

INTERSOLAR 2014.

Intersolar-Highlights 2014



LG
Life's Good

Welcome to LG Solar for our Presentation of our 2014 Intersolar Highlights



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- 2 Why LG Solar Modules?
- 3 Why LG ESS Battery Systems?
- 4 Why LG MonoX[®] ACe AC Modules?
- 5 Why LG Heat Pumps?
- 6 Why LG LED Lighting?

1. Why LG?



LG

Life's Good

The LG Group:



Subsidiaries: 60 Employees: 200.000 Sales: 128 Billion USD.

Electronics

LG Electronics

A Global Leader in
Consumer Electronics

LG Display

A Global Leading
Display Company

LG Innotek

One of the Largest
LED Chip Manufacturers

Chemicals

LG Chem

One of Korea's Largest
Chemical Companies

LG Hausys

LG Life Science

Telecommunications & Services

LG U+

A Frontier in the Korea's
Telecommunications Industry

LG CNS

LG International

LG Electronics: Our 6 Business Units

Home Entertainment



Mobile Communication



Information System Products



Home Appliances



Air Conditioning & Lighting

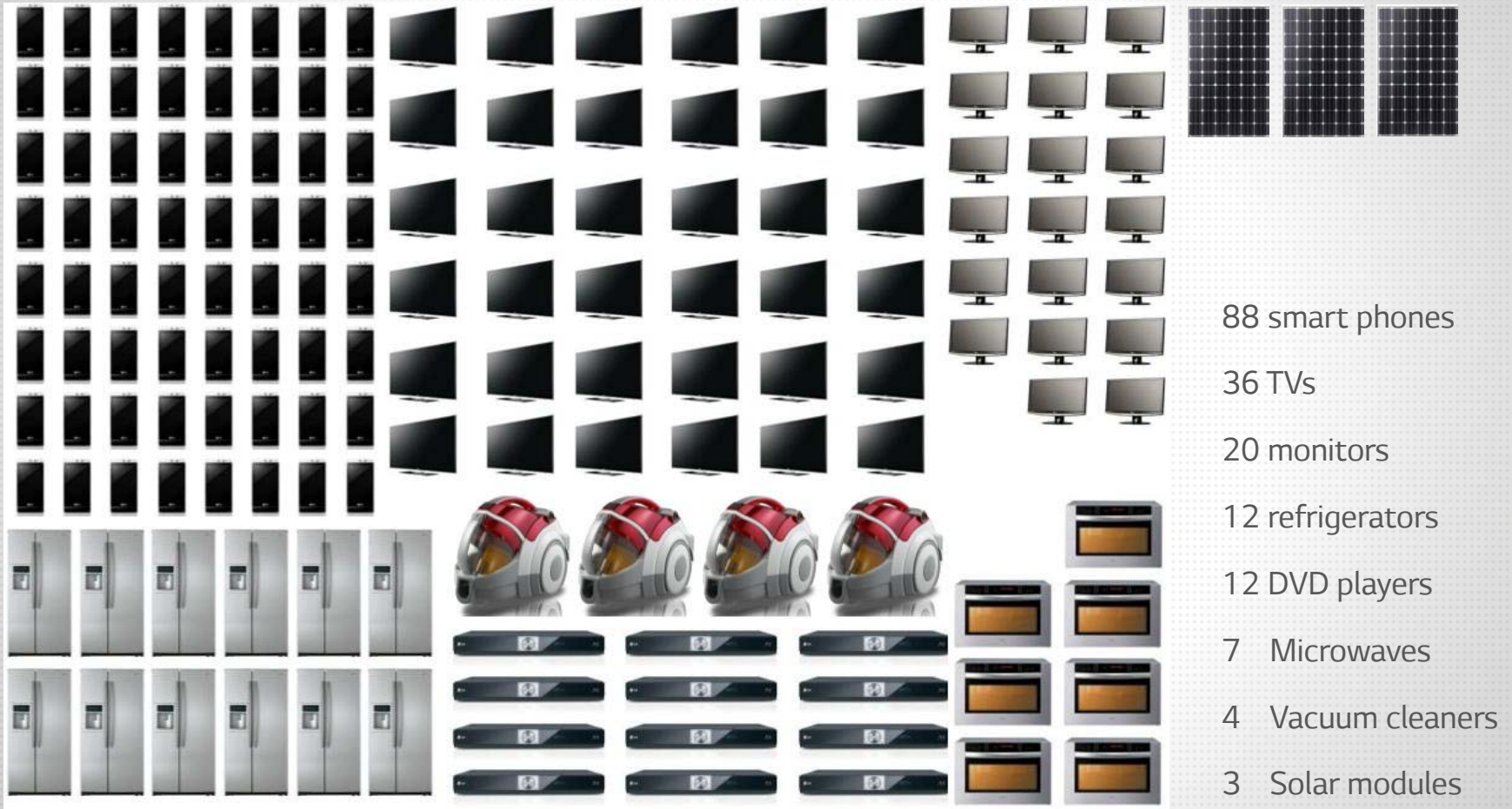


Solar



LG Electronics:

