1. GENERAL
- COVER SHEET
- SHEET LIST
- GENERAL SYMBOLS
- GENERAL ABBREVIATIONS
- EXTERIOR RENDERING
- EXTERIOR RENDERING

2. ARCHITECTURAL
- Solar Village Plan
- Site Plan
- Ground Level Plan
- Mezzanine Level Plan
- Roof Level Plan

3. BIOCLIMATIC ANALYSIS (BA)
- HVAC DISTRIBUTION PLAN
- ME-011 HVAC equipment
- ME-021 Heating
- ME-031 Cooling
- ME-041 Ventilation
- ME-101 Mechanical room elevations
- ME-201 HVAC System Schematic drawings
- ME-211 Heating mode Schematic drawings
- ME-221 Cooling mode Schematic drawings
- ME-231 Controls
- ME-301 Isometric Distribution

4. INTERIORS (IN)
- Ground Level Floor
- Mezzanine Level Floor
- Reflected Ceiling
- Interior Elevations
- Interior Elevation 2
- Interior Elevation 3
- Interior Elevation 4
- Ground Level Furnishings
- Mezzanine Level Furnishings
- Kitchen Plan
- Kitchen Elevations
- Bathroom Plan
- Bathroom Elevations
- Bathroom Elevations
- Interior Rendering
- Interior Rendering

5. STRUCTURAL (ST)
- Foundation Plan and Details
- Structural Floor Framing Plan
- Structural Floor Plan
- Structural Roof Plan
- Structural Longitudinal Sections
- Structural Transversal Sections

6. FIRE PROTECTION (FP)
- Fire Protection : Ground Level
- Fire Protection : Mezzanine Level

7. PLUMBING (PL)
- Plumbing Plan. Supply and Removal
- Schematic diagram
- Supply and removal Isometric
- Drain/Waste/Vent Isometric

8. SOLAR WATER HEATING (SW)
- Plan
- Isometric

9. MECHANICAL (ME)
- HVAC DISTRIBUTION PLAN
- Mezzanine Level Power Plan
- Lighting plan
- One-line Diagram
- Ground level AC Circuit layout
- Mezzanine level AC Circuit layout

10. ELECTRICAL (EL)
- Grid interconnection
- DC wiring diagram
- Ground level Power plan
- Mezzanine level Power plan
- Lighting plan
- One-line Diagram
- Ground level AC Circuit layout
- Mezzanine level AC Circuit layout

11. PHOTOVOLTAIC SYSTEM (PV)
- Photovoltaic System: General
- Photovoltaic System: General 2
- Photovoltaic System: DC circuits
- Photovoltaic System: AC circuits
- Photovoltaic System: grounding system

12. TELECOMMUNICATIONS AND BUILDING AUTOMATION SYSTEM (BAS)
- Wiring plan
- Schematic diagram
- Equipment

13. SDE INSTRUMENTATION DRAWINGS (ID)
- General Monitoring
- Monitoring panel room
- Electricity meters topology
- Electricity meters connection
- House appliances

14. SITE OPERATION (SO)
- Trucks shipment
- Solar Village
- Lot plan

15. HEALTH AND SAFETY (HS)
- Health and Safety in the lot and surroundings
- Health and Safety during the Outside Logistic
- Health and Safety during the Inside Logistic
- Health and Safety during load/unload
- Health and Safety during assembly

16. PUBLIC TOUR (PT)
- Site accessibility
- House tour floor plan
- House Tour General Information
T.B.D.
Glass
Solar Water Heater
See DWG. SW-001
DC Exhaust Fan

Solar Module
Automated Louvers

Project:
Institution:
Team Name:
Checked by:
Scale
DWG. Title
DWG. No.
Address:
Contact:
Consultants:

DN 2013/04/01 SD Submission
DN 2013/07/01 DDc Submission
Note:

Mark Date Description
MAXIMUM MEASURABLE AREA
52.92 m²
Exhaust Grill

T.O.: ROOF
EL +7,500

T.O.: MEZZANINE
EL +3,750

T.O.: F.L.
EL +500

EL ± 0

MEZZANINE T.O.
EL +3,750

EXHAUST GRILL

Note:
DN 2013/04/01 SD Submission
DN 2013/07/01 DDc Submission
### Window Schedule and Details

