



Aeon Lighting Technology Inc.

# Application of energy saving, light up the new look of the industry

~High power LED lighting accelerates development of smart green architecture~

Speaker:

Aeon Lighting Technology Inc.

General manager: Mr. Luo Hsian-jie

# “Green architecture”

requires minimum global  
resource

requires minimum energy

produces minimum waste

Source: Architecture and Building Research  
Institute, Ministry of the Interior



## The first green building in Taiwan

Built on NTU campus by Professor Han Sian-Tang of Department of Bioenvironmental Systems Engineering, NTU

## Taipei Public Library Beitou Branch



## Tainan Yizai Elementary School



# Elements of “green architecture”

## Green building materials

-steel structure, wood, bamboo

## Green ecology

-coexist with the environment

## Green home appliance

-water saving appliance, LED lighting

# New light source of the 21<sup>st</sup> century—LED lighting



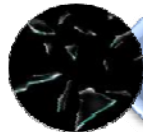
Energy saving



Longevity



No toxic chemicals such as mercury



No broken glass



No harmful light

# The biggest advantage of LED lighting—energy saving



**10W**



**100W**

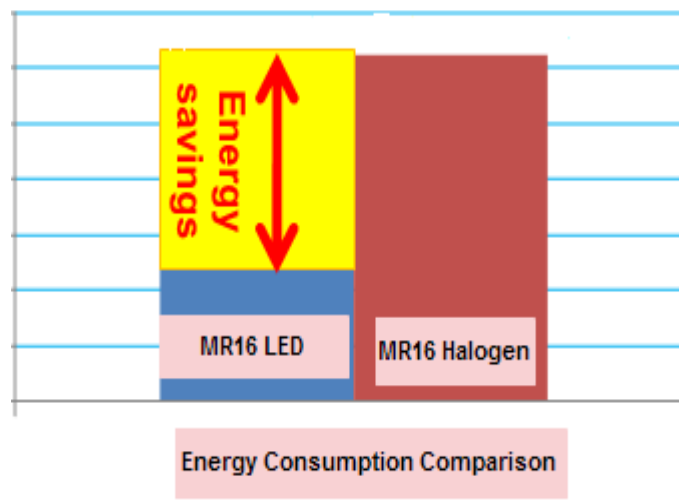
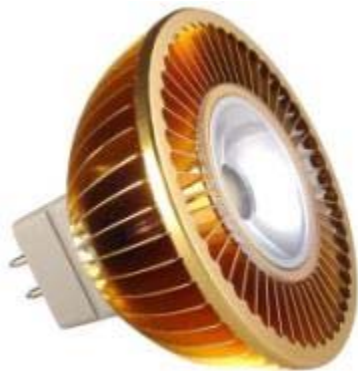
**more  
than  
90%  
of the  
energy  
saved**

“If all the traditional lighting in Taiwan is replaced with white LED, we will save the energy of a power plant every year”

~Taiwanese father of photonics, Dr. T.D. Shih

# Energy saving comparison – MR16 spot light

A bulb	MR16 LED	MR16 halogen light
Electricity energy consumption	7W	50W
Maintenance fee	0	
Longevity of the product	20,000 hrs	3,000 hrs
Electricity energy consumption/year	31 kW/h	219 kW/h
Maximum energy saved:	86%	

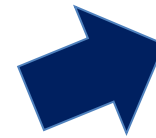




# Energy saving comparion – street light

A street light	LED street light	Mercury street light
Electricity energy consumption	145W	400W
Maintenance fee	0	
Longevity of the product	50000 hrs	24,000 hrs
Electricity energy consumption/year	635 kW/h	2365 kW/h
Maximum energy saved:	<b>73%</b>	





## No broken glass

Aluminum and acrylic are the main materials of LED light bulbs. They are rugged, durable, hard to break, and they won't harm people. All of the materials used could be recycled, achieving real resource recycling.



## No mercury

Different from current energy-saving bulbs and fluorescent tubes, LED lighting does not contain any mercury or other toxic chemicals. It not only does no harm to our body, but also will not stay in the environment to harm the ecology.



