



Prefabricated Houses

Introduction and Presentation



OLIVIER

OLIVIER GROUP is agent for

 **TerraNova Ltd.**



Introduction of TerraNova Homes

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Our Products

- Follow 3 R

Save land Increase building utilization
area 10% (compare with brick wall)

Save energy 50% compare with brick wall

Save water 90% dry operation

Save material 90% materials are recycle
materials

Environmental protective Our System accord
with Environmental Certificate ISO14001

Our Service

- Design your own house like tailoring clothes
- As elaborate as producing cars
- After service is as good as home appliance





Construction System

- Light gauge steel stud structure system lower than three-storied house
- Light gauge steel composite structure system lower than six-storied house



System Standard

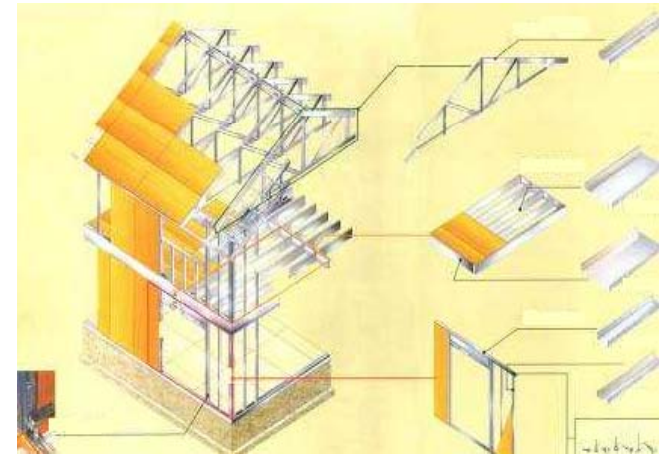
Our Homes Light gauge steel stud structure system is safe and advanced, it is energy saving and environmental protective, perfectly meet the industrialization policy of China—“save four kinds of energy and environmental protective”.

Under the great support of construction administration and other specialists, the standard of corporation has been passed in 2003.

The System accord with JIS standard.

Light Gauge Steel Stud Structure System

Our technique consists of structure technique, interior and exterior finish technique of house, heat and sound insulation, water, heat, electric and other facilities. It is a advanced and complete ecotecture system. This technique is advanced all around the world, and is very common in many developed countries,



Light Gauge Steel
Stud structure System

Seven Character of Light Gauge Steel Stud Structure System

Promote the quality of houses through techniques.

- ❑ recycle 90% materials
- ❑ Durable (Structure is safe for 95 years)
- ❑ Suitable for all kinds of climates
- ❑ Earthquake Resistant
(can resist 9 earthquake intensity)
- ❑ Wind Resistant (1500N/m² can resist
12 Beaufort scale wind)
- ❑ Flexible Interior Space Arrangement (Can design
144m² inner room space, Overhanging, staggered
floor flat or slope roof)

