

HelioJet

Smart LED cabin lighting to replace fluorescent tubes



The Challenge: A sufficient LED solution to replace fluorescent tubes in cabins

Up until today LED lighting solutions have not been able to satisfactorily replace fluorescent tubes in aircraft cabins. **LED strips**, which consist of a large number of light diodes, show certain **disadvantages**:

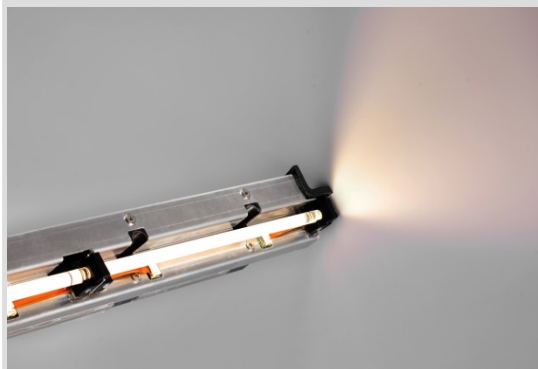
- No homogeneous line light
- Change of light stability over time
- Susceptibility to trouble due to a large number of light diodes

The solution: HelioJet – Smart LED cabin light

HelioJet, a new and unique LED lighting technology uses only a fractional amount of light diodes as conventional LED strips. This leads to significant **improvements in performance, reliability, maintenance and costs**:

- Very homogeneous line light
- Constant high light stability
- Low maintenance due much smaller number of LED involved
- High MTBF (Mean Time Between Failure)

Product Concept HelioJet



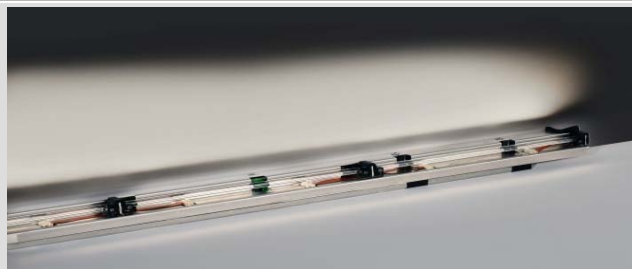
HelioJet line light

- Uses all the advantages of fluorescent tubes and LED technology: long lifetime combined with homogeneous illumination.
- Flexible, modular production concept enabling multiple electromechanical light variations suitable for most aircraft types.

Comparison of LED strip and HelioJet

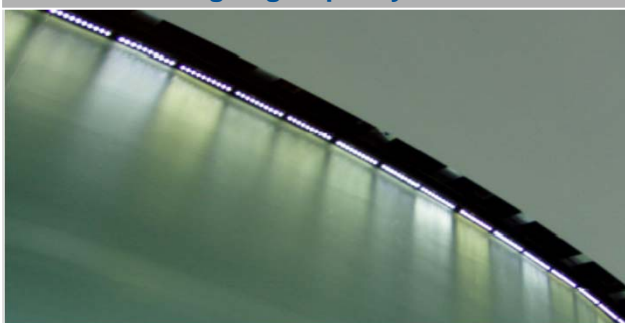


- In contrast to pure LED solutions HelioJet does not show any light point effects, as it mixes the light colours of the LEDs in the light guide that creates a perfect homogeneous appearance.



- Furthermore high quality LEDs are used to guarantee best light performance and reliability.

Continuous high light quality over lifetime



LED strip: Change in light stability over time

- An ageing LED has a negative influence over its lifetime that results in a colour shift from the original LED colour in addition to the dot effects. The observed result is an even more inhomogeneous light pattern.
- HelioJet counteracts this by using a high quality, high power LED and mixing its light in the glass light guide.

Technical Specifications (for 928mm unit)

Illuminance @ 1m distance	> 350 lx (fluorescent tube: 130 lx)
Illuminance of cabin floor	>50 lx
Colour temperature	Various (typically 4000 K, 5600 K)
Colour Rendering Index	85
Relative MTBF	5 times the MTBF of standard LED strip
Operating current of LEDs	700 mA max.
Operating voltage	28 VDC
Power Consumption	25 W
Light Beam angle	80°

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