



SPECTACOLO PROJECT



ERASMUS+

LIGHT DESIGN WORKSHOP



Funded by the
European Union

SPECTACOLO PROJECT



WWW.THEATRESTUDIES.GR
WWW.SPECTACOLO-PROJECT.EU



Funded by the
European Union



THE ART OF LIGHTING

Lighting controls everything we do.

We are governed by lighting.

In the performing arts it's the foundation of every movie, TV show, photo, and play ever made, and it's even more important in our regular lives.

THE LIGHT IN ANCIENT GREEK THEATERS

The lighting in ancient Greek theaters, such as those found in Athens, was primarily dependent on natural sunlight. There were certain strategies employed to manage lighting during performances

- The positioning of the stage
- The use of a building behind the stage
- Performances taken place during dusk or twilight hours



THE LIGHT IN ROMAN THEATERS

Roman theaters also primarily relied on natural light during performances, much like their Greek counterparts

Roman theaters sometimes had tents or folding canopies, known as **velaria**. These canopies could also help to create certain lighting effects by filtering sunlight.



LIGHTING IN MIDDLE AGE ERA



During the Middle Ages, theaters underwent significant changes compared to ancient Greek and Roman theaters

- Performances often took place in churches or other religious buildings, where natural light from windows provided illumination
- Natural sunlight was less of a factor, and artificial lighting became more important.
- One common form of artificial lighting during the Middle Ages was the use of candles or oil lamps

LIGHTING IN RENAISSANCE

During the Renaissance, theaters began to incorporate more sophisticated lighting techniques

- Theaters, featured elaborate stage designs with integrated lighting elements.
- These might include concealed candles or lamps behind the scenery to create dramatic lighting effects

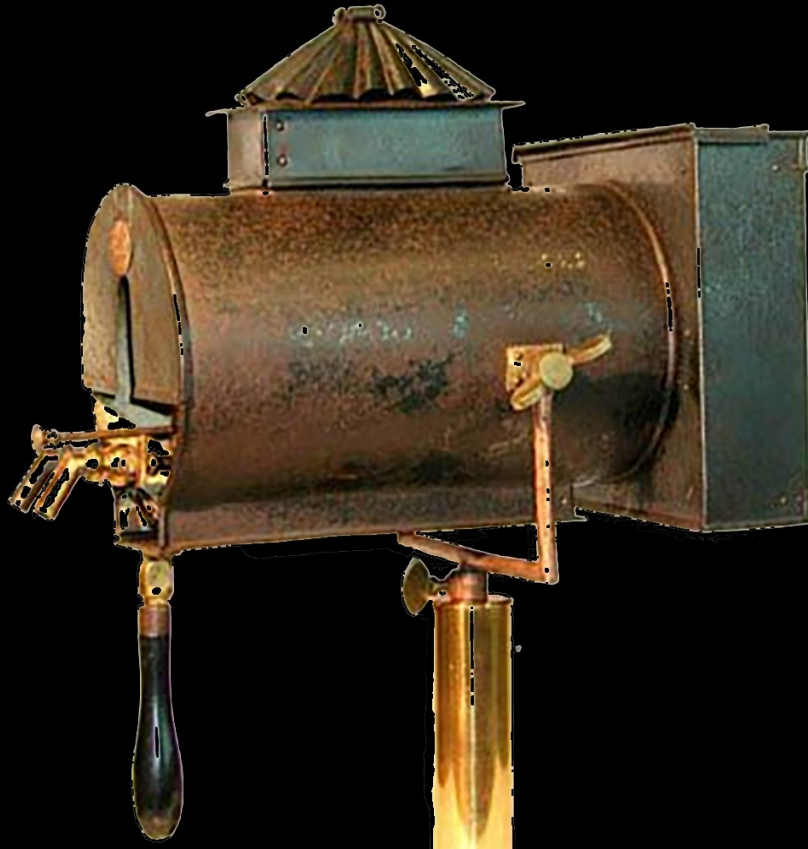




LIGHTING IN ELIZABETHAN ERA

During the Elizabethan era, lighting design was a stark contrast to what we see in modern theaters today. The performances of theatres in London on the banks of Thames river, relied on natural light during daytime performances, while artificial lighting was minimal and rudimentary for evening performances

17TH AND 18TH CENTURIES OIL LAMPS AND LIMELIGHT



In the 17th and 18th centuries, progress was made when **oil lamps** were invented because they gave off a more steady and manageable light.

Also, the early 1800s creation of **limelight** changed the way theaters were lit in a big way. Limelight used a flame pointed at a barrel of lime to make a bright white light that made things on stage much easier to see.