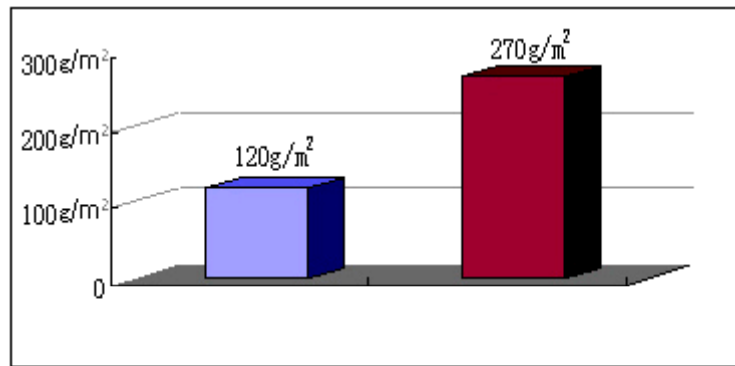


Continuously Developing Ecotecture System

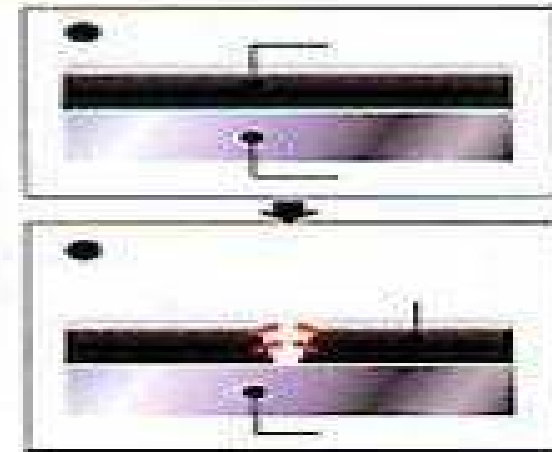
Recycle 90%
materials



Durable - 95 Years Structure Safety Assurance

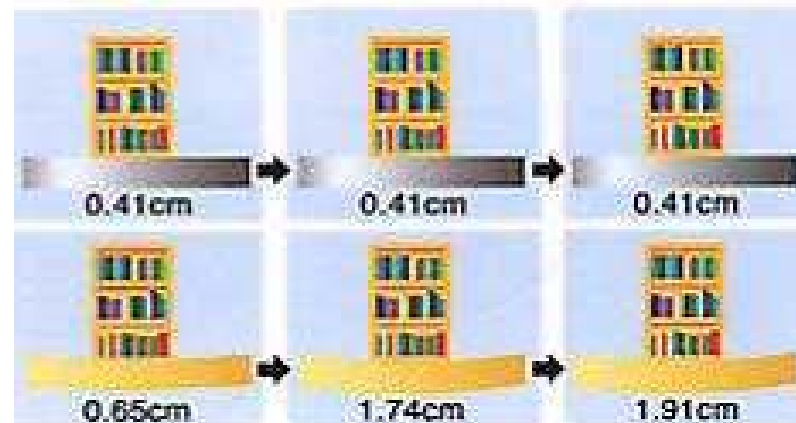


Self
repair



new Five years later Ten years later (stable)

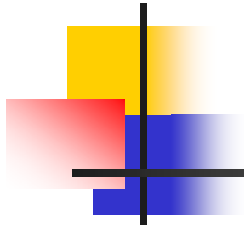
Light Gauge
Stud Steel Structure
Wood
Structure



Stable
Changeless

Chang slowly
Increase

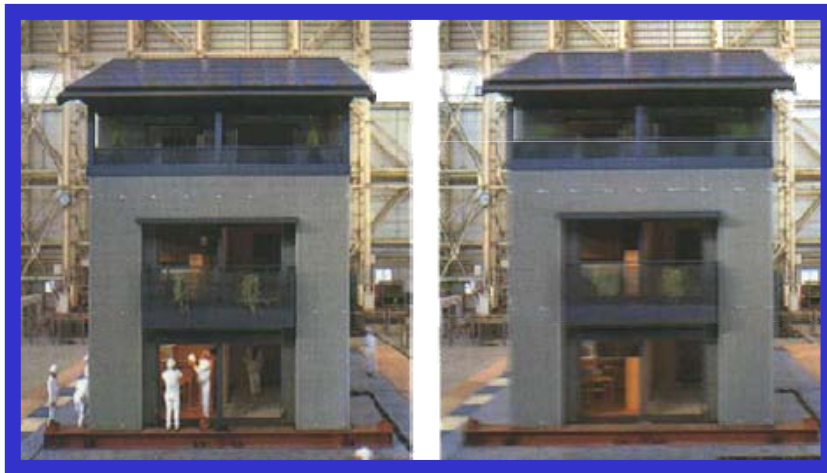
Suitable for all kinds of climates



Cold zone ~ Torrid zone

Wind resistant - 1500N/m²

Earthquake resistant - Resist 9 earthquake intensity



Earthquake resistant test can
resist 9 earthquake intensity



Flexible Interior Space Arrangement



Overhanging,
staggered floor

Can design 144m²
interior space



Flat roof

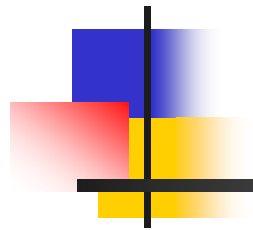


slope roof

Convenient Construction

5 days to complete structural part of one single house, and 2.5 - 3 month to finish the exterior and interior finish.