# LED lighting x green architecture

## Control indoor temperature effectively

Low-emissivity LED lighting can not only keep the brightness of the indoor space, but also lower the temperature, contributing to reduction of AC use.



# LED lighting x green architecture

## Additive effect of energy saving

Combine solar panels, cloud technologies and sensor network technologies to smartly control energy consumption

Analysis table of the new-generation LED smart lighting management system effect

	現階段示範系統	擴大實施至台北縣	擴大實施至全台灣
<b>傳統系統</b>	水銀路燈9盞 (400w) 燈街燈12盞 (250w) 雙管T8燈470盞 (80w) 用電度數：16.1萬度/年	路燈約185,000盞 (400w) 用電度數：2.7億度/年 排碳噸數：17.2萬公噸/年	路燈約160萬盞 (230~465w) 用電度數：23.5億度/年 排碳噸數：149.7萬公噸/年
<b>智慧照明管理系統</b>	LED路燈9盞 (90w) LED街燈26盞 (48w) LED嵌燈500盞 (26w/12w) 用電度數：3.78萬度/年 省電度數：12.32萬度/年 減碳噸數：78.4公噸/年	LED路燈185,000盞 (90w) 用電度數：6,077萬度/年 省電度數：2.09億度/年 減碳噸數：13.3萬公噸/年 省電率：77.4%	LED路燈160萬盞 (90w) 用電度數：6.3億度/年 省電度數：17.2億度/年 減碳噸數：109.5萬公噸/年 省電率：73.2%

資料來源：資策會

# LED lighting x green architecture

## Largely lower electricity fee and maintenance cost

LED lighting of low energy and longevity can really help house owners or business owners save electricity fee, as well as the cost of replacing old lights with new ones.





Aeon Lighting Technology Inc.

## High Power LED Lighting Solutions

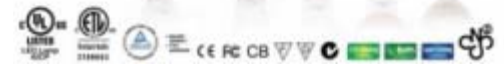
[www.aeonlighting.com](http://www.aeonlighting.com)

- specialized in manufacturing, developing and promoting high power LED lighting
- our products include indoor/outdoor LED lighting, light dimmer, street light, T8 tubes...etc.
- our products are sold in more than 100 countries all over the world
- our products are internationally renowned for their high quality, high power and high safety
- our products have won Germany's M Technology Award, iF and Red Dot Design Award
- we have patent and product safety certification for more than 100 products, and we're one of the few LED lighting manufacturers with CNS label in Taiwan

**ALTLED**<sup>®</sup>



reddot design award  
winner 2011



- Aeon Lighting Technology's company tenet is to bring LED lighting of high power, energy-saving, zero pollution to the world, providing more stable and safer green lighting.
- All products have obtained EU RoHS certification. They do not contain any toxic chemicals. They are not only eco-friendly, but also helpful for energy-saving.