17TH AND 18TH CENTURIES LIMELIGHT

LIGHTING WITH GAS AND GAS MANDLES



In the 1800s, gas lighting became popular in shows because it was brighter and more consistent. The gas lamps, which made the lighting effects more dynamic. During this time, colored lighting got better by using tinted glass and other techniques. Gas lighting remained prevalent in theaters until the late 19th and early 20th centuries when electric lighting began to replace gas as the dominant form of illumination.



**LIGHTING WITH GAS
AND GAS MANDLES**



A
NEW
INVENTION
NEW
WORLD

Electricity sparked a revolution that illuminated
the world in ways unthinkable.

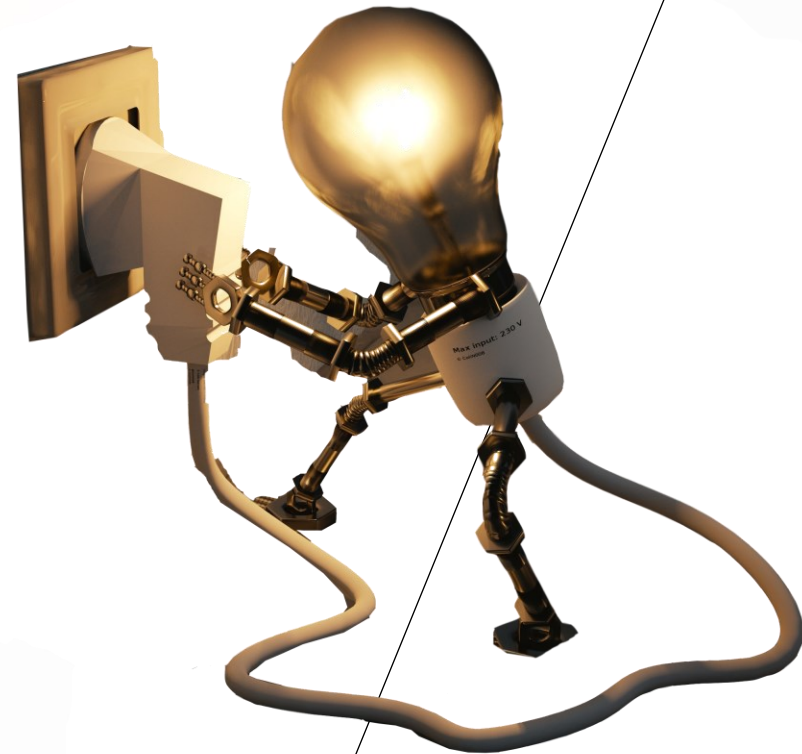
In the late 19th century, pioneers like
Thomas Edison
and Nikola Tesla,
as modern Prometheans , gave to
mankind the massive
power of electricity

ELECTRICITY ERA

Electric lighting became popular in shows in the late 1800s and early 1900s.

Thomas Edison's electric light bulb and later improvements in lighting technology changed the way stage lighting was done. Electric lighting was safer, easier to control, and more flexible than older ways.

Rapid developments happened from then on





ELECTRIC ARC LAMPS

In the late 19th century, electric arc lamps were among the earliest electric lighting sources used in theaters.

These lamps produced light by creating an electric arc between two carbon electrodes. While arc lamps were much brighter than gas or oil lamps, they had drawbacks such as flickering and producing a harsh light.

