Beyond Sparkles | From Objects to Space: Light

Water Melody

„Water Melody" is a public interactive installation, be built in parks, plazas, shopping malls and other public places. By sound, light and interactive design, „Water Melody" create a funny, tranquil and elegant atmosphere, to attract and encourage people to participate, and also to provide the opportunity for people to communicate with each other.
Entire interactive installation consists of three parts: pool, glass bridge and LED ball.
Both length and width of the pool are 10m, and depth is 20cm. In order to make a better integration of the pool and the environment, surface of the water is flush with the ground. And also there's no obstructions at the poolsides, to make it easier for people to get close. There's a glass „bridge" linking two pools. Glass bridge combined by a series of glass boxes, and each glass box has an independent electromagnet system. the electromagnet will be activated, when people set foot on the glass. The bridge deck is flush with the ground, and the waterway which under the glass connecting two pools.
The protagonist of the whole installation are small plastic balls which with a diameter of 6cm. The small transparent ball can emit blue and white light. They will change colors when they collide with each other, and at the same time the balls will emit different chromatic tones. Under ordinary circumstances, the balls floating freely in the pool water. But when someone moving on the glass bridge, the surrounding balls will be attracted by electromagnet, and follow the people move from one pool to another.
When night fell, the lights suspended in the water, sway with the water gently, exudes a kind of special charm. Light collide with each other slightly, change colors, make beautiful sound of the slight collision. People gathered at the the pool side, sitting or standing, Splash the water with hands or feet. Curious children picked up the ball from water and thrown back into the water. A gust of wind blew, the pools are full of „Ding-Dong" sound. Occasionally someone walks on the glass bridge, light will flow from one pool to another.

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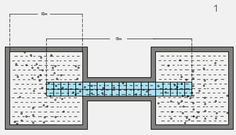
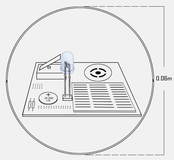


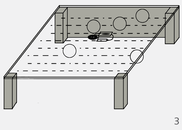
1. Aerial view of the overall structure: The pool is a square, both length and width are 10 meters. The glass bridge is 15 meters long, two ends of the bridge are in the center of the pools.

2. Internal structure of the LED ball: diameter is 6cm, arduino circuit board be fixed inside. Solar power system includes rechargeable button battery, solar panels, charge controller. led light is the double colors light for blue and white. In addition, there are also collision sensors, electronic switches, iron, speakers inside of the ball.

2



3. 4. 5. The internal structure of the glass bridge: glass box is a square which both length and width are 1m. Infrared sensors and electromagnet are mounted under the glass. Height of the tunnel is 20cm, water and balls can pass through freely. When people set foot on glass, the signal which from infrared sensor activates electromagnet, balls will be attracted by a magnet. It looks like the light flow to follow the footsteps and track the people.



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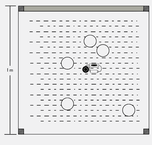

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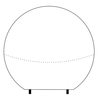
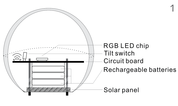
Internal structure





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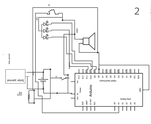

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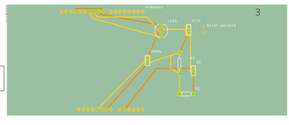

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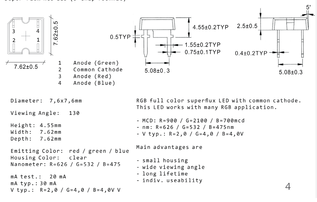

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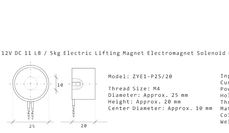
1. diagram of the light ball
2. circuit diagram of the light ball
3. demo_ pcb of the light ball
4. detail of RGB LED Chip in the light ball
5. detail of electromagnet in glass panel
6. circuit diagram of the glass panel
7. demo_ pcb of the glass panel with infrared switch and electromagnet



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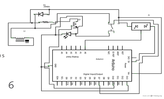

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Technical details

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