House Function

Environmental Protective

All the construction materials Homes use has been inspected strictly according to relative regulations, and has been proved no harm to people' health and environment.

Our Homes has passed ISO 14001 Environmental Protection Certificate



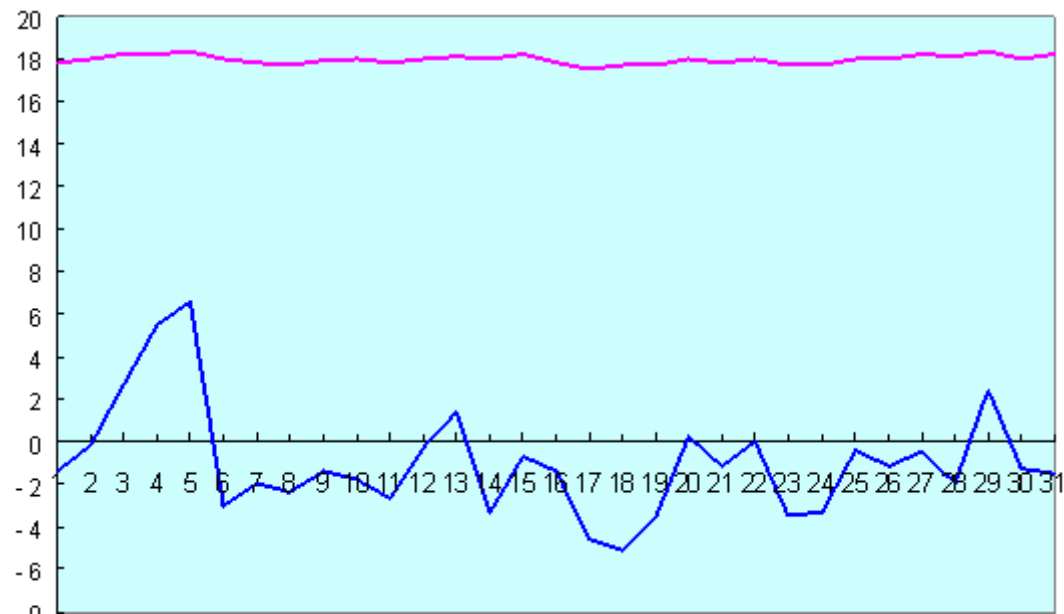
Traditional Method



