

# CASESTUDY

BY MINILAMPE

**BESPOKE  
SOLUTION**  
**COMPLETE LED  
LIGHTING SYSTEM**

## RAILWAYS

**SNCF – TGV DUPLEX  
1<sup>ST</sup> CLASS SEAT 1<sup>ST</sup> GENERATION**

**TRAIN INTERIOR  
OUTFITTING  
REFURBISHMENT**



**DESIGN  
MANUFACTURING  
AESTHETICISM  
ERGONOMICS**



### THE REQUIREMENT

SNCF, the French transport operator, in a constant effort to bring more comfort to its passengers, wished to renovate its TGV DUPLEX 1<sup>st</sup> class 1<sup>st</sup> generation fleet. SNCF studied an ergonomic seat which adapts to the passengers' needs. MINILAMPE has been selected by the manufacturer of the seat to bring the complete lighting solution on the TGV first class seat.

### SOLUTION MINILAMPE

With its research and Development Department, its production unit and its laboratory located in France, MINILAMPE has designed all lighting functions of the first class seat in partnership with the seat manufacturer to deliver a number of lighting features required by SNCF. The seat adapts to the passengers' need (working, reading, or relaxing). In this case study, only the lighting features are presented.

The solution of the complete kit driven by a main electronic card located in the folder of the seat includes all lighting features: folding table light, reading light, under seat light, and USB light. This kit is EN50155, EN45545-2 approved.

**1. Lighting for folding table and touch.** Enables to light automatically the tablet once pulled down. Dimmable tablet lighting by touch switch for a better working comfort.

**2. Lighting 5V USB port.** USB with LED included.

**3. 12V reading light.** Individual reading light with indirect lighting for a better visual comfort.

**4. 12V under seat lighting.** Floor lighting, corridor for security and control.

### THE RESULT

MINILAMPE was the lighting expert for this project from the electronic study, certification to prototypes manufacturing to bring the best comfort lighting features.

■ **Product reliability.** All lighting functions are independent of each other in case of damage (eg: USB socket used many times by users, risks of failure).

■ **Reduction of maintenance costs.** The complete kit (all lighting functions) does not need to be replaced, only the function concerned by the failure.

■ **MTBF 1 500 000 hrs.**

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