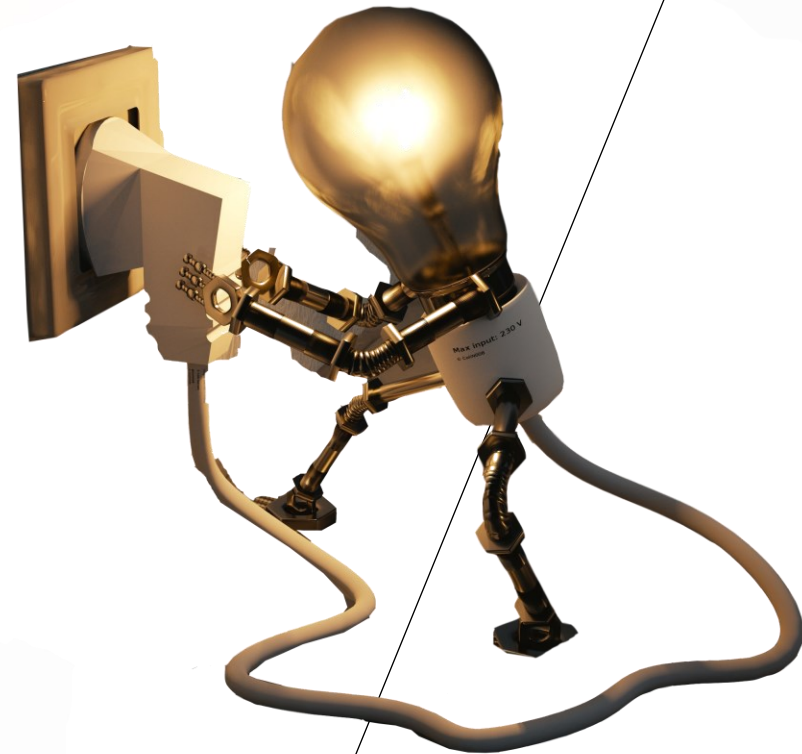


**ELECTRIC
ARC
LAMPS**



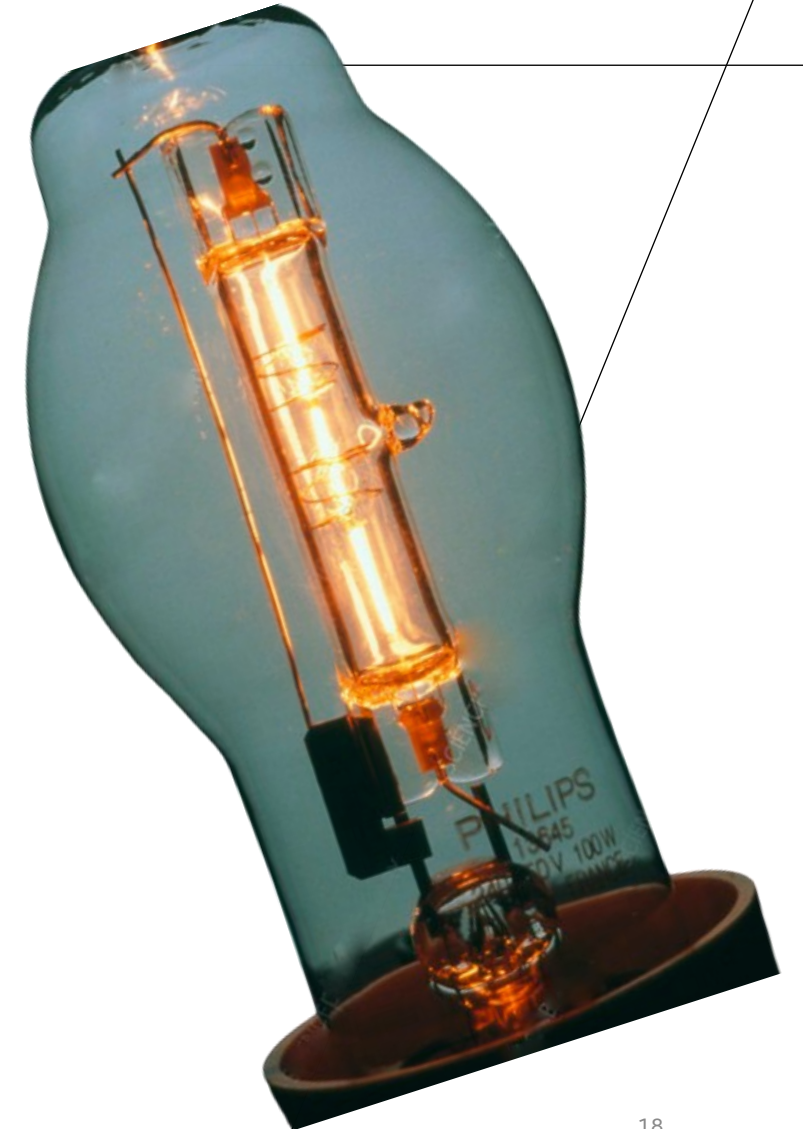
ELECTRIC INCANDESCENT LAMPS

Thomas Edison is credited with creating the first incandescent bulb and, by the 1880s, it was being used in theater. Over the next 40 years, gas and limelight were completely replaced by incandescent electric light. These lamps first used carbon filaments and were later replaced with metallic filaments such as tungsten.



HIGH-INTENSITY DISCHARGE (HID) LAMPS

In the 1980's as automated lighting began to enter into the entertainment scene, the use of High Intensity Discharge (HID) lamps grew rapidly. These lamps produce light by creating an electric arc between tungsten electrodes. This arc occurs in a quartz tube that is filled with a mix of gas chemicals. When heated, the chemicals evaporate and form a plasma, which in turn increases the intensity of the light produced by the arc.



INCANDESCENT LAMPS

Incandescent lamps provide a warm, natural light that can be essential for creating certain moods and atmospheres on stage.



