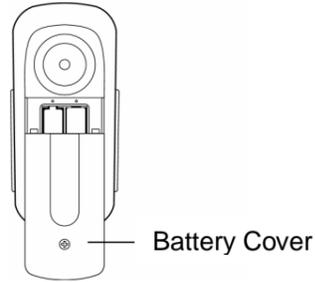


Usage and Part Names

Battery

(1) Installing Batteries

Loose the screw at the lower part of the battery cover, pressing the battery compartment cover as shown and remove it. Install batteries positioning the negative and positive poles properly as shown inside the compartment, bolt up the screw, and put the cover back.



Note:

If the battery cover does not fit tightly, water-proof property will be deteriorated, or the performance will be deteriorated due to water penetration in the unit.

Don't bolt up the screw too tightly, as putting the battery compartment cover.

(2) Replacing Batteries

Residual quantity of the batteries is displayed on the low battery symbol in the display part. When the low battery symbol becomes  the batteries have been exhausted. Replace the batteries with new ones (AAA).

Note:

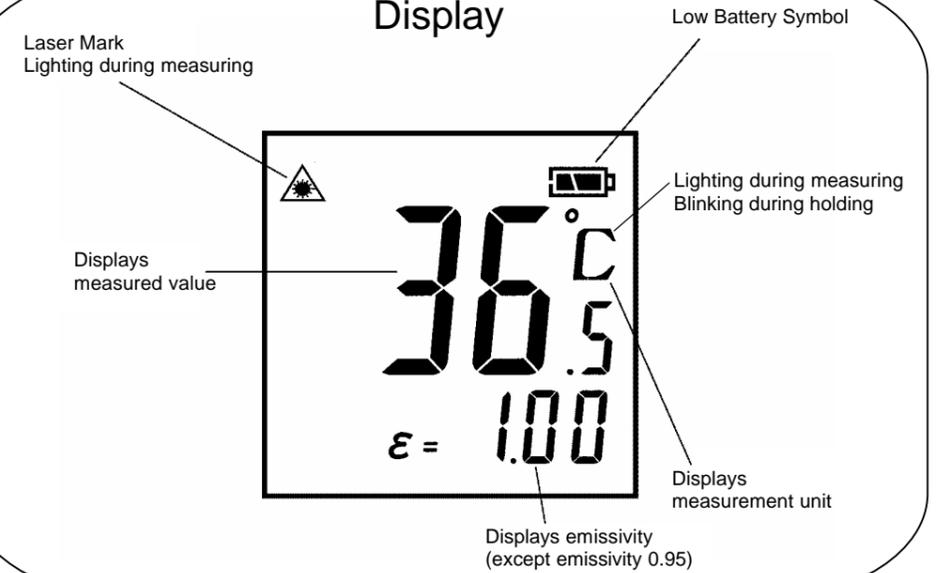
When replacing batteries, do replace 2 batteries at the same time.

Measurement Display

Aim the measuring window at the measuring target, and press the MEASURE key. Holding down the MEASURE key, confirm if the laser beam irradiates the measuring position properly. Adjust the position, if the laser beam does not irradiate the measuring position properly. During holding down the MEASURE key, measuring continues. When the MEASURE key is released, the measured value is hold for about 30 seconds, and then the power is shut off with the Auto Power Off function.

If the measuring window is aimed at a new target and the MEASURE key is pressed while the measured value is being hold, the temperature of the new target will be measured. When the MEASURE key is released, the newly measured temperature will be hold.