Worldwide product sales every minute



2. Why LG Solar Modules?



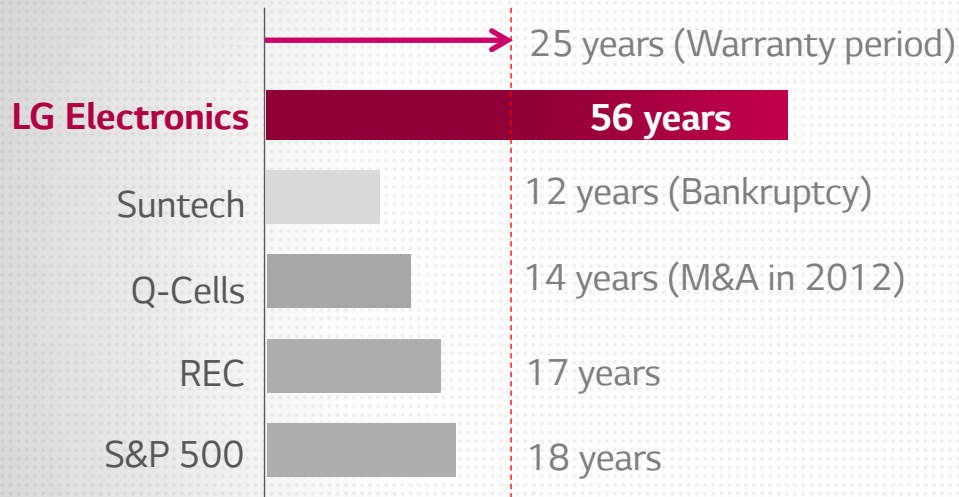
The 7 Key Competitive Advantages of LG Solar

- 1 Technical Competence
- 2 Innovation
- 3 Product Quality
- 4 Performance / Efficiency
- 5 Design
- 6 Financial Strength
- 7 Regional Service

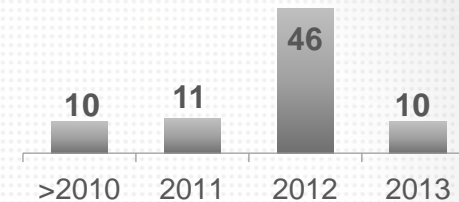


Key Question: Which manufacturers will also be active in solar in the future?