**AR-301**

<table>
<thead>
<tr>
<th>WINDOW #</th>
<th>ELEVATION</th>
<th>NAME</th>
<th>LOCATION</th>
<th>TYPE</th>
<th>NOTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIN1</td>
<td>2750</td>
<td>SLIDING WINDOW</td>
<td>LIVING RM</td>
<td>DOUBLE LAYER GLASS</td>
<td>DOUBLE LAYER GLASS</td>
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<tr>
<td>WIN2</td>
<td>2750</td>
<td>FIXED WINDOW</td>
<td>LIVING RM</td>
<td>DOUBLE LAYER GLASS</td>
<td>DOUBLE LAYER GLASS</td>
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<tr>
<td>WIN3</td>
<td>2750</td>
<td>FIXED WINDOW</td>
<td>ABOVE THERMAL MASS</td>
<td>SINGLE LAYER GLASS</td>
<td>SINGLE LAYER GLASS</td>
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<table>
<thead>
<tr>
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<th>NAME</th>
<th>LOCATION</th>
<th>TYPE</th>
<th>NOTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIN4</td>
<td>2750</td>
<td>SLIDING WINDOW</td>
<td>STAIRCASE</td>
<td>DOUBLE LAYER GLASS</td>
<td>DOUBLE LAYER GLASS</td>
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<tr>
<td>WIN5</td>
<td>2750</td>
<td>SLIDING/FIXED WINDOW</td>
<td>KITCHEN</td>
<td>DOUBLE LAYER GLASS</td>
<td>DOUBLE LAYER GLASS</td>
</tr>
<tr>
<td>WIN6</td>
<td>2750</td>
<td>SLIDING/FIXED WINDOW</td>
<td>BED RM</td>
<td>DOUBLE LAYER GLASS</td>
<td>DOUBLE LAYER GLASS</td>
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<tr>
<td>WIN7</td>
<td>2750</td>
<td>FIXED WINDOW</td>
<td>BED RM</td>
<td>DOUBLE LAYER GLASS</td>
<td>DOUBLE LAYER GLASS</td>
</tr>
<tr>
<td>WIN8</td>
<td>2750</td>
<td>FIXED WINDOW</td>
<td>BED RM</td>
<td>DOUBLE LAYER GLASS</td>
<td>DOUBLE LAYER GLASS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WINDOW #</th>
<th>ELEVATION</th>
<th>NAME</th>
<th>LOCATION</th>
<th>TYPE</th>
<th>NOTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIN9</td>
<td>2200</td>
<td>FIXED WINDOW</td>
<td>STAIRCASE</td>
<td>DOUBLE LAYER GLASS</td>
<td>DOUBLE LAYER GLASS</td>
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<tr>
<td>WIN10</td>
<td>2750</td>
<td>FIXED WINDOW</td>
<td>BATH RM</td>
<td>DOUBLE LAYER GLASS</td>
<td>DOUBLE LAYER GLASS</td>
</tr>
</tbody>
</table>

**AR-301**

**Note:**

- Double Layer Glass
- Single Layer Glass

**DATE:**

- DN 2013/04/01 SD Submission
- DN 2013/07/01 DDc Submission
DOOR SCHEDULE AND DETAILS

<table>
<thead>
<tr>
<th>DOOR #</th>
<th>ELEVATION</th>
<th>NAME</th>
<th>LOCATION</th>
<th>TYPE</th>
<th>NOTE</th>
<th>MATERIAL</th>
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<tbody>
<tr>
<td>1</td>
<td>2400 x 1300</td>
<td>ENTRANCE DOOR</td>
<td>ENTRANCE</td>
<td>HINGED</td>
<td>FIRE RATED</td>
<td>METEL + GLASS</td>
</tr>
<tr>
<td>2</td>
<td>2700 x 1500</td>
<td>SLIDING DOOR</td>
<td>KITCHEN</td>
<td>SLIDING</td>
<td>FIRE RATED</td>
<td>METEL + GLASS</td>
</tr>
<tr>
<td>3</td>
<td>2700 x 1500</td>
<td>SLIDING DOOR</td>
<td>BED RM</td>
<td>SLIDING</td>
<td>FIRE RATED</td>
<td>METEL + GLASS</td>
</tr>
<tr>
<td>4</td>
<td>2700 x 1500</td>
<td>SLIDING DOOR</td>
<td>BATH RM</td>
<td>SLIDING</td>
<td>FIRE RATED</td>
<td>METEL + GLASS</td>
</tr>
<tr>
<td>5</td>
<td>4000 x 1085</td>
<td>PIVOTED ORCHID PLANTING DOOR</td>
<td>TERRACE SPACE</td>
<td>SLIDING</td>
<td>FIRE RATED</td>
<td>WOOD</td>
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<tr>
<td>6</td>
<td>2700 x 1300</td>
<td>SLIDING DOOR</td>
<td>MECHANICAL ROOM DOOR</td>
<td>SLIDING</td>
<td>FIRE RATED</td>
<td>METEL + GLASS</td>
</tr>
<tr>
<td>7</td>
<td>2400 x 900</td>
<td>SLIDING DOOR</td>
<td>SHOWER SPACE</td>
<td>SLIDING</td>
<td>FIRE RATED</td>
<td>METEL + GLASS</td>
</tr>
</tbody>
</table>
SECTION DIAGRAM: SUMMER TIME

