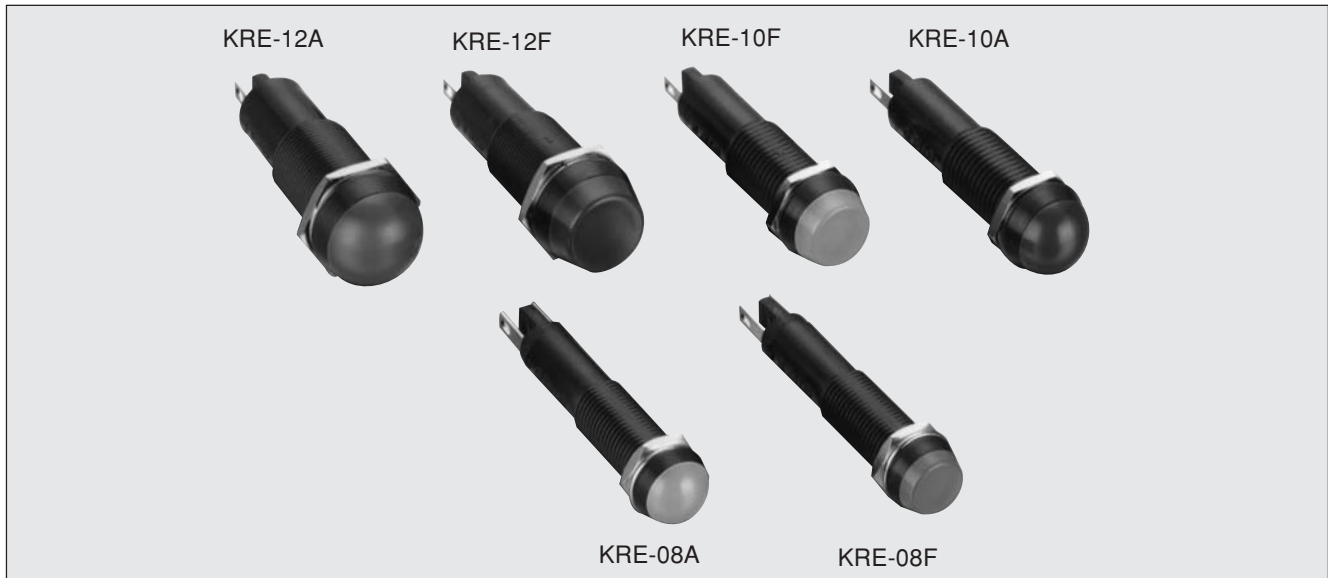


# LED Indicator Lights

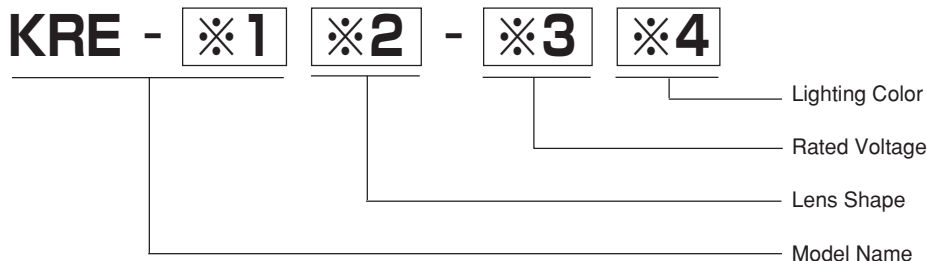
## KRE-08/10/12 Series



### ■ Features

- Wide angle of visibility, clearly seen from the side when lit.
- Three identically shaped types from diameter  $\phi 9 \sim \phi 13.5$ .
- Totally enclosed protected construction (IP40).

