

# Portable Refraction Tank with LED

Cat.No.D20-1290-W0

## Instruction Manual

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### Purpose

When light travels in different media, such as air to water or water to air, it is reflected or refracted at the boundary of the two media.

You can confirm the properties of light when it is reflected or refracted at the boundary plane of water or glass(water in case of this apparatus).

### Outline of the apparatus

Water is enclosed in a cylindrical water tank of diameter 90mm, made of acrylic material. All necessary items, including light source and slits, are provided in the body, therefore, you can perform the experiments with the body alone.

You can change the angle of incidence of light by inclining the body. This enables refraction and reflection of light due to water to be observed easily and distinctly.

Naturally, you can observe the path of the light the instant it moves from air to the water surface and the instant it moves from within the water to the water surface.

Since the water tank is small, you can measure angles accurately using the commonly available protractor of about 9 cm.

This apparatus is ideal for demonstration as well as for experiments conducted by students.

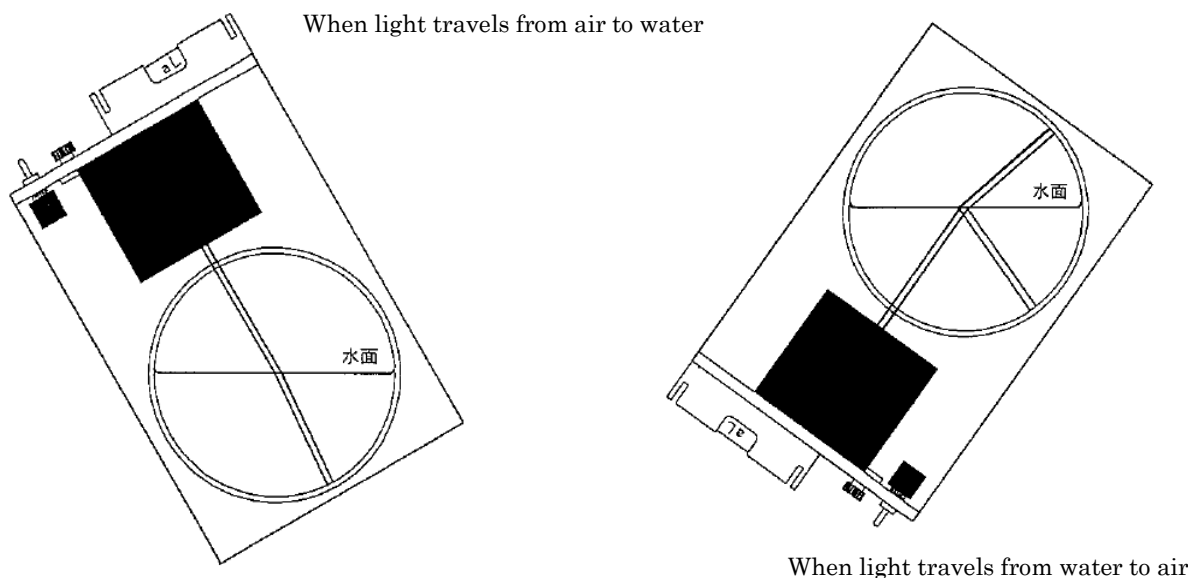
## Method of usage

Set the dry cells provided in the cell box of the unit and turn on the switch.

Light enters the water tank through the slit.

Keep the body vertical at first. Then by inclining the body or rotating it, change the angle of incidence of the light beam in the water tank, measure and observe the refraction and reflection of light.(Refer to the bellow figure.)

If you perform the experiment in a slightly darkened room, you can observe the light beam distinctly. To adjust the angle of illumination from the slit, loosen the illumination angle adjusting screw by the side of the power switch. After performing adjustments using this screw, tighten it.



Material: Acrylic

Size: External dimentions...170×100×35mm

Size of Tank.....Dia.90×20mm

Weight Approx.200 g (Without batteries)

Light source : High Brightness LED(Red color)

(Voltage: Max2.5V)

Power supply : Dry cells (UM-3) × 2 nos.(Provided)

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