LONGEVITY OF SOLAR COMPANIES



DECEASED SOLAR COMPANIES*



PROBABILITY OF SURVIVAL**



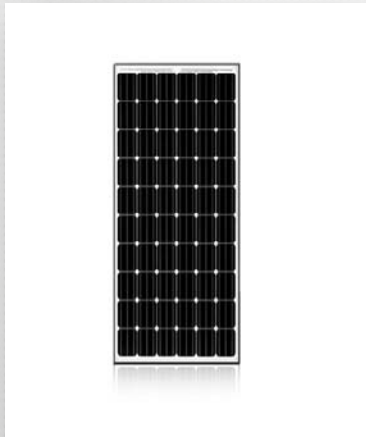
* greentechmedia.com

** Knaup, Amy E, Monthly Labor Review, May 2005 & September 2007

LG Solar: Module Portfolio 2014

LG MonoX™
LG280S1C

Black Frame
White Backsheet



OUR „ALLROUNDER“

LG MonoX™ Black
LG270S1K

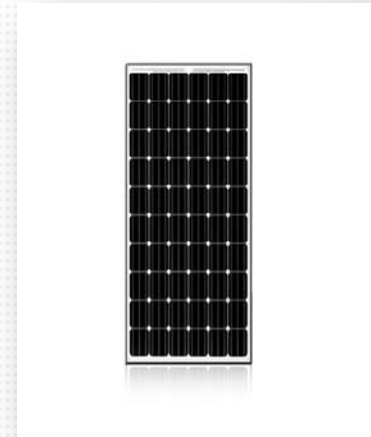
Black Frame
Black Backsheet



OUR „ÄSTHETIC“

LG MonoX™ NeON
LG300N1C

Black Frame
White Backsheet

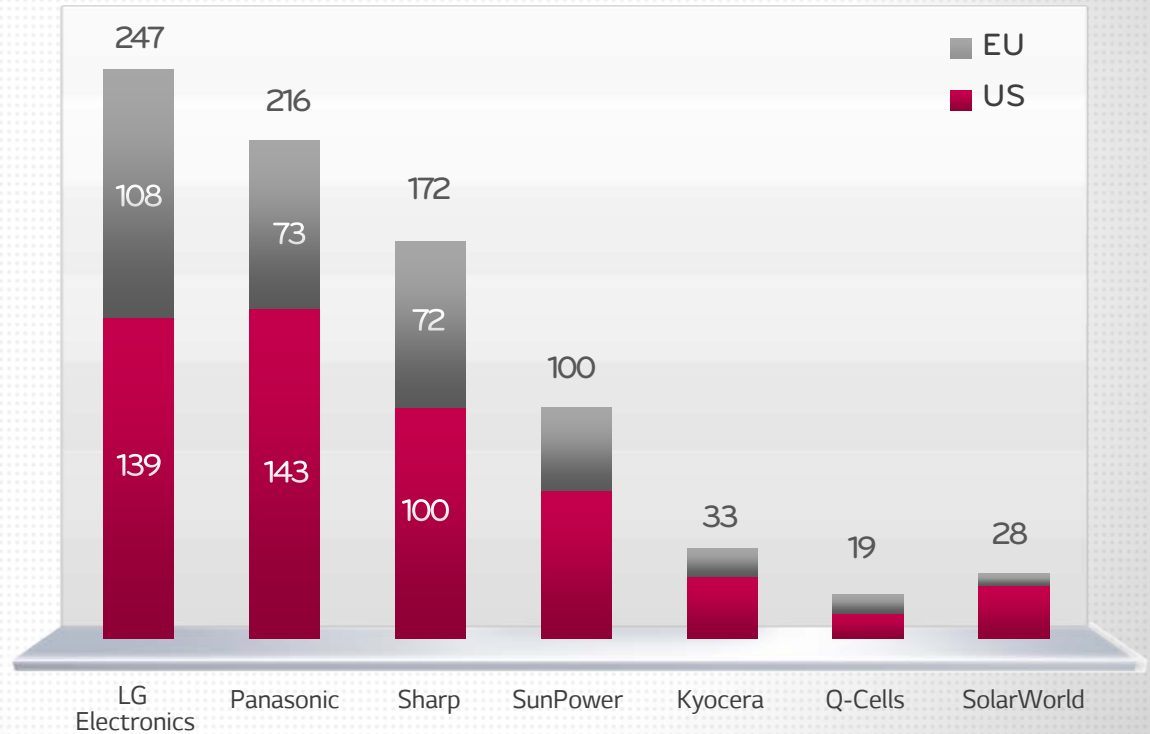


OUR „TOP-PERFORMER“

LG Solar Modules won many prizes already.
 Top Performance thanks to high R&D investment.



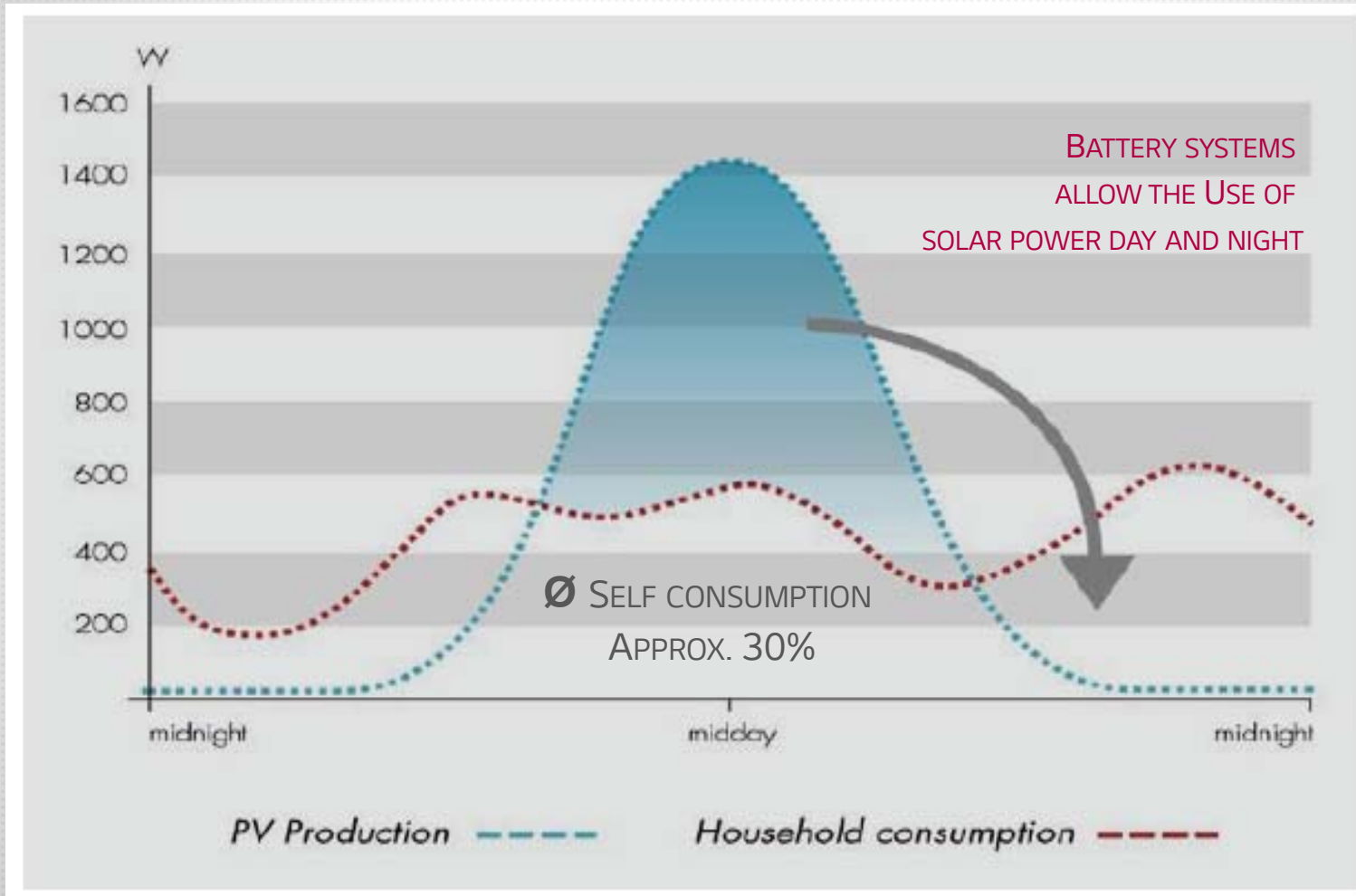
SOLAR REGISTRATIONS (2010-2012)



