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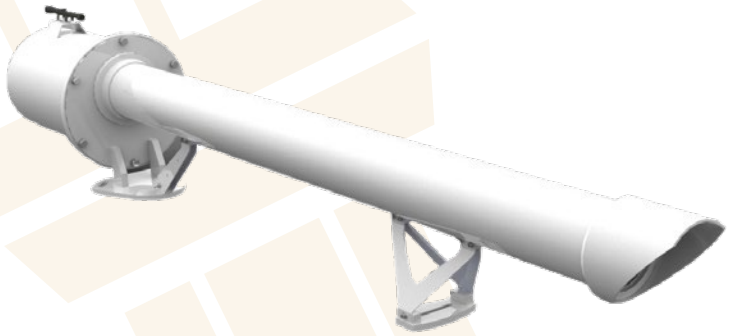
There are two basic types of sector lights: **omni-directional and directional.** Omni-directional sector lights generally cover up to 360 degrees, whereas directional sector lights only cover a relatively small arc.

MBL400S

MEL500L



Example of omnidirectional and directional sector lights.

There are a variety of technical solutions to generate the needed light sectors for this type of beacon. This solutions can be classified by the optical method applied to manage the light direction and intensity. The two most common technologies for the provision of sectored light signals are as follows:

1- POINT LIGHT SOURCE SECTOR LIGHTS (FOR LARGE SECTOR ANGLES OR OMNIDIRECTIONAL):

1-1 Single light source and filters

This type of sector lights are composed by some kind of single light source, that emits light on a omnidirectional plane.

This light is screened by colour filters placed at some distance, producing the desired sectors.

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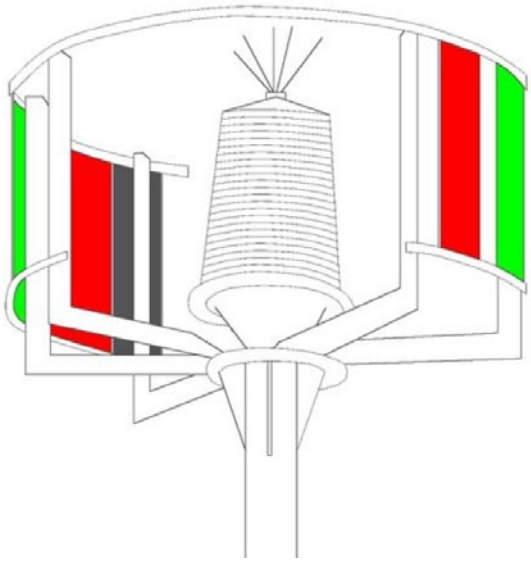


IMAGEN 2

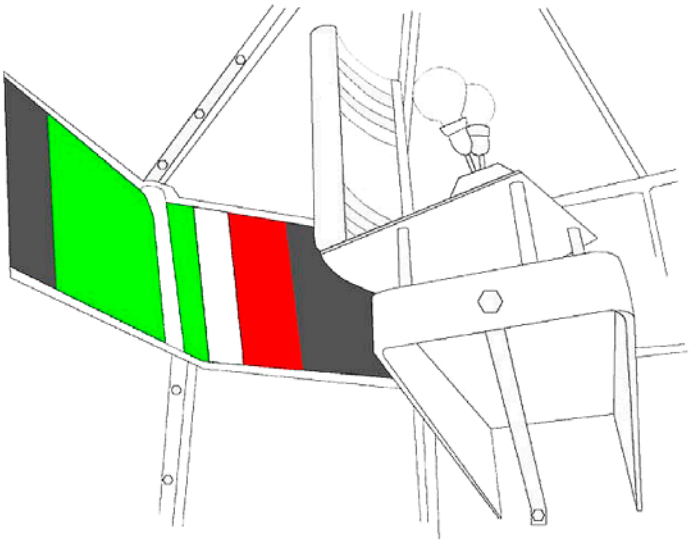
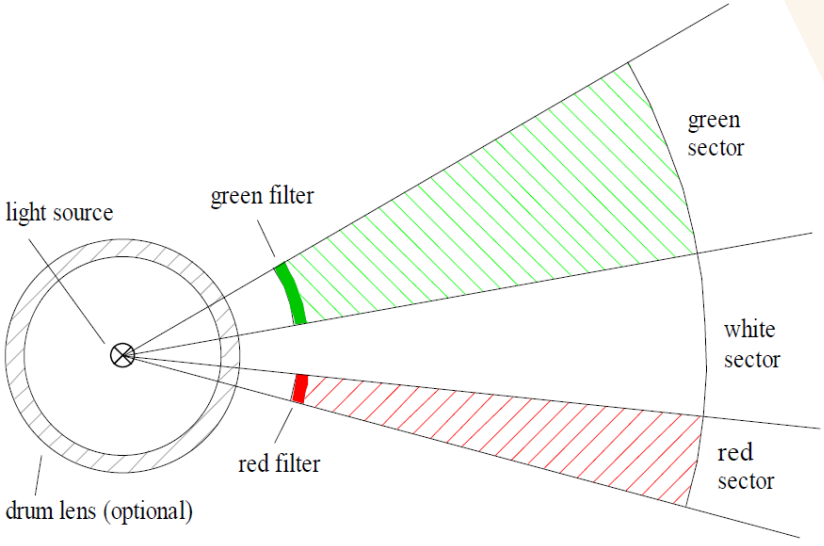


