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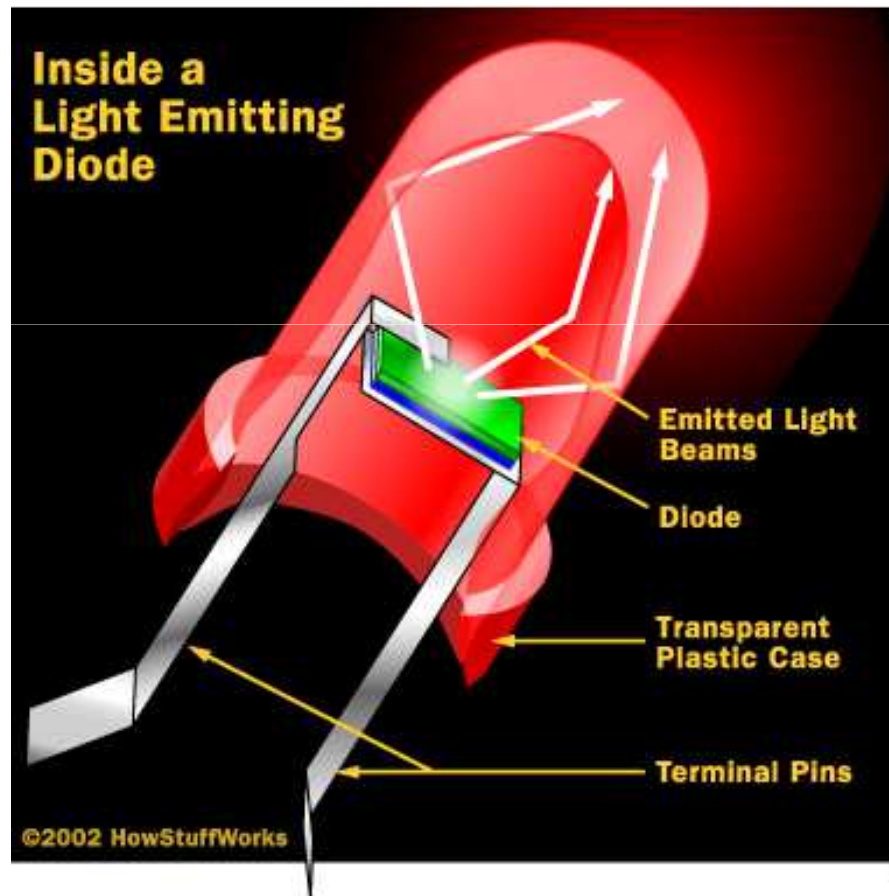
# **SOLID STATE LIGHTING**

