

# Lighting up our world

## Light and lighting

ISO/TC 274 applies to lighting in specific cases, complementing the work of the International Commission on Illumination (CIE). 16 joint ISO/CIE standards have already been published.

Since **Thomas Edison**'s incandescent light bulb in the **1880s**, artificial light has become of primary importance to human activity.



## Optics and photonics

ISO/TC 172 develops for example standards for laser systems for medical application. Did you know "laser" means **Light Amplification by Stimulated Emission of Radiation**?

By 2020, LED lighting will represent

# 60%

of the lighting market



## Fireworks

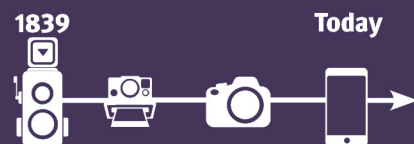
ISO/TC 264 reduces accidents, ensures the protection of employees and promotes the international fireworks trade.



## Photography

ISO/TC 42 applies to still picture imaging, both chemical and electronic.

From the **daguerreotype**, invented by **Louis Daguerre** in **1839**, to the smartphone, the principle of photography is to create images through the action of light.



UNESCO celebrates 2015 as the International Year of Light. Light in all its forms, from sunbeams to lasers, to photographic devices, illuminates our daily lives, and plays a vital role in the development of today's technological world. Whether natural or artificial, here's what you should really know about light.

The **speed of light** in vacuum is exactly **299 792 458 m/s**

## Solar energy

ISO/TC 180 deals with development, testing, installation and servicing of equipment and systems related to solar energy.

### Solar photovoltaic systems

+ Solar thermal electricity

= **6 billion tonnes of CO<sub>2</sub> saved/year**



It takes **sunlight** an average of **8 min and 20 s** to travel from the Sun to the Earth.

**Sea foam** reflects **25%** of UV radiations

**Snow** reflects **80%** of UV radiations

**Sand** reflects **15%** of UV radiations

**Cosmetics**  
ISO/TC 217 develops sun protection test methods to safeguard the skin from the damage of the sun.

**66 000** deaths occur annually from **melanoma and other skin cancers**.

## Quantities and units

ISO/TC 12 develops units and symbols for use within the different fields of science and technology such as light and other electromagnetic radiation.