



valid until: February 20, 2030

Single product Outgassing Behavior Inorganic Acids

DUPPLICAT

This document only applies to the named product in its original state and is valid for a period of 5 years from the date the first document was issued. The document can be verified under www.tested-device.com.

Detailed information and parameters of the test environment can be found in the Fraunhofer IPA test report.

Fraunhofer TESTED[®] DEVICE

LAPP KOREA LLC
FD 8711 C MC 7x0.34
Report No. LA 2410-1570

Qualification Certificate

This is to certify that the product mentioned above, provided by
LAPP KOREA LLC
Hwaseong-si, Republic of Korea

has been awarded a Fraunhofer certificate TESTED DEVICE bearing the report number LA 2410-1570.

The outgassing behavior of the cable system CLEANROOM FD 8711 C MC 7 x 0.34 mm² (color: black) at the stated temperatures was investigated according to ISO 14644-15. Based on the outgassing rates determined for the specific units, the following material classification was made for the corresponding Contaminant Category:

Contaminant Category (x)	SER _u ¹⁾ 23 °C [g/unit · s]	ISO-ACC _e Class (x) based on 23 °C
Fluoride (HF)	< 2.9 x 10 ⁻⁹	< -8.5
Chloride (HCl)	< 2.9 x 10 ⁻⁹	< -8.5
Bromide (HBr)	< 2.9 x 10 ⁻⁹	< -8.5
Nitrate (HNO ₃)	< 2.9 x 10 ⁻⁹	< -8.5
Phosphate (H ₃ PO ₄)	< 2.9 x 10 ⁻⁹	< -8.5
Sulfate (H ₂ SO ₄)	< 2.9 x 10 ⁻⁹	< -8.5

¹⁾ SER_u: Unit-specific emission rate

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Report No. first document

Stuttgart, February 20, 2025
Place, date of first document issued

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Place, current date

on behalf of
Dr.-Ing. Frank Bürger, Project Manager Fraunhofer IPA