## **LIGHT EMITTING DIODE (LED) LIGHTING**

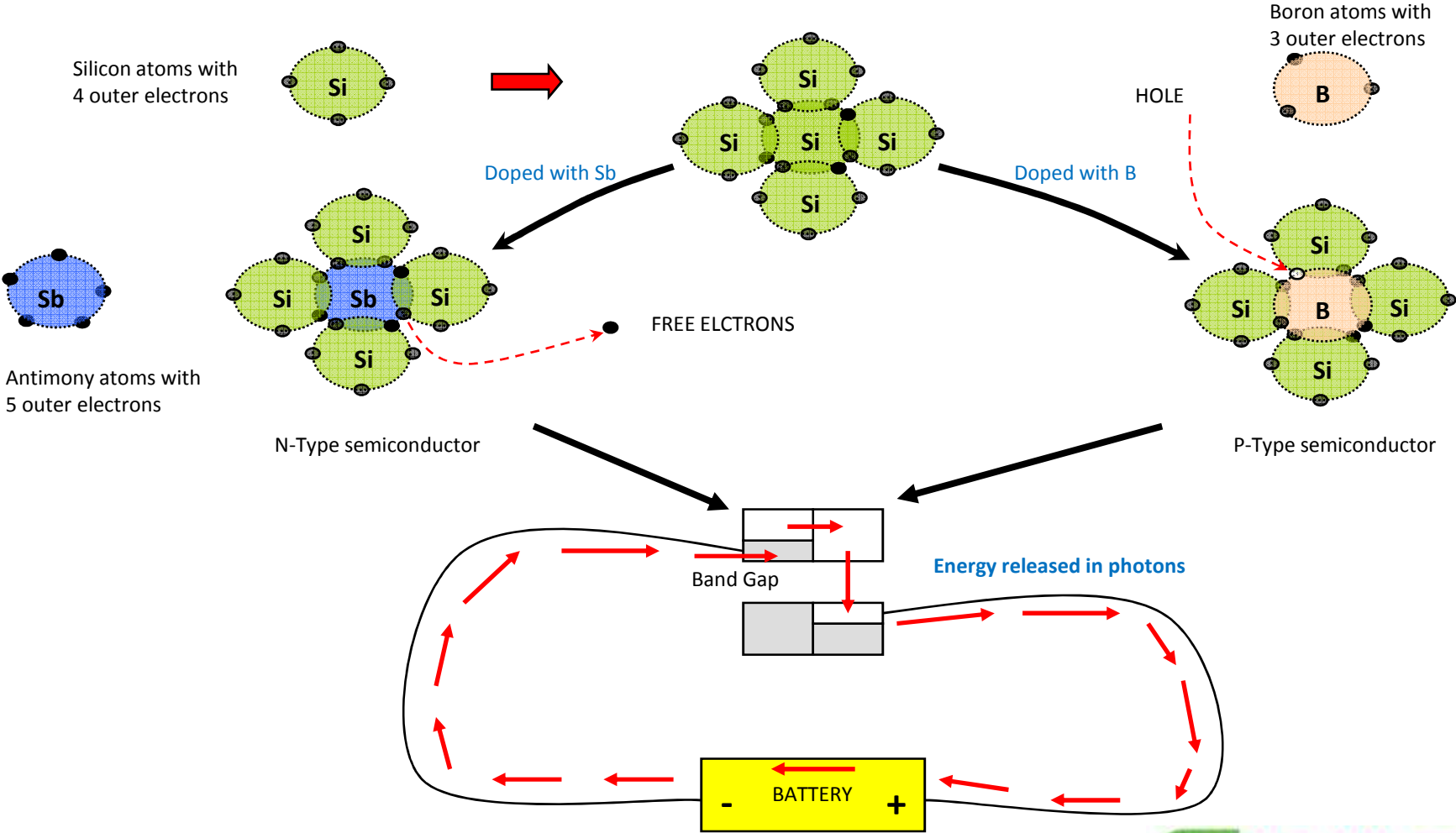
# Agenda

1. Basic anatomy of an LED
2. How an LED works
3. Types of LED package
4. Key Technologies
5. Market expectations

# Basic Anatomy of LED



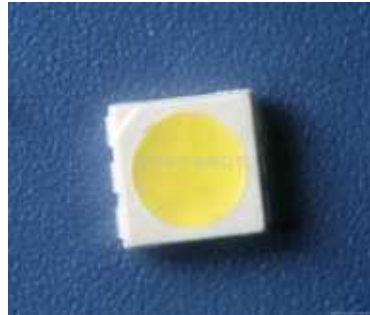
# How an LED works



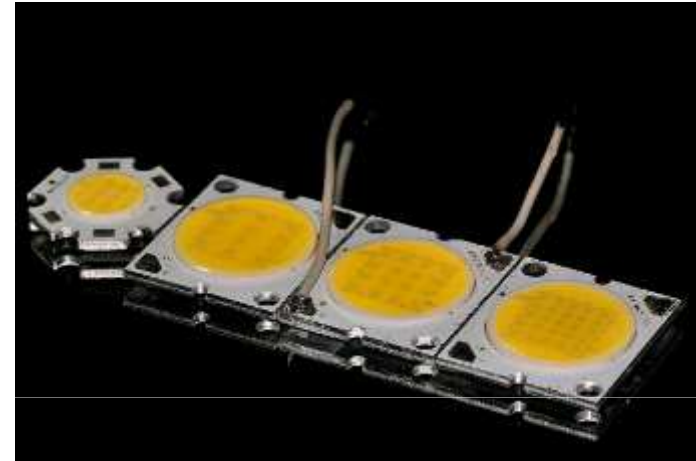
# Different types of LED



2 Pins



2surface mount



Multi Chips

## Major LED companies

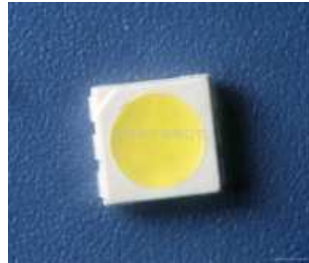
1. CREE (USA)
2. NICHIA (JAPAN)
3. OSRAM (GERMANY)
4. PHILIPS (THE NETHERLANDS)



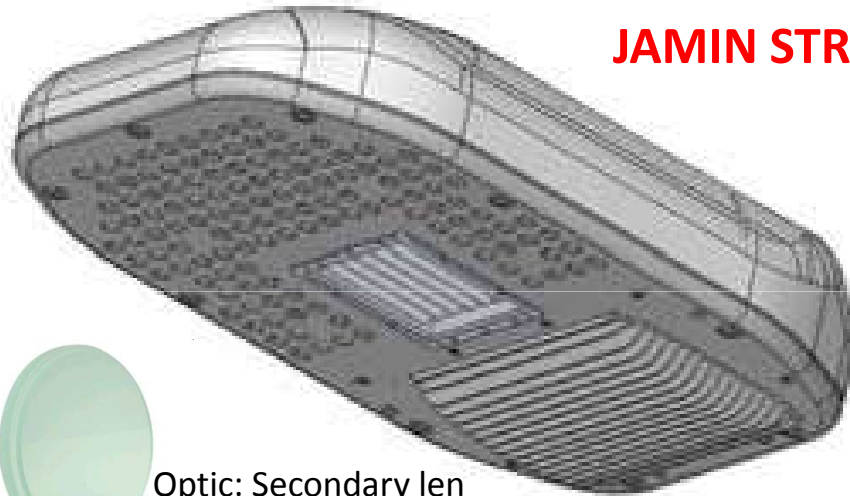
# Key Technologies

for a successful LED luminaire design

Creative Design  
Mechanical & structural  
Special coating technology



Light Source  
LED used



## JAMIN STREETLIGHT



Optic: Secondary len

Reflector



Diffuser



Thermal Management :Heat sink



Power Source: Driver



# Market Expectations

## Expectation

1. Low electrical consumption
2. Long life-span
3. Efficient & Reliable
4. Cost savings
5. Environmental friendly

50 to 70% savings  
in electrical consumptions  
for the same brightness in lumens

30,000 to 50,000 hours  
lifespan reduces  
maintenance and  
Replacement cost

Declaration of  
RoHS & PFOS  
Conformity



- Any colour without using filter
- No mercury
- No Ultra Violet light

- Switch on instantly
- Dimmable