Interior Design Lighting
The interior design of the house is divided into 3 main areas:

1. Main Living Area
2. Secondary space: The Bathroom
3. Private Area: The Bedroom

Entering the house through the main entrance will introduce the main living area, which includes the kitchen, dining area and home entertainment space.

Caramel Bamboo Board // Most of the furniture are designed and made out of Caramel Bamboo Board. Bamboo is the fastest growing woody plant on earth and therefore has sustainability benefits over conventional hardwoods.

The board is made of 3 layers of perpendicular Bamboo laminates which are treated under high pressure and heat to create stable high quality engineered boards for interior applications.

Multiple reconfigurable features of the house are installed, as outlined in the following pages.
1 - Main Living Area

Kitchen Island Eating Area // The kitchen island comprises an eating area and storage space, and can be used in two configurations, as shown in the illustration below: the first one provides an eating area for permanent residents of the house, and the second provides additional dining space to host a large number of guests.

- Refrigerator KFI 3285-91 N +A
- Bosch Dishwasher Slimline SPI53M15EU +A
- Folding eating chairs
- Samsung Microwave TDS
- Hob Cooker - Bosch Flex Induction PIN675N14E
- Cooking zone ceramic
- Bosch HBA638251B Electric Oven A
Lounge Sofa Units // The lounge sofa includes four seating units filled with recycled polystyrene. The unit is lightweight and easy to move, and can be arranged in many different configurations due to its modular character. Depending on space available and the users' needs, the unit can be turned into either one big piece of furniture or several smaller pieces with individual seating areas for each person. The lounge sofa units can also be reconfigured to provide additional sleeping spaces for guests.

Retractable Television Mount // The TV is located on the southern wall, with a retractable, angled mount which allows it to be configured for different viewing scenarios, such as the Movie Night Competition.
2 - Secondary space: The Bathroom

Walking along the living area will take us to the secondary area which is the Bathroom that also holds a verity of advanced technologies:

- Vaso Sospeso
- Chromagen hot water tank+ digital screen
- iTap
- Bosch WAS 24441 A+
- Siemens WT48Y780 clothes dryer
- PICSOL radiant heating panels+ towels holder
3 - Private space: The Bathroom

The third area is the most private one, which holds the Bedroom.

Workstation // The workstation provides the necessary desk space and storage for the study/work area.

As shown in the illustration below, the desktop folds down from a unit which is constructed as part of the east wall bedroom closet. During jury tours, and public tours time-permitting, a decathlete will lower and raise the desk to demonstrate the flexibility of the space.
Lighting

The lighting design aims to create comfortable lighting condition throughout the day, while avoiding glare and unnecessary energy consumption. The house is designed to maximize entry of indirect natural sunlight through north facing skylights and through windows that are protected with shading devices to avoid glare from direct sun.

Natural lighting checks // A natural lighting simulation was performed and 6 different lighting conditions were checked

<table>
<thead>
<tr>
<th>Time &amp; Date</th>
<th>Light condition</th>
<th>Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>11am and 3pm on the shortest day of the year (21st of December)</td>
<td>clear sky</td>
<td>The house is getting plenty of natural lighting during morning and afternoon.</td>
</tr>
<tr>
<td>11am and 3pm on the shortest day of the year (21st of December)</td>
<td>overcast sky</td>
<td>Natural light gives us a basic amount of light averaging around 100lux and in some areas arriving to 400lux. Additional artificial lighting is needed for specific tasks (reading, kitchen work etc).</td>
</tr>
<tr>
<td>11am and 3pm on the clear skies. longest day of the year (21st of June)</td>
<td></td>
<td>Plenty of natural lighting during the whole day.</td>
</tr>
</tbody>
</table>

Artificial lighting // The artificial lighting comes to complement the natural sunlight during the day when necessary and to create task appropriate lighting levels during the evening.

The task of artificial lighting, in addition to set the appropriate lighting levels in the space, is to create a domestic and pleasant atmosphere in the house. The artificial lighting is designed to set a minimum of 300 lux lux at task areas that require more lighting and allows the illumination levels to drop in areas that the function can take place with less lighting (ie corridors, areas of the rooms without furniture). Attention is put that the contrast between lit areas and under-lit areas is not so high, to avoid glare.
All fluorescent and LED lighting are specified with light bulbs of color temperature of 3000˚K to create a warm atmosphere. The lighting loads for all the interiors come to 3.21 W/m² (see summary in dialux report of interior lighting).

All artificial lighting is controlled // A smart dimming system that allows for photocell sensors to set the lights on the lighting level required and to add to the lighting levels from natural lighting.

Outdoor lighting // The Outdoor areas of the house are minimally lit to avoid light pollution. All fixtures in the exterior have all their fixture luminance emitted at less than an angle of 90 degrees from nadir (straight down).

Solar motion sensor light collects solar radiation from the sun and actively converts that energy to electricity. It is packed with 16pcs LED lights that produce high brightness light.

The motion-sensing light is triggered when someone or something enters its 1-2 meters range within a 120 degree sensing angle. The light stays on for approximately 30 seconds.
The Solar Decathlon competition challenges 20 student-led teams to design, build, and operate solar-powered houses that produce at least as much as energy as they use, while being affordable, livable, and attractive. The winner of the competition is the team that best blends cost-effectiveness, consumer appeal and design excellence with optimal energy production and maximum efficiency.

The Solar Decathlon demonstrates innovation in solar and sustainable architecture and identifies immediately viable technologies. The first competition was held in the United States in 2002 and it has been held biennially since 2005, with additional competitions in Europe in 2010 and 2012.

In August 2013, Solar Decathlon China takes place in Datong, China, hosted by the Chinese National Energy Administration and the U.S. Department of Energy. Team Israel, the first Israeli team to take part in a Solar Decathlon competition, will construct and operate its prototype house, competing in ten contests assessing everything from the house's architectural style and market appeal to the ability of its residents to cook, do laundry and entertain while conserving energy.

The group's approximately thirty students hail from the fields of architecture, engineering, interior and industrial design, and environmental studies, supervised by two academic supervisors, both architects specializing in sustainable design. In addition, the team has created a large network of academic, government and industry partners. The project's position at the cutting-edge of sustainable building technologies has garnered extensive partnerships and industry support.
Team Israel is made up of students from four leading colleges and universities in Israel incorporating future architects, engineers, and designers: Shenkar College of Engineering & Design, Tel Aviv University, the College of Management Academic Studies, and the Neri Bloomfield School of Design. We are proud to be the first Israeli team to participate in a Solar Decathlon competition.

Our design agenda reflects Israel's dynamic culture, social values and sun-blessed climate. Participating in the competition is an opportunity for us to demonstrate professional and social responsibility by presenting a building which aims to be low budget while maintaining a high standard of architectural and energy design.
Team Members

Academic CO-directors
Arch. Dr. Joseph Cory
Arch. Chen Shalita

Team Managers
Hadass Pe’er // Team Leader
Veronica Zak // Architecture
Alon Kaplan // Energy
Yulia Lipkin // Interior Design
Liron Dan // Materials
Maya Assif – Ashkenazi // Communications
Yasmeen Lala - Ferro // PR
Naama Romano // Sponsorship
Nir Dubrovsky // Market Appeal
Shula Goulden // Project Manual
Anna Blovshtein // BIM

Team Members

Yonatan Friedman // Team Leader 2011-2012
Stephan Bahous // Architecture Manager 2011-2012
Gali Elkovitch // BIM Manager 2011-2012
Nick Peykov
Noa Shimoni // Climate Manager 2011-2012