

Product Information

Lithium Fluoride Optipur®

GENERAL INFORMATION

Lithium Fluoride Optipur® is a high purity salt that is ideally suited as a precursor material to grow single crystals from. These single crystals have very high optical transmittance over a wide spectral range from 105 nm to 6 µm and can thus be used as optical elements. Furthermore, Lithium Fluoride Optipur® is well suited as evaporation material for the deposition of thin films.

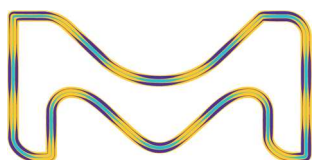
AREAS OF APPLICATION

- Single crystals from Lithium Fluoride Optipur® can be used as optical windows, crystal blanks, lenses for VUV & IR applications (105 nm to 6 µm), and as optical elements in X-ray diffraction devices.
- Due to the large bandgap Lithium Fluoride has the best transmission in the VUV region and is thus ideally suited for specialized DUV/VUV applications
- Lithium Fluoride Optipur® can be used to deposit thin films by evaporation for applications such as optical multilayer stacks or charge injection layers in OLEDs.

PRODUCT

Article No.	Description	Formula	Purity*	Package	Appearance
105689	Lithium Fluoride Optipur®	LiF	3N5	2.5 kg	white powder

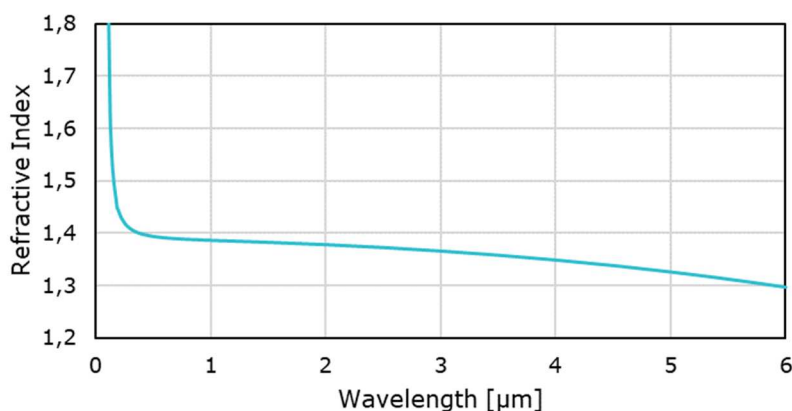
* The purity value is based on the specified trace metals. For further information, please read the quality statement at www.optipur.com.



PROPERTIES

Transmission Range	0.11 - 6 μm
Refractive index (@ 600 nm)	1.392
Solubility in water	0.27 g/100 g water (20 °C)
Solubility	soluble in HF insoluble in alcohol

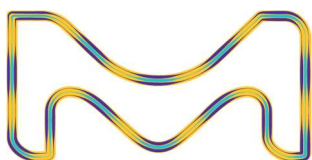
Optical Dispersion



NOTES FOR EVAPORATION

Thermal evaporation	Boat: Ni, Ta, Mo, W, Crucible: Al ₂ O ₃
Electron beam gun	Crucible: Ta, W, Mo
Melting temperature	845 °C
Temperature @ vapour pressure 10 ⁻⁶ Torr	1020 °C
Deposition rate	0,1 – 1,5 Å/s dependent on application, tight rate control required
Substrate temperature	dependent on application
QCR-settings	Density 2.638 g/cm ³ , Z-ratio 0.778

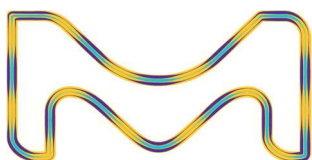
Gentle preheating is recommended for outgassing before evaporation.



SPECIFICATION

Ba (Barium)	≤ 5	ppm
Ca (Calcium)	≤ 100	ppm
Cd (Cadmium)	≤ 0.5	ppm
Co (Cobalt)	≤ 0.5	ppm
Cs (Caesium)	≤ 50	ppm
Cu (Copper)	≤ 0.5	ppm
Fe (Iron)	≤ 1.0	ppm
K (Potassium)	≤ 20	ppm
Mg (Magnesium)	≤ 5	ppm
Mn (Manganese)	≤ 0.5	ppm
Na (Sodium)	≤ 50	ppm
Ni (Nickel)	≤ 0.5	ppm
Pd (Lead)	≤ 0.5	ppm
Rb (Rubidium)	≤ 20	ppm
Sr (Strontium)	≤ 10	ppm
Zn (Zinc)	≤ 0.5	ppm

Should you have further specific requirements, please contact us.



Quality assurance

Research, production and sales of our Optipur® high purity materials take place under a certified DIN EN ISO 9001:2000 quality management system and DIN EN ISO 14001 environmental management system. The quality of the materials is assured by our manufacturing processes, in-process controls and quality tests. Each batch is released only after passing our chemical analysis and application tests designed to confirm the suitability of the material for the evaporation process.

Handling precautions

Product safety information required for safe use is not included in this document. Before handling, read product and safety sheets and container labels for safe use, physical and health hazard information. The material safety data sheet is available online at www.optipur.com, from your representative or distributor, or by calling your global contact.

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