### ■ Model Designation



※1

Code	Mounting Hole ( $\phi$ )
08	$\phi 8.1$
10	$\phi 10.1$
12	$\phi 12.1$

※2

Code	Lens Shape
A	Dome
F	Round flat

※3

Code	Rated Voltage
2	12V DC
4	24V DC

manufactured to order

※4

Code	Lens Color
W	Milky white
R	Red
G	Green
O	Orange
Y	Yellow

manufactured to order



#### NOTICE

- The lens and LED of the KRE-08/10/12 series are not replaceable.
- Solder the KRE-08/10/12 at a soldering iron temperature of 270 degrees or less, for under 5 seconds.
- In the resistance equation means this series of indicator lights will light up with a very small current of even a few mA. In circuits with induced voltage or leakage current, these lights can malfunction. If this occurs, use a resistor in parallel with the indicator light.
- Unless otherwise mentioned, all dimensions are indicated in "mm" in this book.

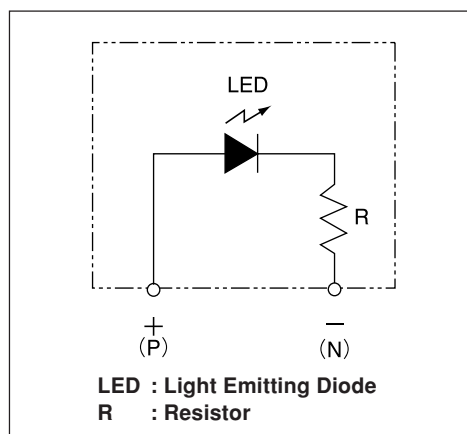
## ■ Specifications

Item	Model	KRE-08/KRE-10/KRE-12
Lighting Method		Illumination by bright LED
Rated Voltage		12V DC ( $\pm 10\%$ ) 24V DC ( $\pm 10\%$ )
Rated Current		15mA (Milky white / Red / Green / Yellow), 10 mA (Orange)
Insulation Resistance		100M $\Omega$ or more between live parts and ground measured by 500V DC megohmmeter
Withstand Voltage		2000V AC for 1 minute between live parts and ground
Heat Resistance		For 2 hours at $-25^{\circ}\text{C}$ and $+55^{\circ}\text{C}$ respectively
Humidity Resistance		For 95 hours at $40^{\circ}\text{C}$ and 95% RH
Vibration Resistance		3-dimensional vibration for 1 hour with sweep time of 1 minute, (double amplitude; 1.5mm, frequency; 10~55Hz)
Shock Resistance		3-dimensional shock of 500m/s <sup>2</sup> to 6 surfaces 5 times
Protection Structure		Enclosed for 1.0mm object (IP40)
Operating Environment		Temperature: $-10\sim 40^{\circ}\text{C}$ , Humidity: 45~85% RH (No freezing or condensation)
Reverse Voltage		+10% or rated voltage
Lighting Color		Milky white, Red, Green, Orange, Yellow
Lens Shape		Dome and Round flat
Panel Thickness		1~10mm
Wiring		Soldering or 110 type fasten tab (+ or – display)
Bezel Color		Black

## ■ Materials

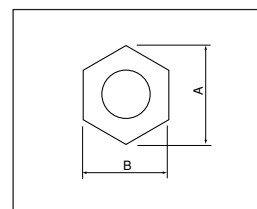
<div>Model</div> <div>Item</div>	KRE-08 / KRE-10 / KRE-12		
Lens	Polycarbonate resin	(Milky white, Red, Green, Orange, Yellow)	UL94V-2
Holder	PBT resin	(Black)	UL94V-0
Terminal Block	PBT resin	12V DC : (Gray), 24V DC : (Black)	UL94V-0
Terminal Shape	Soldering or 110 type fasten tab		
Terminal Metal	Brass	(nickel-plated)	
Mounting Washer	Stainless steel	(nickel plated)	
Mounting Nut	Brass	(nickel plated)	

## ■ Circuit Diagram



## ■ Mounting

Insert into a front panel and fix in place with the mounting nut.  
Use ring spanner or regular spanner.



Model	Size	A	B	Torque
KRE-08	(11.2)	10mm		0.2~0.4 N·m
KRE-10	(13.5)	12mm		0.2~0.4 N·m
KRE-12	(17.2)	15mm		0.6~0.8 N·m

■ Dimensions