3. Why LG ESS Battery Systems?



Key Advantage of Battery Systems: Increase of Self Consumption

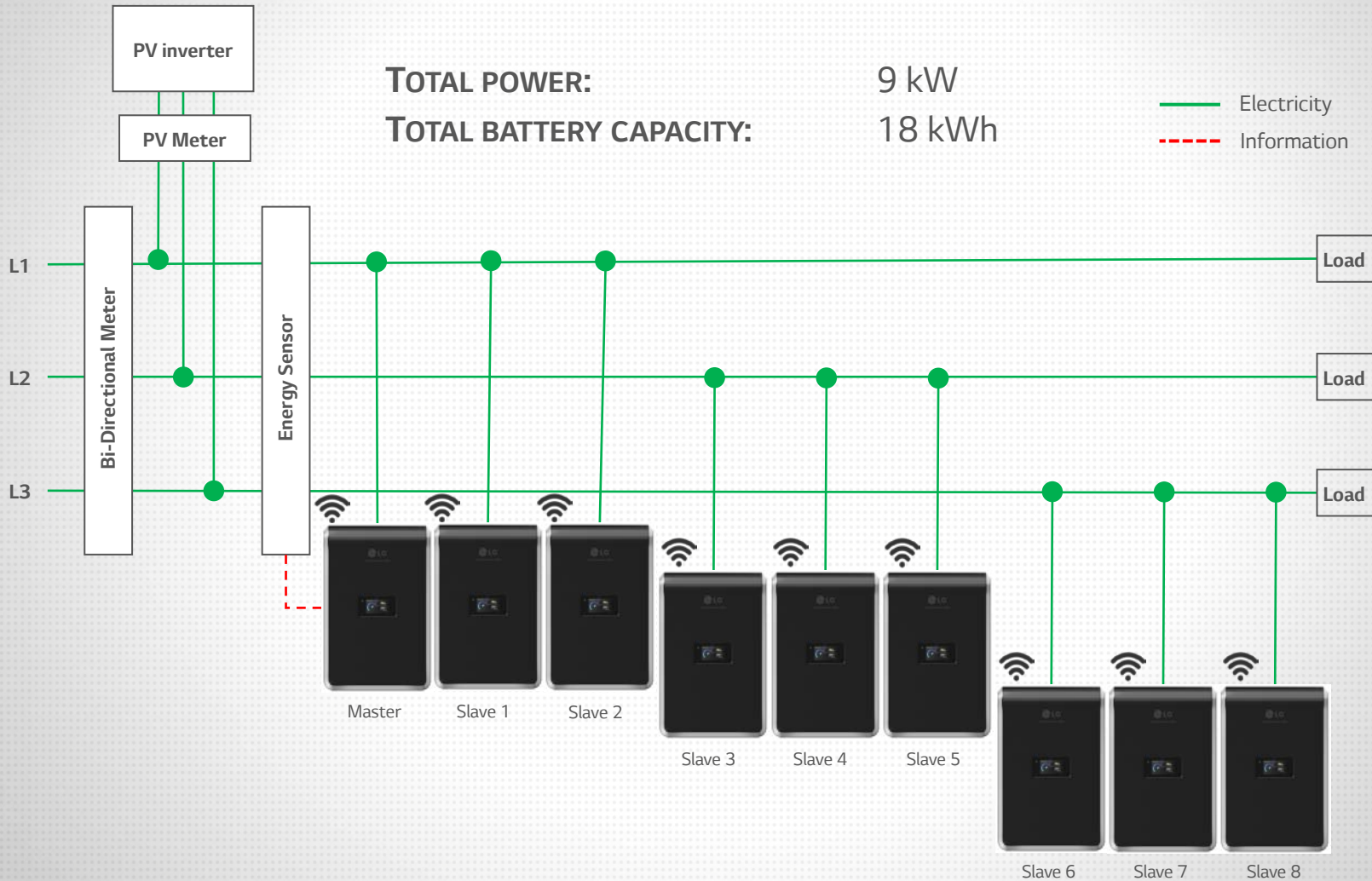


LGE's Battery System Parameters



1. BATTERY TYPE: LiFePO4
2. DIMENSIONS: 450/640/230 mm
3. WEIGHT: 55 kg
4. NOMINAL POWER (AC): 1 kW
5. BATTERY CAPACITY: 2kWh
6. WARRANTY: 10 years
7. COMMUNICATION: Wireless LA
Ethernet, RS485
8. CAN BE EXTENDED TO: 9 systems
9 kW / 18 kWh
9. PHASES: 1- bis 3-phases

The LG Battery System can easily be expanded to 9 kW and 3 Phases.



