the potential level signal put in the color-changing module **20**, to enable the color-changing module **20** to generate a corresponding color, thereby, to change the exterior color of the color-changing module **20**.

The color control module **30** further includes a touch control unit **301**, a temperature sensor **302** and a system random color-changing unit **303**. The touch control unit **301** is located on one side of the host case **10** to receive the compression of an external force to generate the control signal. The touch control unit **301** includes a piezoelectric sensor.

The temperature sensor **302** is located on one side of the host case **10** to detect the ambient temperature, and generate a control signal corresponding to the temperature. The temperature sensor **302** includes a thermistor.

The system random color-changing unit **303** aims to perform a random parameter process and generate a control signal randomly to enable the color-changing module **20**, to change the exterior color randomly.

The selection module **40** has one end connecting to the color-changing module **20** and another end connecting to the touch control unit **301**, temperature sensor **302** and system random color-changing unit **303**, to selectively put a potential level signal in the color-changing module **20**, thereby, to select a touch control color changing mode, temperature control color changing mode or random color changing mode to change color. The selection module **40** includes a switch.

Refer to FIG. **3** for the structure of the color-changing electroluminescent material. The electroluminescent material consists of a plurality of micro containers **201** arranged in a desired layout. Each of the micro containers **201** has white base layer **205** on the bottom, a transparent electrode **204** above the white base layer **205**, and a water insulation layer **203** above the transparent electrode **204**. The micro containers **201** contain an oil-base pigment **202** and a water layer **206** on the top portion. The oil-base pigment **202** is located between the bottom of the micro container **201** and the water layer **206**, to form a flat film. When the transparent electrode layer **204** and the water layer **206** are subject to a voltage, the tension of the contact surface alters, the film is deformed and shrunk and squeezed to one side by the water layer **206**, and the white base layer **205** is exposed and the micro container **201** can reflect light to generate a lighter color on the exterior. When the micro container **201** contains the oil-base pigment of different colors, and different potential level signals are put in the transparent electrode **204**, the exterior will generate different colors or patterns. As the voltage required to change the color is very low and consumes little electric power, the required power may be supplied by the battery of the portable information-processing device.

By means of the portable information-processing device with a color changing case, the color changing film located in the transparent host case can change color or pattern according to different potential level signals. Hence users can change the appearance of the portable information-processing device any time desired and the visual diversity of the product increases.

While the preferred embodiments of the invention have been set forth for the purpose of disclosure, modifications of the disclosed embodiments of the invention as well as other embodiments thereof may occur to those skilled in the art. Accordingly, the appended claims are intended to cover all embodiments, which do not depart from the spirit and scope of the invention.

What is claimed is:

1. A portable information-processing device having a color changing case, comprising:

a host case made from a colorless transparent material having a housing space to hold a main body of the portable information-processing device, the colorless transparent material having a laminated space; and

a color-changing module made from a color-changing electroluminescent material housed in the laminated space to generate a selected color corresponding to a potential level signal provided by the portable information-processing device, wherein the color-changing electroluminescent material has a plurality of micro containers, and the micro containers have white base layer on a bottom, a transparent electrode above the white base layer, and a water insulation layer above the transparent electrode and contain an oil-base pigment and a water layer on a top portion.

2. The portable information-processing device of claim **1**, wherein the host case includes an upper shell and a lower shell.

3. The portable information-processing device of claim **1** further including a color control module linking to the color-changing module to generate a control signal to control the potential level signal input into the color-changing module to change the color of the color-changing module.

4. The portable information-processing device of claim **3**, wherein the color control module includes a touch control unit to receive compression of an external force to generate the control signal.

5. The portable information-processing device of claim **4**, wherein the touch control unit includes a piezoelectric sensor.

6. The portable information-processing device of claim **3**, wherein the color control module includes a temperature sensor to detect ambient temperature and generate the control signal according to the detected temperature value.

7. The portable information-processing device of claim **6**, wherein the temperature sensor is a thermistor.

8. The portable information-processing device of claim **3**, wherein the color control module includes a system random color-changing unit to generate the control signal randomly.

9. The portable information-processing device of claim **1** further including a selection module to select the potential level signal input into the color changing module.

10. The portable information-processing device of claim **9**, wherein the selection module includes a switch.

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