**ROTATING COLOUR SWITCHING SECTOR LIGHT**

The principle of this system is based on the speed with which the LEDs can switch on and off.

It consists of a system of 6 Fresnel lenses in a rotating equipment, so that each lens is focused on a single LED. Unlike conventional rotating systems, there is not only a single focal point for the 6 lenses, but 6 different focal points.

A LED diode is placed in each of the focal points, and the luminous source will rotate jointly with the lenses.

Therefore, we have a luminous source consisting of 6 LEDs, and it is possible to use different colours (For example, 2 white, 2 green and 2 red ones). Thus, we obtain an equipment producing 2 white beams, 2 green beams and 2 red beams.

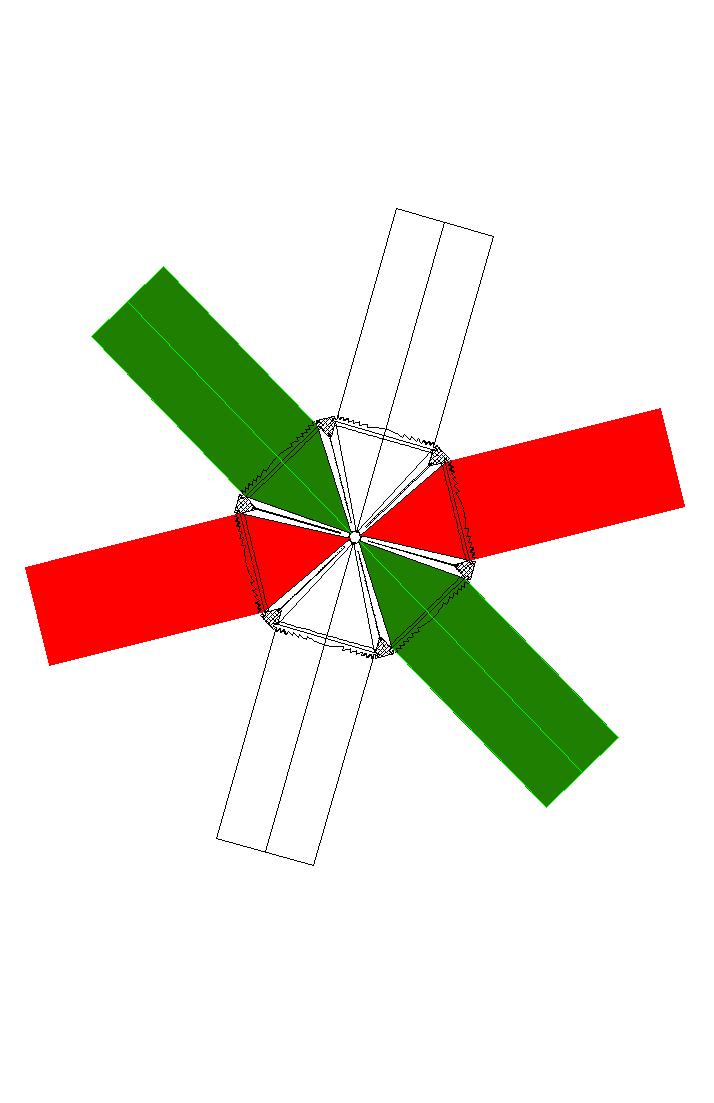


FIGURE 1: LED –Lenses array

An electronic control of the position can be made, by which each LED switches off or on, depending on its angular position and on the lens focusing on it.

This way, when the system is rotating, it is achieved through programming that the “LED-lenses” providing white light only switch-on when they are in the sector where we need white light. The same applies for green and red sectors.

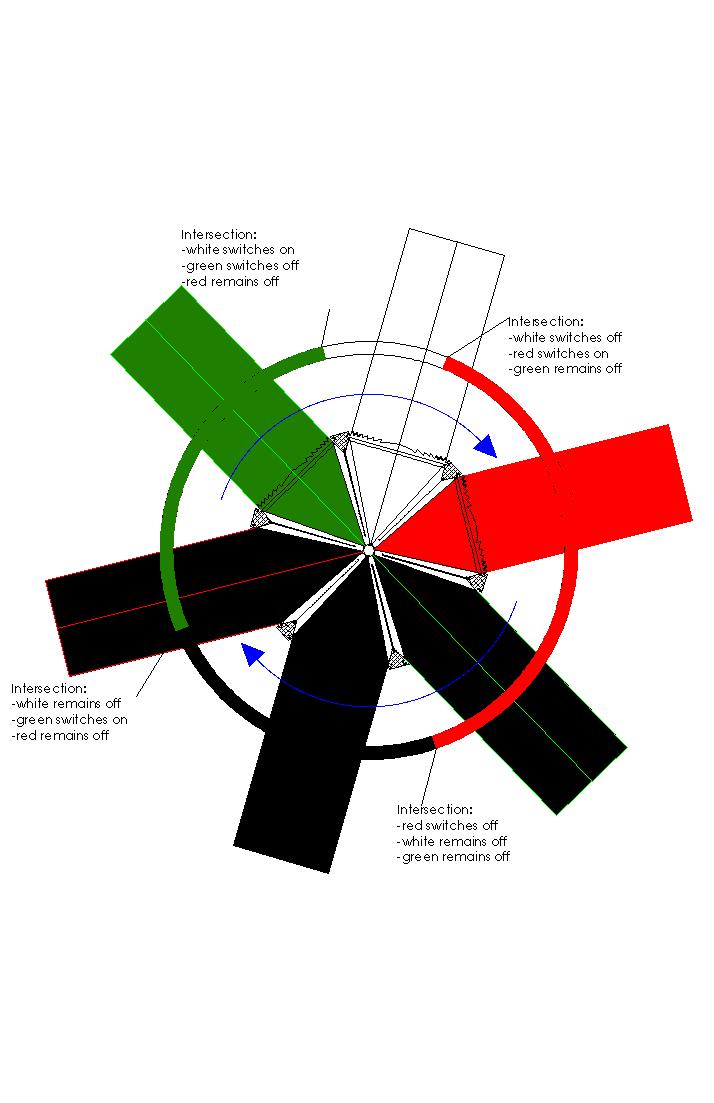


FIGURE 2 : Example operation mode for single flashing light of 3 sectors

Therefore, the sector configuration is merely a matter of programming, with the possibility of any kind of configuration, from only one sector of a single color up to complex multiple sectors of different colours.

The modification of the width of any sectors can be done by programming without the need of physical handling or modification of the equipment.

Besides, another advantage is that the luminous intensities with these rotating systems are higher than using flashing systems and the consumption is much reduced.

The uncertainty angle in that kind of equipment corresponds to the horizontal divergence of the beam, so that it will depend on the LED light source used and the focal distance of the lens.

The only limitation of this system is the impossibility to perform characters of long flashes or occulting flash rhythms, like in any rotating systems.