Overhead wind brings out house inside heat

SECTION DIAGRAM: WINTER TIME

Leaves "OPEN" + Fans "ON" to facilitate inside ventilation

The overhanging roof creates the deep shade to protect the comfortable area. The overhead sunlight is shaded to cut wind and retain heat.
IN-401

APP. LIST

<table>
<thead>
<tr>
<th>No.</th>
<th>Type</th>
<th>Brand</th>
<th>Location</th>
<th>Size (W<em>D</em>H)</th>
<th>Note</th>
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<tbody>
<tr>
<td>01</td>
<td>Refrigerator</td>
<td>Sanyo</td>
<td>Kitchen</td>
<td>646<em>700</em>1696</td>
<td></td>
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<tr>
<td>02</td>
<td>Laundry Machine</td>
<td>Toshiba</td>
<td>Kitchen</td>
<td>665<em>1050</em>865</td>
<td></td>
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<tr>
<td>03</td>
<td>Induction Top</td>
<td>Ariston</td>
<td>Kitchen</td>
<td>W 900</td>
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<tr>
<td>04</td>
<td>Oven</td>
<td>Ariston</td>
<td>Kitchen</td>
<td>590<em>545</em>595</td>
<td></td>
</tr>
<tr>
<td>05</td>
<td>Hood</td>
<td>Ariston</td>
<td>Kitchen</td>
<td>680<em>480</em>720</td>
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<tr>
<td>06</td>
<td>Dishwasher</td>
<td>Ariston</td>
<td>Kitchen</td>
<td>600<em>900</em>620</td>
<td></td>
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<tr>
<td>07</td>
<td>TV</td>
<td>CHIMEI</td>
<td>Living Room</td>
<td>680<em>160</em>74</td>
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<tr>
<td>08</td>
<td>Laptop Comp.</td>
<td>Asus</td>
<td>Workstation</td>
<td>420<em>287</em>36</td>
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</tbody>
</table>

APPLIANCE LIST
### FIXED FURNITURE LIST

<table>
<thead>
<tr>
<th>FIXT. No</th>
<th>TYPE</th>
<th>BRAND</th>
<th>LOCATION</th>
<th>SIZE (W<em>D</em>H)</th>
<th>NOTE</th>
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</thead>
<tbody>
<tr>
<td>FIXT. 01</td>
<td>TOILET</td>
<td>TOTO</td>
<td>BATHROOM</td>
<td>595<em>547</em>389</td>
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</tr>
<tr>
<td>FIXT. 02</td>
<td>LAVATORY</td>
<td>TOTO</td>
<td>BATHROOM</td>
<td>500<em>460</em>135</td>
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<tr>
<td>FIXT. 03</td>
<td>FAUCET</td>
<td>TOTO</td>
<td>BATHROOM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIXT. 04</td>
<td>SHOWER</td>
<td>TOTO</td>
<td>BATHROOM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIXT. 05</td>
<td>TAB</td>
<td>TOTO</td>
<td>BATHROOM</td>
<td>1600<em>800</em>990</td>
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</tr>
<tr>
<td>FIXT. 06</td>
<td>FAUCET</td>
<td>TOTO</td>
<td>KITCHEN</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **NOTE**: toilet, sink, faucet, and shower.
Rain water tank

watering plants

Filter

Pump

Kitchen

Toilet

Bathroom

Black water tank

Removal water tank
WATER TANK

PUMP

SUPPLY WATER

RETURN WATER

VALVE

WATER HEATING
WATER TANK

RETURN WATER

SUPPLY WATER

PUMP

COOLING MODE

SCHEMATIC DRAWINGS

ME-221
T.B.D
SOLAR PANELS
1061*1160*16 (mm)
42 pic.