# Product Introduction



**2-year warranty**

## ALT Indoor Lighting Series

MR16 V1



MR16 V2



MR16 V3



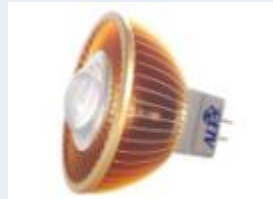
MR16 V4



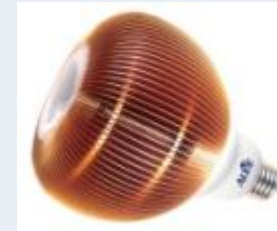
MR16 V5



MR16 V6



BR30



BR40



BR AC dimmable



R20 recessed lights



R02 recessed lights



T8 tubes



## ALT Indoor Lighting Series

DC MR16 V1  
dimmable



DC MR16 V2  
dimmable



DC MR16 V3  
dimmable



DC MR16 V4  
dimmable



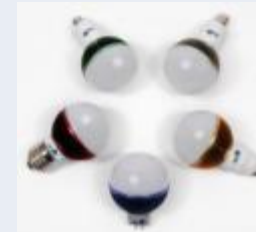
DC MR16 V5  
dimmable



A19 dimmable  
bulb



G19 dimmable  
Globe



Spot Light



AC dimmable  
MR16



A55 light bulb



Candle light



AR111



# Product introduction- outdoor lighting series

**2-year warrantee**

## ALT Outdoor Lighting Series

**F01 Floodlights**



**F02 Floodlights**



**F02 Grow Lights**



**S01 Street lights**



**S02 Street lights**

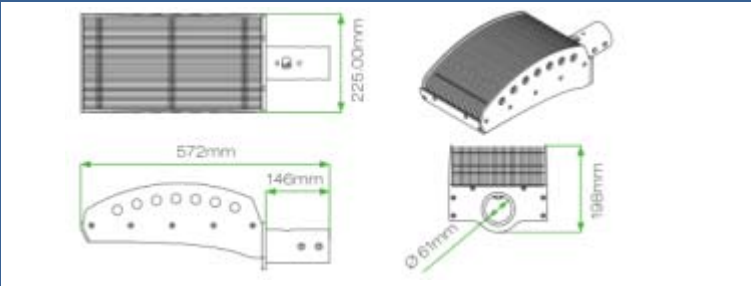


# Successful examples of smart energy-saving

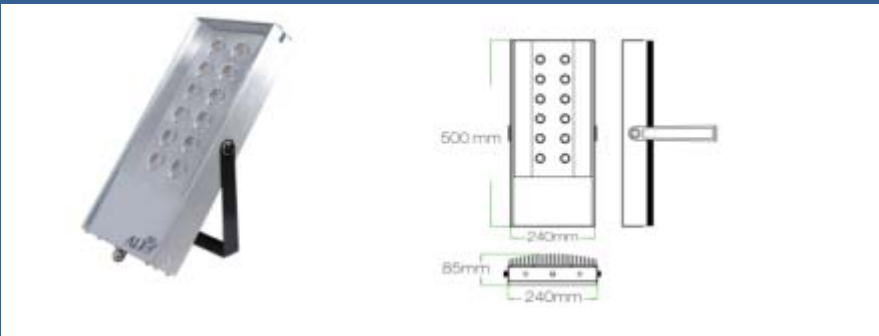
# Street Lighting Application - Nigeria



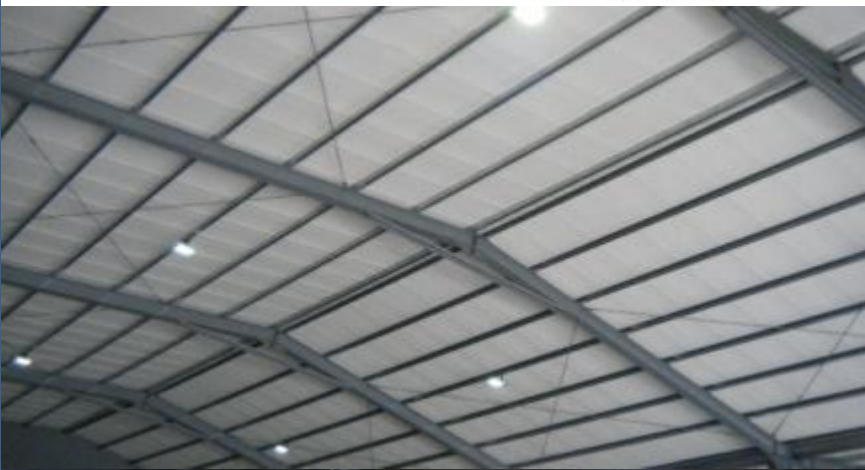
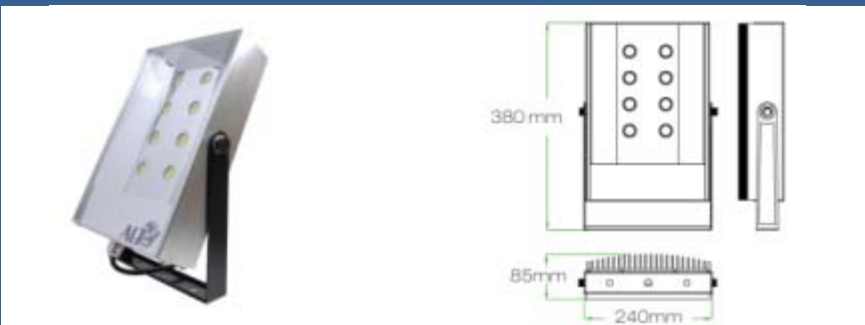
# Street Lighting Application – Japan



