SCHOTT® HelioJet White

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.

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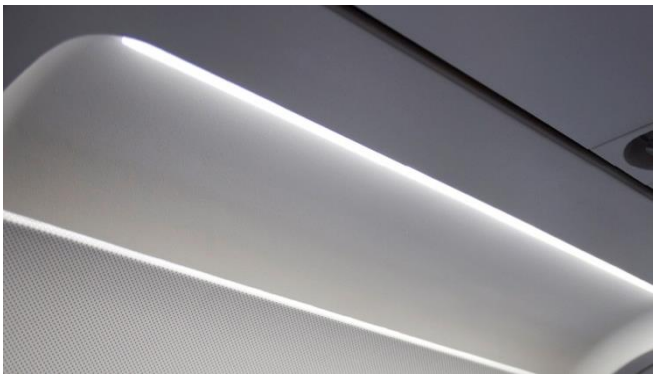
Comparison of LED strip and HelioJet

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



- 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 4000K, 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	Typically 25 W

EASA approved STC for installation of HelioJet (white) in A319-A320-A321

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