Advantages of LG's Battery System

1. Easy Installation:

„Plug & Play“ – Solution

2. Compatibility:

Can be combined with all known PV systems (also for retrofit)

3. Can be expanded in a flexible way:

9 units can be combined. 1- to 3-phase possible

4. Strong warranties:

Total solution and warranty from LG Electronics

MARKET LAUNCH:
EU: 2015 2H



4. Why LG Mono X[®] ACe
AC-Module?



Main Advantage of AC Modules: AC Modules produce AC (Alternating Current)

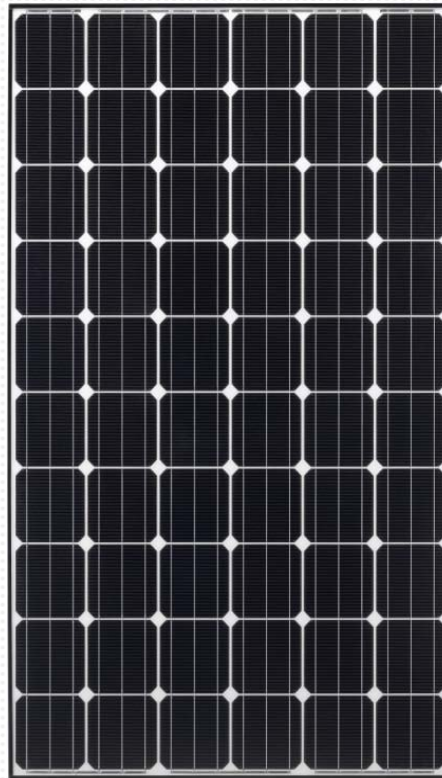
FRONT SIDE

AC MODULE

DC MODULE

REAR SIDE

REAR SIDE



PRODUCES

PRODUCES

AC (ALTERNATING CURRENT)

DC (DIRECT CURRENT)