# Canopy Lighting Application – Asia



# High Bay Lighting Application – Japan





# Indoor Application - Taiwan



# MR16 Application – Canada



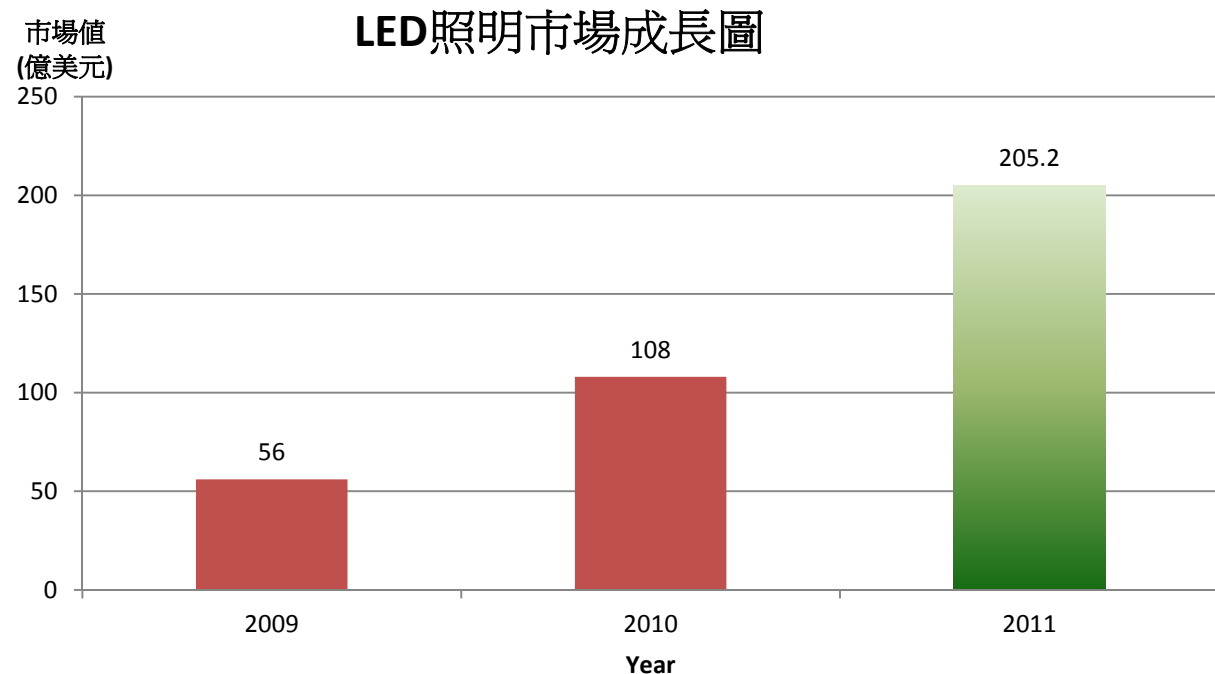
# MR16 Application - Europe



# Promotion of LED lighting in global market

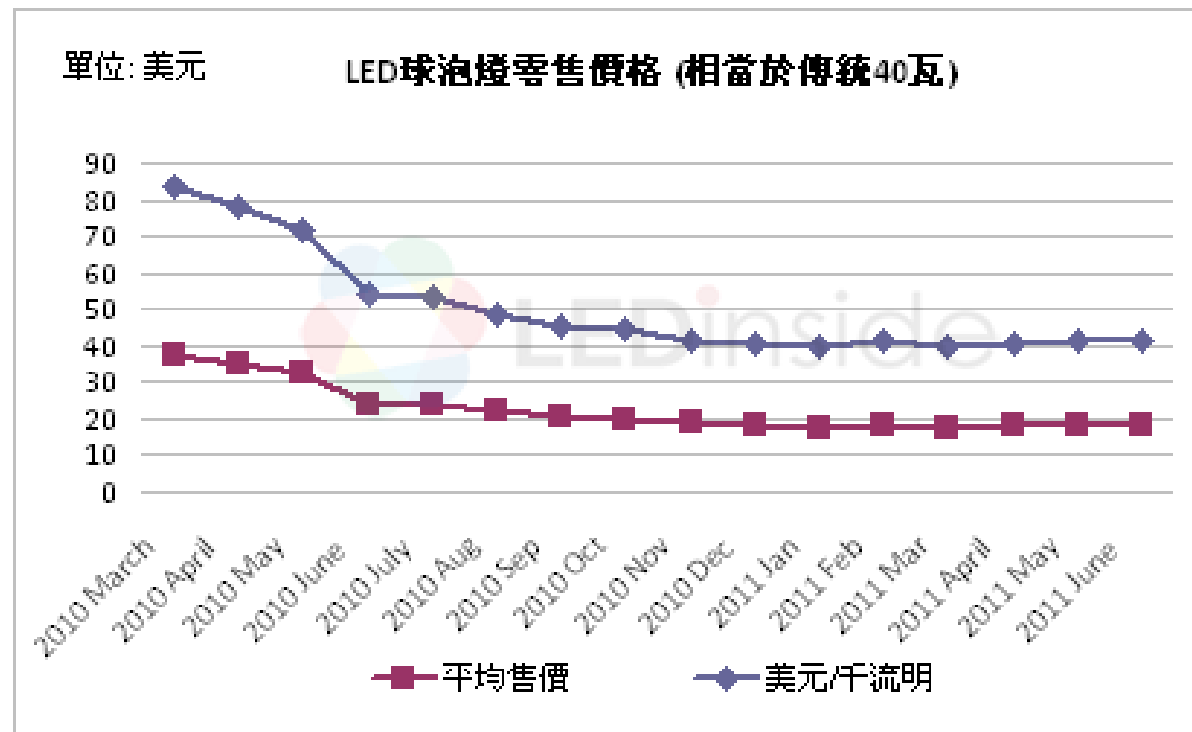
# Potential of LED lighting market

According to market research institution Strategies Unlimited, in 2009, global high-brightness LED market valued 5.6 billion USD, and it grew to 10.8 billion USD in 2010. It is expected to value 20 billion USD in 2011, and the drive behind 2011' s high-brightness LED market is LED lighting.



# Potential of LED lighting market

Retail price of LED bulbs is dropping every year. It dropped from last year's 40 USD to this year's 20 USD, and it's still dropping. It helps the market of LED lighting application grow.



資料來源: LEDinside

# ALT' s special project of LED lighting promotion

No installation cost

No maintenance fee

Low entry

Accelerate the growth of  
green architecture

# Benefits of the project

- **Lighting monitoring** : it helps our customers monitor the actual utility of the lighting.
- **Excellent quality**: All Aeon Lighting Technology products are guaranteed with excellent quality
- **Replacement assistance**: Aeon Lighting Technology will offer installation consultation and service, including installation of light dimmer and adaptor
