



ELECTRIC LIGHTING QUALITY

MAGIC BOX is a versatile home. Its design allows to change the room size by opening and closing the movable walls and to modify the interior layout, creating different spaces according to the inhabitants' needs. Given these considerations and keeping in mind the competition requirements, we have chosen luminaires that complies with the following goals:

- To achieve the lighting levels required by the competition.
- To minimize energy consumption.
- To enhance specific structural parts of the building.



Each space within the house is provided with two types of lighting: by-location (task) and continuous (ambient). Artificial lighting is used to emphasize specific areas such as the mirror in the bathroom or to enhance the furniture design as in the case of the couch lights.

The kitchen needs concentrated lighting for the countertops and the sink to avoid hitting eyes directly. Therefore, we have installed two fluorescent lamps on the inside of the louver-door countertop. The incoming light is warm white not to distort the color of the objects and food.





During the night, solar greenhouses are lit up to highlight this very innovative and essential part of the house that marks the transition between the inside and the outside.

Light Emitting Diodes (LEDs) are used on the outside of the house, i.e. at the access walkways, to provide dynamic pathway lighting. This kind of lighting is low-consumption, long-life and highly efficient, since almost all the energy transforms into light. LEDs emit diffuse light, which has advantages in distances smaller than 10 m., where flashlights are commonly used. Spaces are regularly lighted, with no abrupt contrasts of light and darkness nor light rings, allowing a better orientation and perception of details.



All electric lighting is provided by fluorescent lights since they are more energy-efficient than halogen bulbs. There are recessed ceiling lights in all usable areas, except in the lounge. All of them are compact downlights, even in the bathroom and in the kitchen. No directional downlights have been used, due to the reduced ceiling height (the flat ceiling is 2.23m. high). Commercially available lights are built into the furniture, as in the kitchen cabinets and in the office shelves.