

SCHOTT® 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 light pattern
- Change of light stability over time
- Lots of maintenance efforts due to a large number of light diodes

The solution: HelioJet – Smart LED cabin lighting

HelioJet, a new and unique LED lighting technology uses only about 20% of light diodes than conventional LED strips. This leads to significant **improvements in performance, reliability, maintenance and costs**:

- Homogeneous light pattern – No “hot LED Spots”, **better binning**
- Constant high light stability
- Low maintenance due to much smaller number of LED involved
- MTBF (Mean Time Between Failure) > 50.000 OH

Product Characteristics



- HelioJet eliminates color shifts from aging LEDs by transforming inhomogeneous light in the optical light converter into homogeneous light pattern.
- The meantime between failure (MTBF) is calculated at > 50.000 OH, which reduces the maintenance efforts substantially.
- It is designed for use in new aircraft as well as for retrofit projects. The modular production concept provides a high compatibility with different aircraft and operating systems.

Comparison of LED strip and HelioJet



LED strip

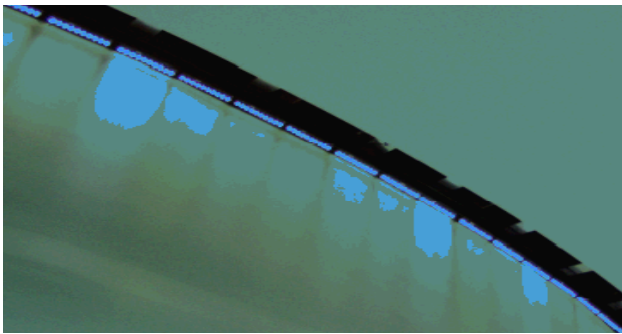


HelioJet

- In contrast to current LED strips, HelioJet shows no "hot LED spots" but constant homogeneous light quality with better binning.



Constant high light stability



LED strip: Change in light stability over time

- An aging LED has a negative influence over its lifetime that results in color shifts as well as the dot effects. The observed result is an inhomogeneous light pattern.
- HelioJet counteracts this by utilizing high quality LEDs and transforming its light inside the optic light converter into a homogeneous pattern.

Technical Specifications (for 928 mm unit)

Illuminance @ 1m distance	> 300 lx (fluorescent tube: 130 lx)
Illuminance of cabin floor	> 50 lx (Airbus single aisle)
Color temperature	Various (Typically 400K, 5000K)
Color rendering index	85
Relative MTBF	5 times the MTBF of standard LED strip
Operating voltage	115 VDC, variable frequency
Operating current of LEDs	700 mA max.
Light beam angle	60°
Power consumption	30 W max. (Typically 28 W)



Aviation
 SCHOTT AG
 Otto-Schott-Str. 2
 55127 Mainz
 Germany
 Phone: +49 (0)6131/667914
 Fax: +49 (0)6131/667850
 E-mail: aviation.info@schott.com