- **Ownership of the products**: through this project, customers are completely entitled to the lighting without paying any extra fee
- **Cost-down**: With professional analysis, the best lighting efficiency and number of lamps could be calculated, reducing demand and cost of lighting

**Green enterprises**

**Smart money!**





# *Introduction of the example of Taipei Medical University Hospital*



# Contract deal

- Total amount of the contract: 19,200,000 NTD (divided into 60 times and paid by the hospital in 5 years)
- Replace traditional lamps with LED lamps (more than 16,000), enhancing energy efficiency, reducing electrical load, and reducing probability of accidents.
- The hospital paid 48 million NTD for electricity last year, 20% (9.6 million NTD) of which was for lighting. After the installation, the electricity fee for lighting is expected to drop to 3.84 million NTD (saving 5.76 million NTD, which is 60% of the total electricity fee).



傳統96W輕鋼架燈具

年省55,296度



LED T-Bar 32W 格柵燈



傳統26W 鹵素燈

年省9,504度



LED 15W 崁燈



傳統48W 日光燈

年省27,648度



LED 16W LED4 呎燈管

# Conclusion

Smart green architecture is the future

LED lighting can enhance the performance of green architecture

LED lighting will be the mainstream of the new era

Let' s create the new future for environmental protection with energy-saving green architecture

**Thank you!**