Modern Method

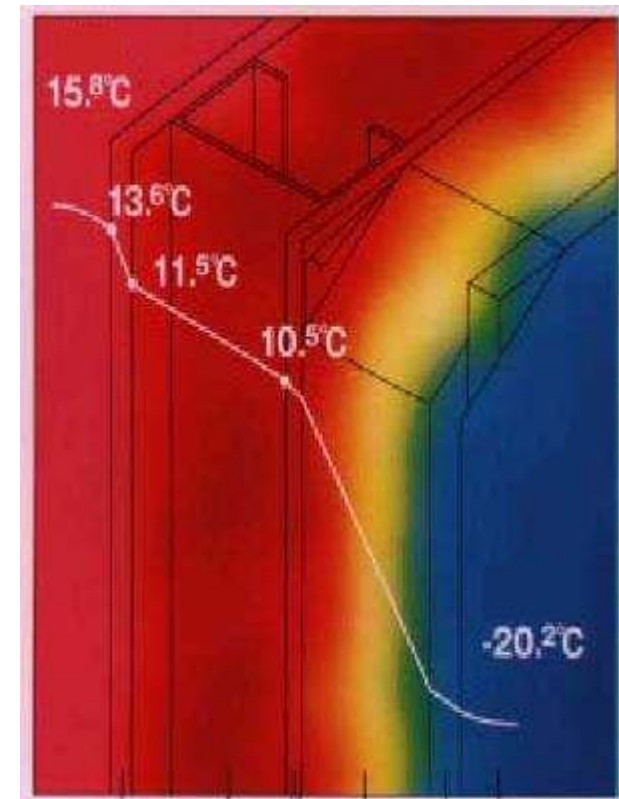
Advanced Heat Preservation Technique

Temperature inside and outside of the house

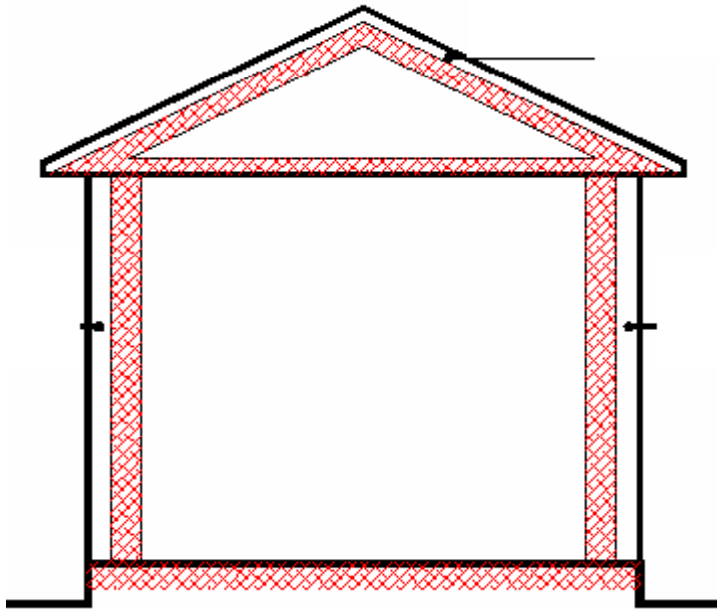


Note The surface temperature of radiator in house is 31

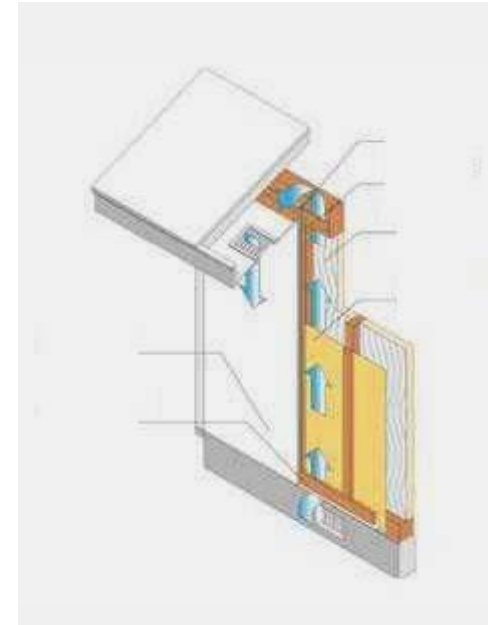
Temperature changing demonstration of wall