INCANDESCENT LAMPS



ERS lights,

also known as profile spots, feature adjustable shutters and a sharp focus, allowing for precise shaping of the light beam.



PAR cans

produce a versatile, powerful beam of light

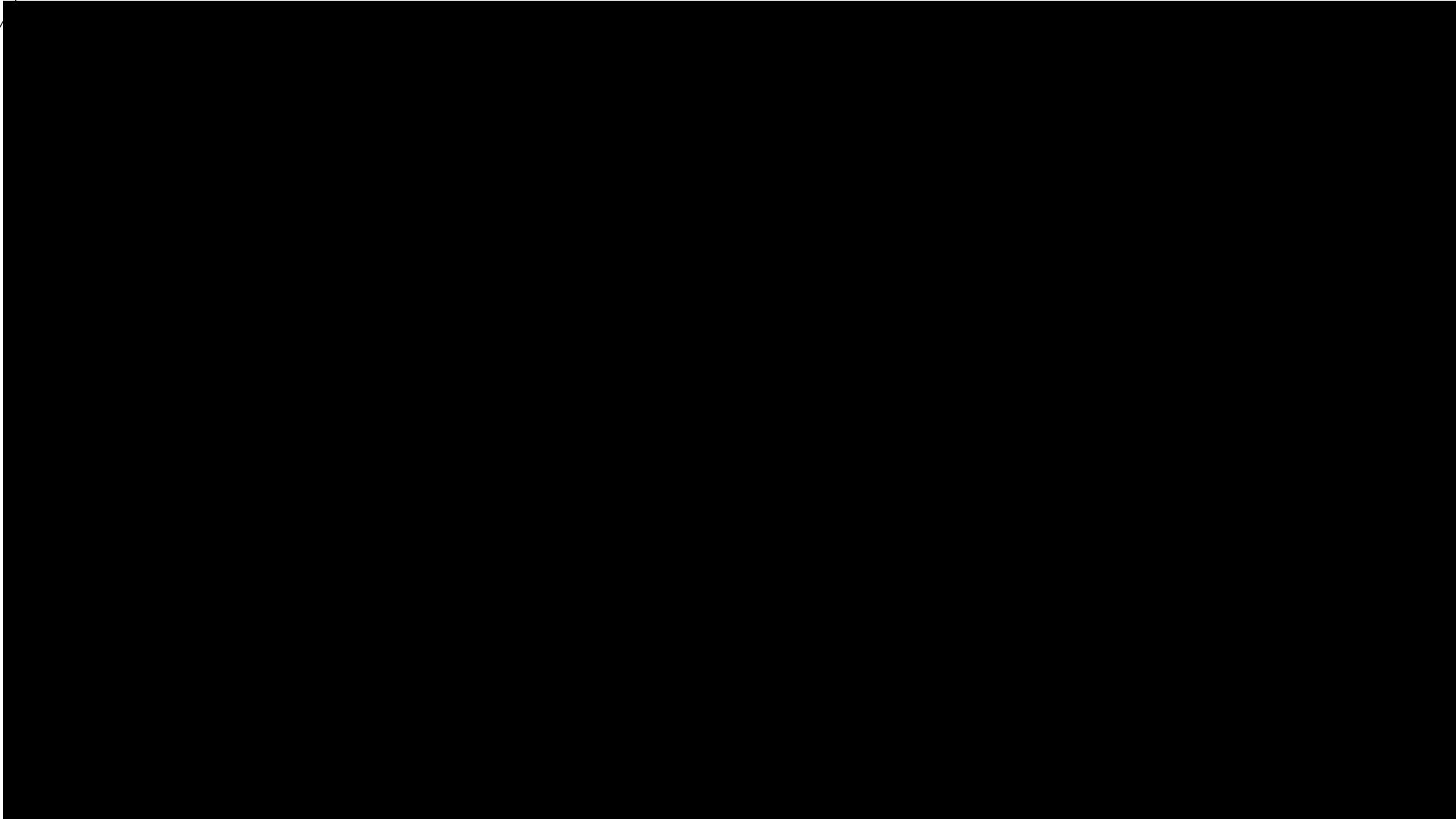


LIGHT EMITTING DIODE (LED)

The LED technology invented in the early 1960s, and recently emerged as the main light source in entertainment lighting fixtures. Starting around 2008, LED stage luminaires were found in stages all over the world. LEDs have excellent energy efficiency, so they are very economical in energy consumption and have a long lifetime. The rich colors and high efficiency of LEDs have led to the creation of many new types of lighting products.



HOW THE LIGHT EMITTING DIODE (LED) WORKS





THANK YOU

For today

Next meeting will be on Thursday....