SDE
INVERTER

DC

AC

BATTERY

HVAC

WATER & VENTILATION SYSTEM

Cooling & Heating

FAN (80W*4)

SOLAR WATER HEATER (200L)

SOLAR WATER HEATER (200L)

DOMESTIC HOT WATER

LIGHTING

CLOTHES WASHER

APPLIANCES & DEVICES

COOKING

CLOTHES DRYING

DISH WASHING

TV & LCD (DISPLAY)

OVEN

NB (DISPLAY)

REFRIGERATION (170) / FREEZING (57)

PUMP (IRRIGATION: GREY WATER TANK)

PUMP (IRRIGATION: TANK - PLANT)

PUMP (WATER WALL)

PUMP (IRRIGATION: TANK - PLANT)

PUMP (IRRIGATION: TANK - PLANT)

PUMP (IRRIGATION: TANK - PLANT)

PUMP (IRRIGATION: TANK - PLANT)

PUMP (IRRIGATION: TANK - PLANT)

PUMP (IRRIGATION: TANK - PLANT)

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PUMP (IRRIGATION: TANK - PLANT)

PUMP (IRRIGATION: TANK - PLANT)

PUMP (IRRIGATION: TANK - PLANT)

PUMP (IRRIGATION: TANK - PLANT)
SOLAR PANELS
1061*1160*16 (mm)
42 pcs

DC

INVERTER

DC

BATTERY

DC WIRING DIAGRAM

EL-201
Transformer box

1. PLUG 125V 15A
2. Waterproof PLUG 125V 15A
3. Floor PLUG 125V 15A
4. Floor Waterproof PLUG 125V 15A
5. Exhaust Fan Power SOCKET
Transformer box

- PLUGIN 125V 15A
- Waterproof PLUGIN 125V 15A
- Floor PLUGIN 125V 15A
- Floor Waterproof PLUGIN 125V 15A
Transformer box

- PLUG 125V 15A
- Waterproof PLUG 125V 15A
- Floor PLUG 125V 15A
- Floor Waterproof PLUG 125V 15A

P-xx in Transformer box's Number

AC CIRCUIT LAYOUT

DL-602
PHOTOVOLTAIC SYSTEM: GENERAL

PV Array -> PV Charge Controller -> Battery Charge Controller

Battery Charge Controller -> Battery -> Discharge Controller

Discharge Controller -> DC/AC Inverter -> AC Load

SDE Grid

PV Array -> DC/AC Inverter -> AC Load

Load

DC Load
系统設計資料
System Design Data

<table>
<thead>
<tr>
<th>模組型式</th>
<th>Module Type</th>
<th>適用於</th>
<th>BIPV</th>
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<tbody>
<tr>
<td>模組輸出功率</td>
<td>Module Power</td>
<td>125 Wp</td>
<td></td>
</tr>
<tr>
<td>模組片數</td>
<td>Number of Module</td>
<td>42片</td>
<td></td>
</tr>
<tr>
<td>Inverter型式</td>
<td>Inverter Type</td>
<td>XX</td>
<td></td>
</tr>
<tr>
<td>Inverter台數</td>
<td>Number of Inverter</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>系統容量</td>
<td>System Capacity</td>
<td>5.25kWp</td>
<td></td>
</tr>
<tr>
<td>模組角度</td>
<td>Tilt Angle of Modules</td>
<td>17°</td>
<td></td>
</tr>
<tr>
<td>模組方位</td>
<td>Azimuth of Modules</td>
<td>正朝南</td>
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</tr>
<tr>
<td>系統型式</td>
<td>System Type</td>
<td>併聯型</td>
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</tr>
</tbody>
</table>

PHOTOVOLTAIC SYSTEM:
GENERAL 2

模組型式: BIPV
模組輸出功率: 125 Wp
模組片數: 42片
Inverter型式: XX
Inverter台數: X
系統容量: 5.25kWp
模組角度: 17°
模組方位: 正朝南
系統型式: 併聯型

Project: NCTU/UNICODE
Institution: 國立交通大學建築研究所
Team Name: NCTU/UNICODE
Address: 1001 Ta-Hsueh Road
Hsinchu City 30010
Taiwan
Contact: www.sde.tw
Consultants: 台達電子工業股份有限公司
DELTA ELECTRONICS, INC.

Drawn by: AW
Checked by: DN
Scale: N.T.S
Dwg. Title: PHOTOVOLTAIC SYSTEM: GENERAL 2
Dwg. No.: PV-002
PHOTOVOLTAIC SYSTEM: DC CIRCUITS

T.B.D.
T.B.D.
T.B.D.
T.B.D.
T.B.D.
1: FIRST IMPRESSION
2: WAIT & WATCH
3: GET BROCHURE
4: PHOTO SPOT 1
5: LIVING ROOM & GRAY WATER SYSTEM
6: KITCHEN & THERMAL MASS
7: BATHROOM & ACTIVE CONTROL SYSTEM
8: BEDROOM & WORKSTATION
9: GREEN HOUSE TECHNOLOGIES
10: OPEN DECK & BIG VIEW
11: PHOTO SPOT 2
12: SPONSOR PRESENTATION BOARDS
13: MECHANICAL SYSTEM
14: FEEDBACK