Good Heat Insulation Capacity

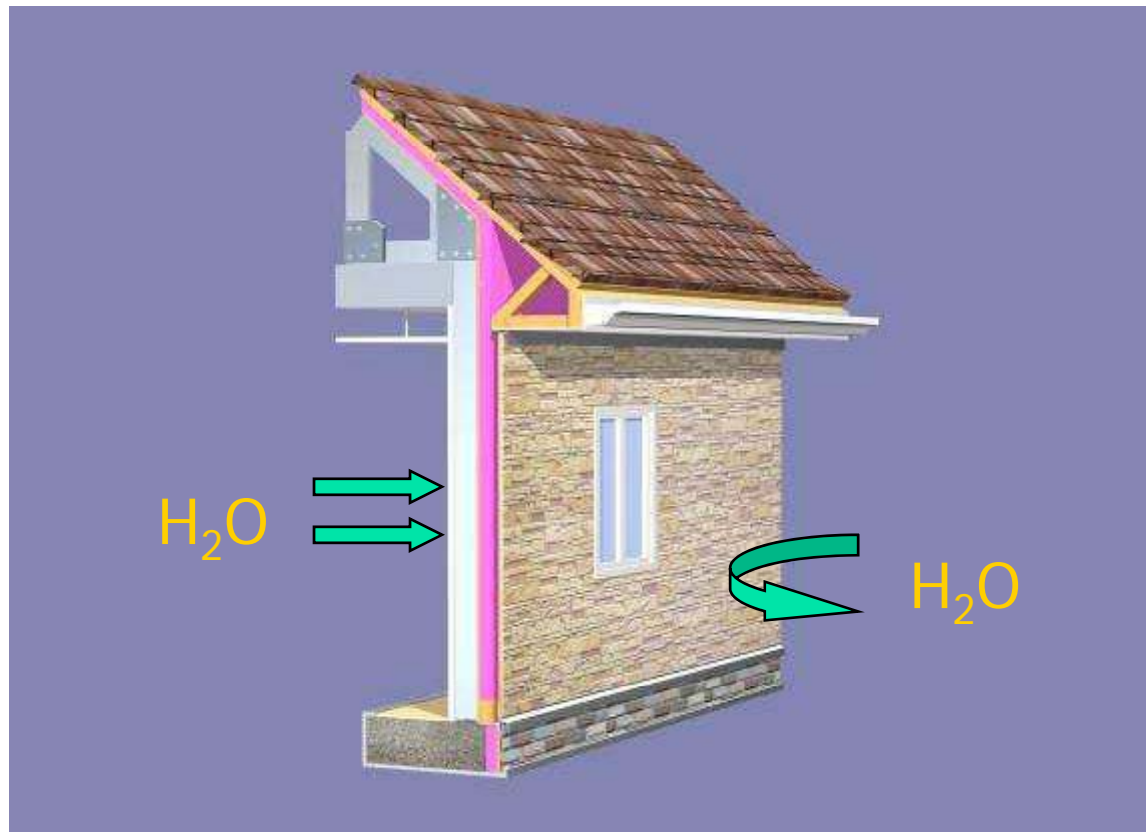


Six sides of exterior heat insulation
can avoid cold and heat bridge effect
and wall condensation



Have ventilation layer,
far from torridity

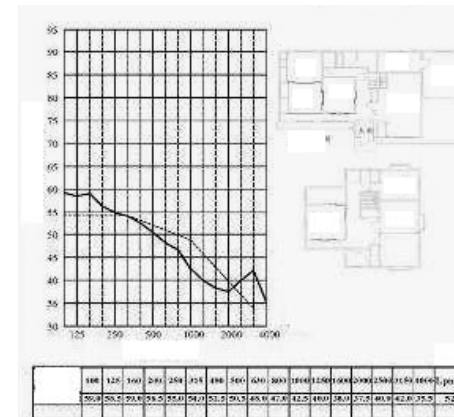
Damp Proof



“ breathing ” wall

Sound Insulation

- Wall ≥ 45 dB
Standard of 4 star Hotel
- Sound Pressure Level of Floor
board ≤ 65 dB
Standard of 5 star hotel



Sound insulation test report of Building
Physical Environment Research Center
of the University

Comparing with brick wall, increase building utilization area 10%

Our system not only has advantages on environmental protection and housing industrialization, its construction utilization rate is 10% higher than traditional wall (brick wall).