288 Wp AC Power at STC Conditions. In Reality up to 305 Wp AC Power possible.

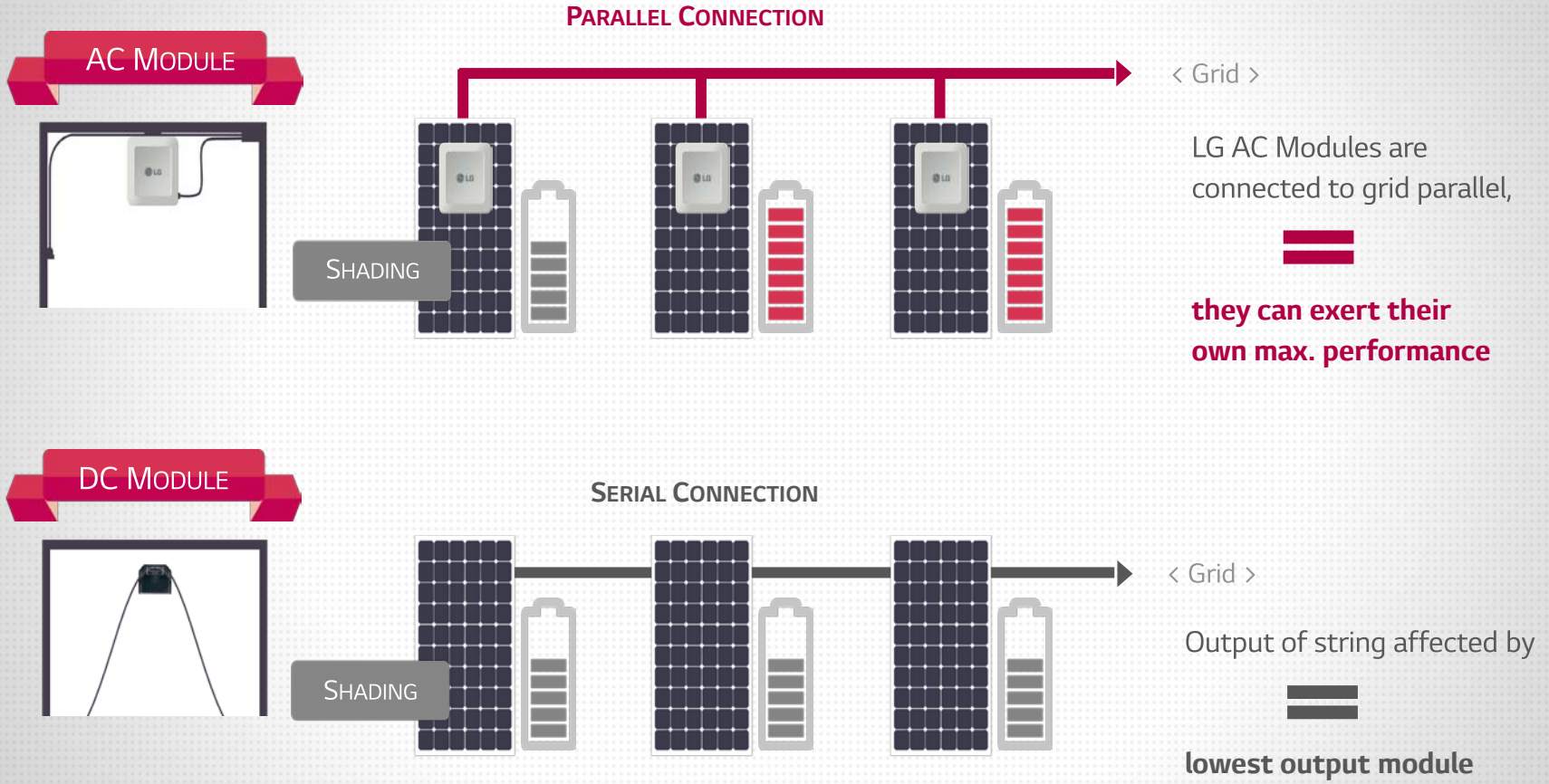


1. DC NOMINAL POWER (INPUT)*: 300 Watt
2. AC NOMINAL POWER (OUTPUT)**: 288 Watt
3. AC INVERTER POWER: 305 Watt max
4. CEC EFFICIENCY: 96%
5. POWER WARRANTY: 25 years

* STC conditions

**Rated output power at 25°C (W)

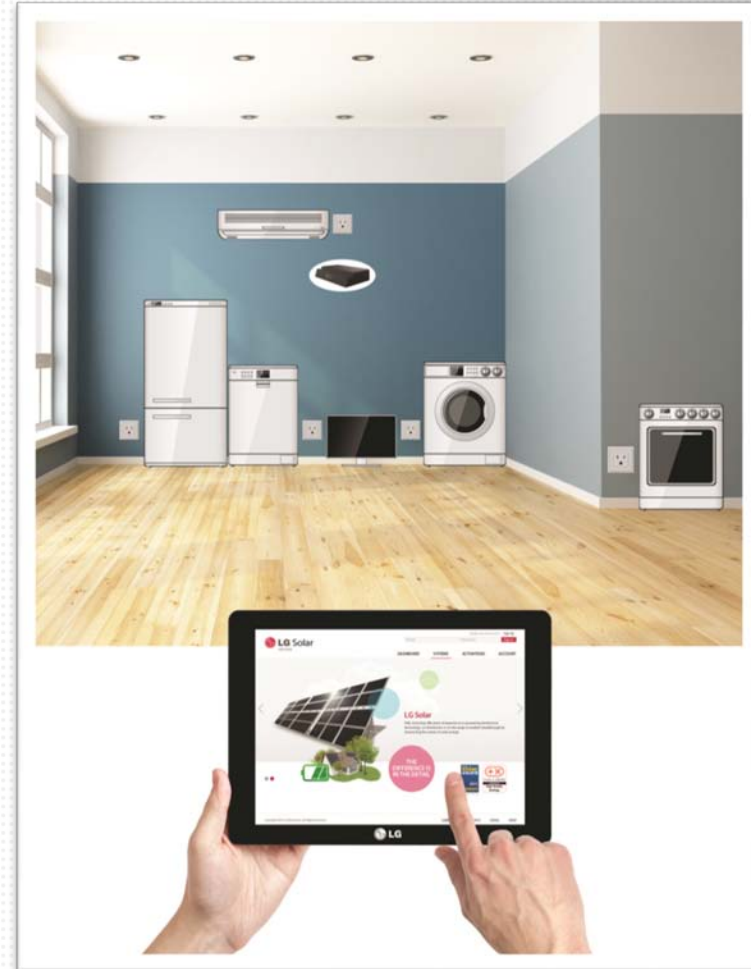
AC Modules show better Performance with Shading and Make Installation Easier.



Key Advantages of LG MonoX[®] ACe

- 1. EASY INSTALLATION AND COST SAVING:**
No additional inverter required
- 2. POWER OPTIMIZATION:**
Optimum Yield (not determined by lowest output module)
- 3. PRODUCT AND POWER WARRANTIES:**
25-year power warranty from LG Electronics for total system

