LED durability, efficiency and reliability have permitted the realization of the Railway LED Signal Light. It has been mechanically and electrically conceived to ensure absolute compatibility with the previous lamp devices. Therefore their replacement and commissioning can be carried out in a very short time.

The luminous uniformity and intensity of the three coloured LED signals are constantly controlled, fulfilling in this way the first class of the UNI 9296 Norm. This Railway LED Signal Light guarantees a fourth safety integrity level (SIL4), according to the safety CENELEC Norm: EN50126, ENV 50129. Moreover the Railway LED Signal Light is designed to guarantee a high reliability level even in harsh environmental conditions (A6 class), taking into account ambient stresses (vibrations, temperature excursions, atmospheric overvoltages, electric faults etc.), thus conforming to Railway Norms.

This Signal Light alternately visualizes one of the three coloured lights (Red, Green and Yellow) on the same emitting surface, according to the intensity and colour coordinates required by specifications.

The patented optical device, made up of a group of lenses, focuses the LED light into a very narrow luminous beam (typ. +/- 3°), as required by the specific application. Moreover the lens is designed to supply an optical feedback of the emitted light in order to allow a diagnostic check of the displayed signal.

**Technical Characteristics**

**Optical Unit**
Each of the three coloured signals consists of:
- 3 separated LED Clusters with a 2-out-of-3 redundancy
- 1 additional LED Cluster, that allows the light to be checked by the maintenance personnel
- An appropriate optical sensor that detects the emitted light
- A precision optics which makes the LED light to be appropriately directed

**Power Supply Unit**
- Mechanical compatibility with the two existing chassis
- On-site adjustment of the electrical input
- Adjustable brightness alarm threshold (set in factory)
- In case of failure of one of the three clusters, the light level doesn't change and a warning electric signal is sent to the control centre
- Ease of installation