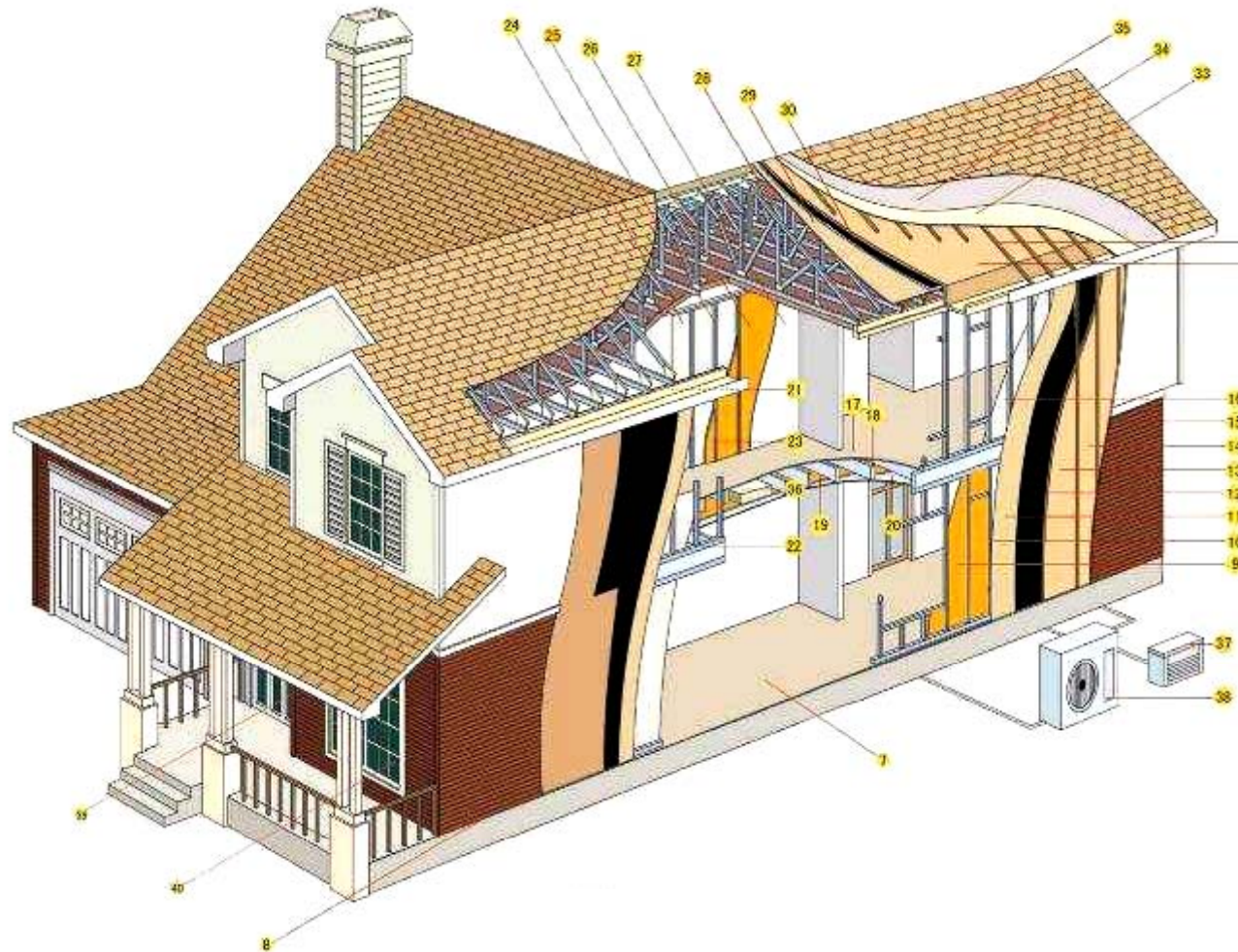




Procurement System

Design → Produce → Procurement →
Construction → Finish

Construction Demonstration



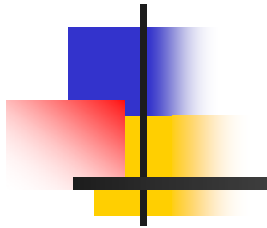
Equipment and Facilities is Compatible

- Advanced solar energy system, realize zero energy supply in habitation;
- Ventilation system, purify house environment;
- Central dust collecting system;
- Rain Collecting System, save water;
- Intermediate Water System, save water;
- Central air condition system;
- Thief proof and video interphone system