IMAGEN 1

Some of the most common devices that fall into this typology are:

- Classic drum lens light and coloured filters (on a lighthouse). IMAGE 1
- Classic small lantern and external filters. IMAGE 2
- Small and medium LED lantern and internal filters.

This technical solution has the disadvantage that the filters usually reduce the efficiency of the whole system, thus incrementing the power needed and reducing effective range.



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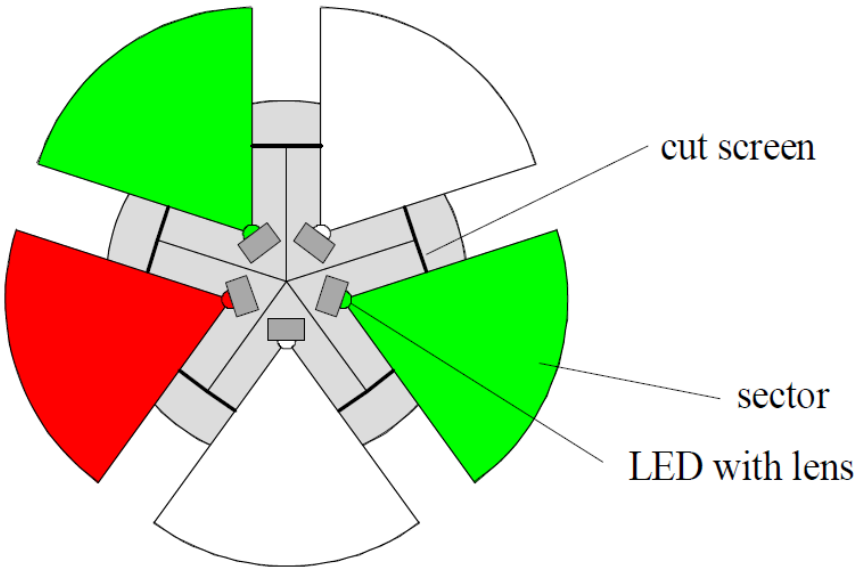
1-2 SINGLE SOURCE MULTIPLE TIER SECTOR LIGHTS

Linterna LED mediana con múltiples niveles. Cada uno de ellos con una sola fuente de luz (habitualmente LED) y filtros internos. Cada nivel se oscurece en ángulos determinados, creando los sectores deseados.

1-3 MULTIPLE SOURCE SECTOR LIGHT (MSSL)

MSSL produce the sector signals using several LED light sources equipped with individual lenses and beam forming screens.



2- PROJECTOR SECTOR LIGHTS (FOR SMALL SECTORS)

Using an individual coloured LED projector for every sector, the resultant is a multi-beam LED Projector Sector Light. Single beam LED Sector Lights can be created using various methods including the use of mirrors.

This technology requires that the sector limits must be adjusted very carefully relative to each other.

NEW DEVELOPMENTS:

3- ROTATING COLOUR SWITCHING SECTOR LIGHT

Latest development in rotating LED light multiple source beacons permitted de design of one of the most useful and versatile typology of sector lights, the rotating colour switching sector light.

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Rotating LED light sources can be used for producing light beams of different colours as required in particular application. Each combination of an LED and a lens produces a different beam that can be precisely switched on and off in time during rotation.

When rotating, an electronic control detects the angular position of the optic and switches on each LED during the passage through the sector required.