MARKET LAUNCH:
USA: 2014 2H
EU: 2015

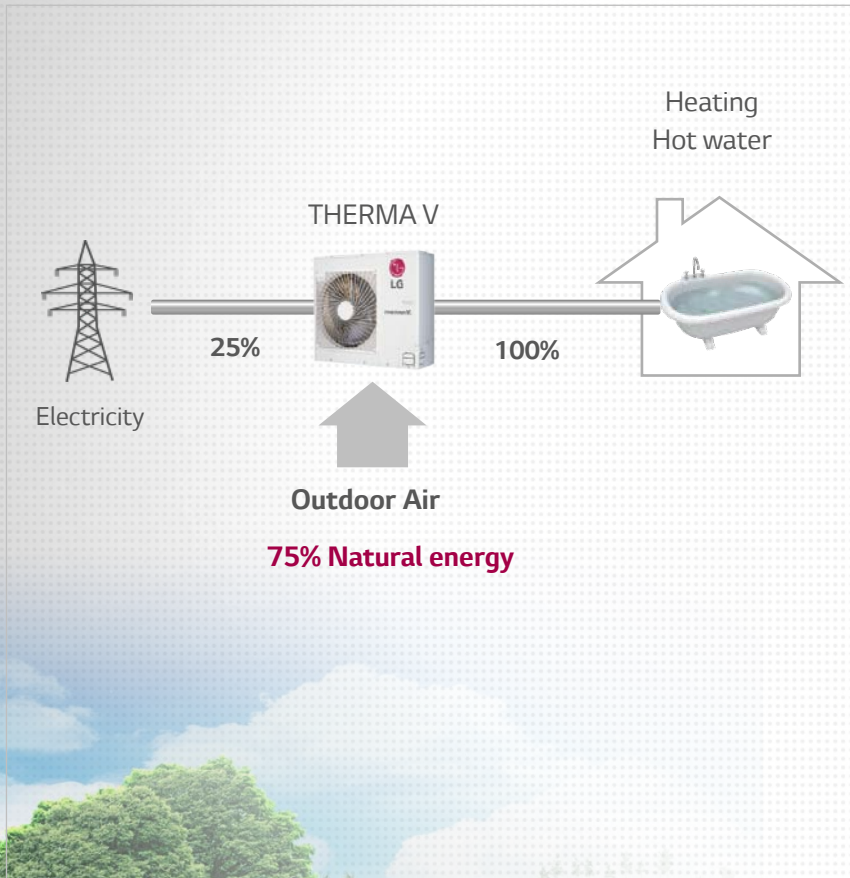


5. Why LG Heat Pumps?

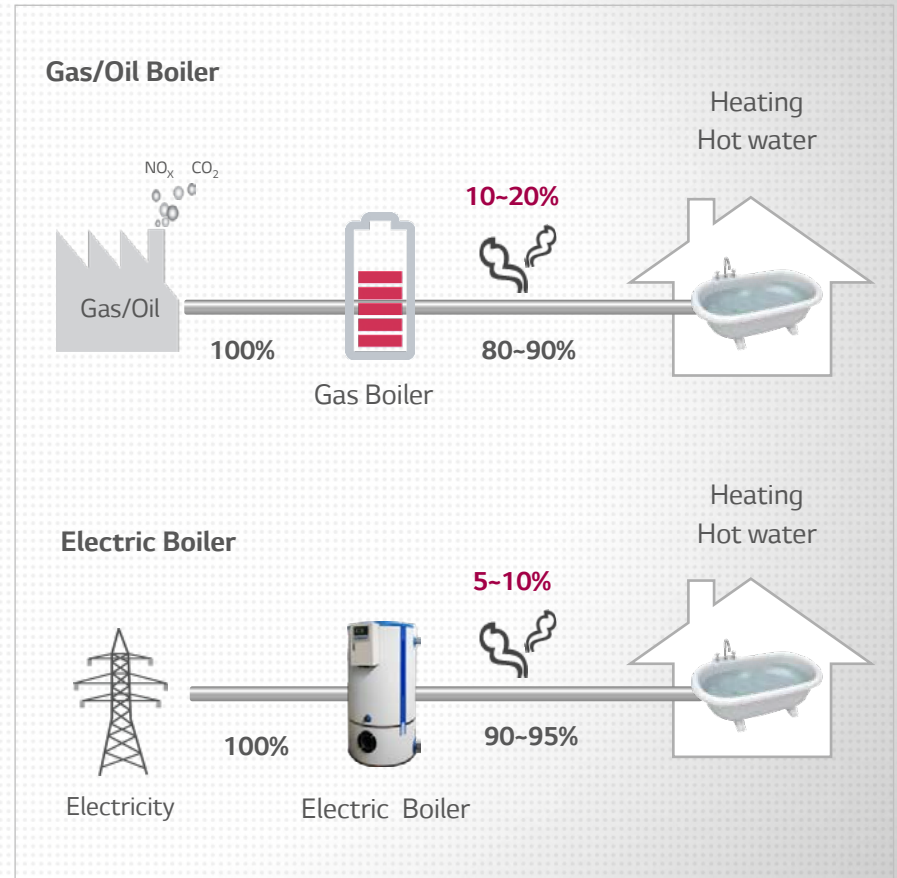


Heat pumps absorb natural energy from outdoor air. Result: Lower energy demand.