Product Type

- Civil Architecture



- Villas for Tour
- Residential Villa

Villa for Tour



Residential Villa

Japanese
Style



North
American
Style



Residential Villa

Town House



Villa



Product Type – Public Architecture

- Public Building
- Apartment
- Commercial House

Public House

- Light steel
- composite structure



Swimming Hall



Light steel composite structure

Apartment

- Light steel composite structure



Building for Specialists
Of Hotel

Apartment

- Light steel composite structure



Student Dormitory

Commercial house

- Light steel composite structure



Project



Project



Design Capacity

- Specialists Team



1 Design Qualification

- Civil Architecture : First Grade
- Project Construction: First Grade
- Project Consultant: First Grade
- Project Supervision: First Grade

Two Designers



- Architect 7
- Structural Engineer 4
- Equipment Engineer
- Assistant Technician





Production Capacity

First Light Gauge Steel Stud Structure
Production Line in China

Can Produce 2600 Sets Houses Per Year

- Produce house in the factory is very common in developed countries. Our homes Light steel frame technique is root in Japanese KC Technique system and developed according to the need of the market.
- Character of Industrialized Houses

- Customization
- Precision
- Environmental Protection
- High Quality



CAM Control System



Wall Board
Production Line



Universal Shaper

Modern Manufactory

- Guarantee high quality

- Advanced equipment and technique, perfect management, skillful workers guarantee you high quality product.
- Precision can avoid the distortion and lateral bending of the wall (the load of the wall board distribute equally)
- Precise parts connection accord with JIS standard.
- Passed ISO9001 / ISO14001 and OHSMS standard.



Installation



Finished Product
management



Construction Ability

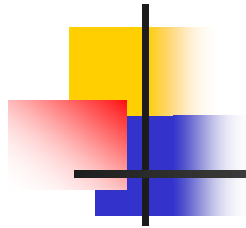
- Excellent Management Team

Construction Management Ability

- 10 Project Teams which have been trained in Japan

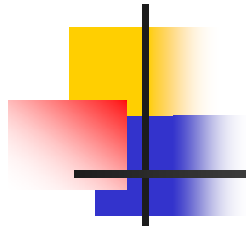


- Thousands of skilful installation workers



Construction Management Plan

Number Of houses	manage rs	Civil Construc tion workers	Simple Finishes workers	Elaborate Finishes workers	Water&Ele ctric workers	Total	Day s
20	3	60	80	80	15	240	130
50	4	100	120	120	20	368	240
100	10	120	150	150	30	462	300
200	15	180	200	200	40	635	360



Construction Management Schedule

(100 houses)

Date Item	1 month	2 months	3 months	4 months	5 months	6 months	7 months	8 months	9 months	10 months
Foundati on										
Body										
Roof										
Exterior Wall										
Interior Finishes										
Exterior Finishes										
Water& Electric										