Display

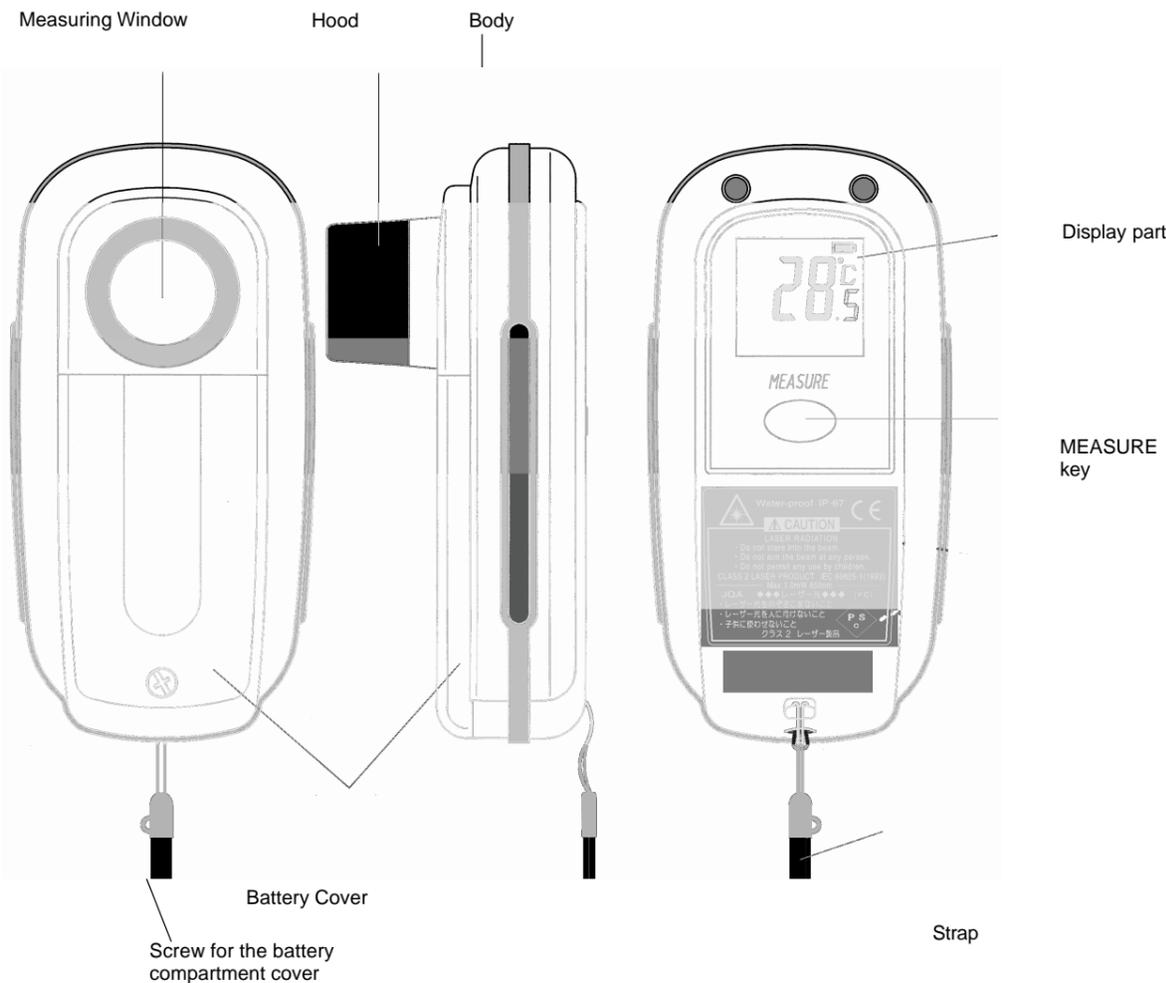
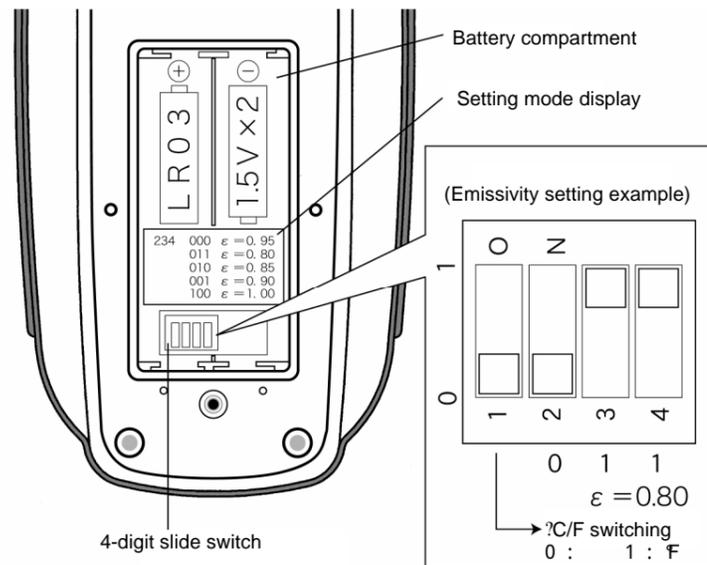


Settings

Normally only the object emissivity is selectable. The emissivity is set at 0.95 at the factory. The emissivity is displayed during measurement (except for emissivity 0.95. When nothing appears on the display, it means that the emissivity is 0.95.) Five variations of emissivity ranging from 0.8 to 1.0 can be set per 0.05 steps.

The emissivity can be altered by setting the 3 digits (2nd, 3rd and 4th digits from left) of the 4-digit slide switch in the lower part of the battery compartment. The setting mode of the slide switch is displayed below the battery part. Remove the batteries, and set as required according to the displayed setting mode.

If necessary, the measurement unit can be switched to Fahrenheit (F) (with the left most digit of the 4-digit slide switch.)



Setting Emissivity (Reference)

Quantity of infrared radiation emitted from objects depends on the objects' material, surface conditions, measuring temperatures and so on. The table below shows emissivity of some objects. Please note that these values are just for reference. Please also refer to the estimated emissivity using the separately sold black body tape.

Emissivity of Objects

Material	Emissivity	Material	Emissivity
Water, Ice	0.98	Cloth, Fabric (colored)	0.95
Soil	0.92 to 0.96	Leather, Fur	0.96
Concrete (wet)	0.96 to 0.98	Human skin	0.99
Concrete (dry)	0.91 to 0.95	Vegetable, Fruit	0.98
Ceramics	0.85 to 0.95	Dough	0.98
Stone, Asbestos	0.92	Meat	0.98
Plastics	0.90 to 0.95	Copper oxide	0.5 to 0.6
Rubber (black)	0.95	Ferric oxide	0.7 to 0.8
Wood	0.98	Painted surface	0.8
Paper	0.92	Tile	0.8

Estimated Emissivity Using the Black Body Tape

If a measuring object accepts sticking of adhesive tapes, stick a piece of the black body tape (emissivity: 0.94) to the object, and measure the temperature after setting the emissivity to 0.95.