THERMA V™



Conventional System



LG Electronics offers Air-Water Heat Pumps as Split and Mono Versions

THERMA V Split

- Refrigerant piping work
- No danger from water pipe freezing



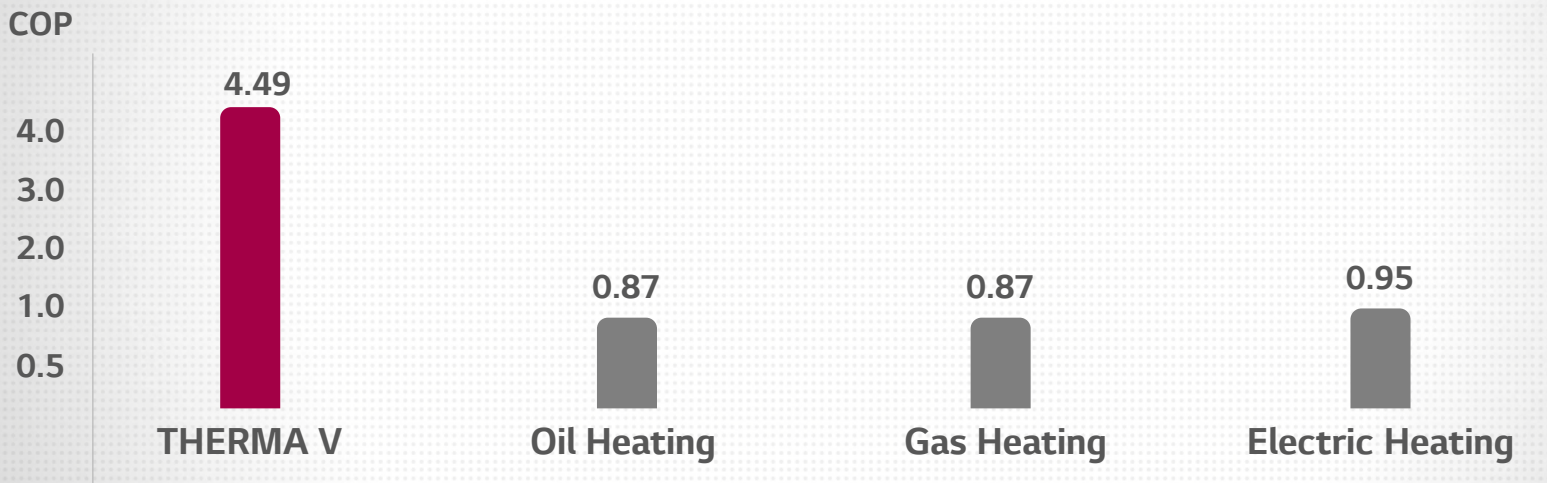
THERMA V Mono

- No refrigerant piping work
- Danger from water pipe freezing



LG Electronics Heat Pumps have much better Efficiencies than other Heating Systems

COP (COEFFICIENT OF PERFORMANCE) COMPARISON



Key Advantages of LG Heat Pumps

1. Better Heating Performance

Better COP-Performance than conventional heating systems

2. Broad Product Spectrum:

Broad product range with Mono and Split systems in various sizes

3. Easy Installation:

Easy to install and easy to combine with PV system

MARKET LAUNCH:
IMMEDIATELY
AVAILABLE



6. Why LG LED Lighting?



Key Advantages of LEDs

- 1. ELECTRICITY CONSUMPTION:**
80% less at same light power (lumen)
(9W LED replaces 60W bulb)
- 2. LONGEVITY:**
25-times longer lifetime
(LED: 25.000h, 60W bulb: 1.000 h)
- 3. UV AND IR:**
No UV and IR / No mercury (HG)

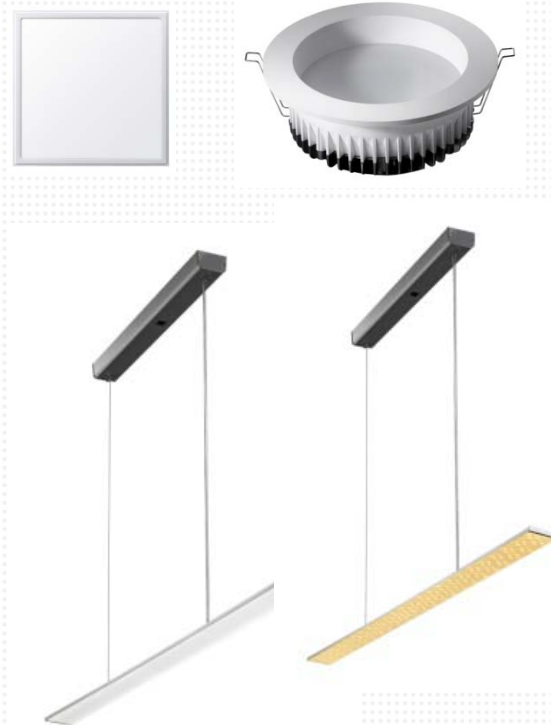


LG Electronics' LED Product Range

RETROFIT REPLACEMENT



INDOORLEUCHTEN



OUTDOORLIGHTING HIGHBAY



OLED - DESKLAMP



Key Advantages of LG LEDs

- 1. EXCELLENT DESIGN:**
Numerous design awards for LG Electronics
- 2. RIGID QUALITY CONTROL:**
Test laboratories guarantee high quality and longevity
- 3. LEADING POSITION IN WORLDWIDE LED CHIP CAPACITIES:**
LG Electronics' worldwide production capacities for LED-chips and 6- inch- semi conductor wafers are leading
- 4. VERTICAL INTEGRATION:**
LG covers the full value chain (comprehensive knowhow)



MARKET LAUNCH:
IMMEDIATELY
AVAILABLE

Would you like more detailed information?

We are happy to answer your questions.

MODULES

ESS BATTERY SYSTEMS

AC MODULES



**ACHMED
MOHAMED**



**BASTIAN
RÖSCH**



**SVEN
ARMBRECHT**



**DAVIDE
PONZI**

HEAT PUMPS



**ANDREAS
KRINKE**

LED LIGHTING



**Udo
VOLLMER**

Thank you very much
for your interest!