Procurement Capacity

- Strict Procurement Management



Different Parts of the House

Structure

Exterior Wall

Roof

Interior Finishes

Kitchen & Bathroom

Window & Door

Facilities

Structure - Light Steel Frame



Structure - OSB

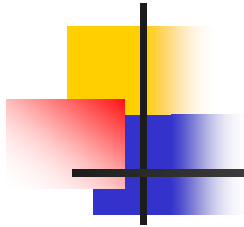


Structure - Structural Bolt



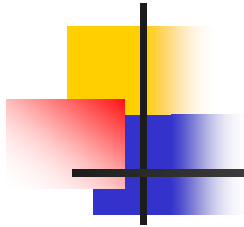
Exterior Wall

- Cement Fiber Board



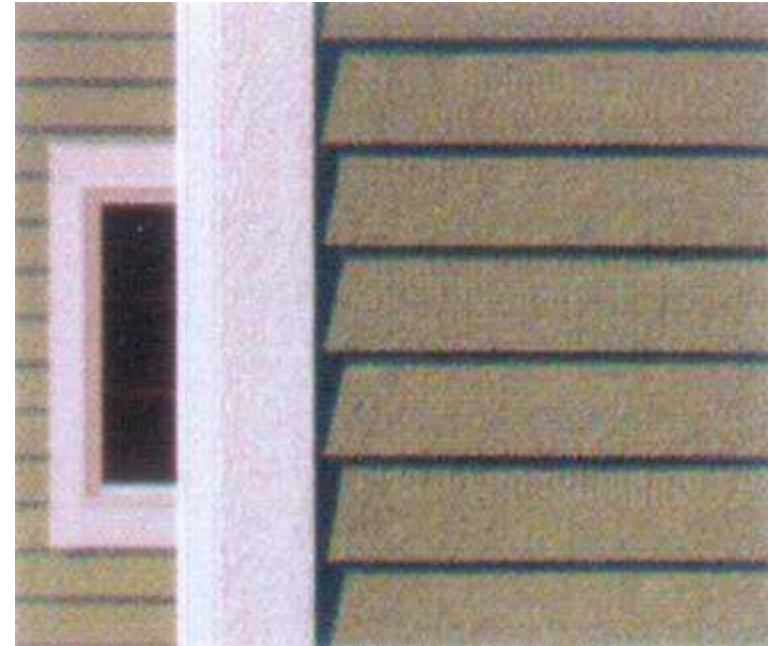
Exterior Wall

- Wood Hanging Board



Exterior Wall

- Imitate Wood Surface Board



Exterior Wall - PVC Hanging Board



Exterior Wall Material - Decorating Tile



Exterior Wall - Cement Block



Exterior Wall - Artificial Rock



Roof - Asphalt Tile



Roof - Cement Tile



Roof - Ceramic Tile



Roof - Color Steel Tile



Roof - Cornice

Wood



EPS

Sewer System - PVC



Floor Paint



Interior Finish - Stairs



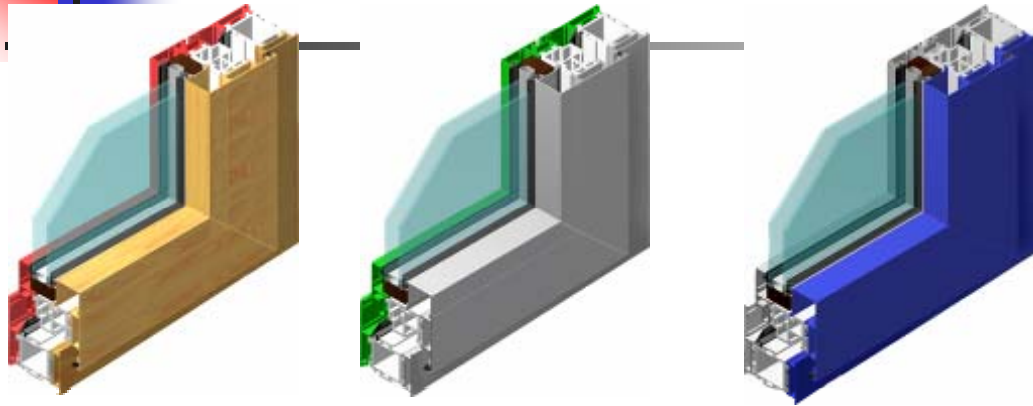
Kitchen



Bathroom



Window



Aluminum alloy window



Side-hung Window



PVC window



Outward-opening Window

Exterior Door



Interior Door



Equipment - Central Air Condition



Equipment

- Detached Hot Water Furnace



Equipment - Radiator



Facility - Elevator



Equipment

- Central Dust Remove System

