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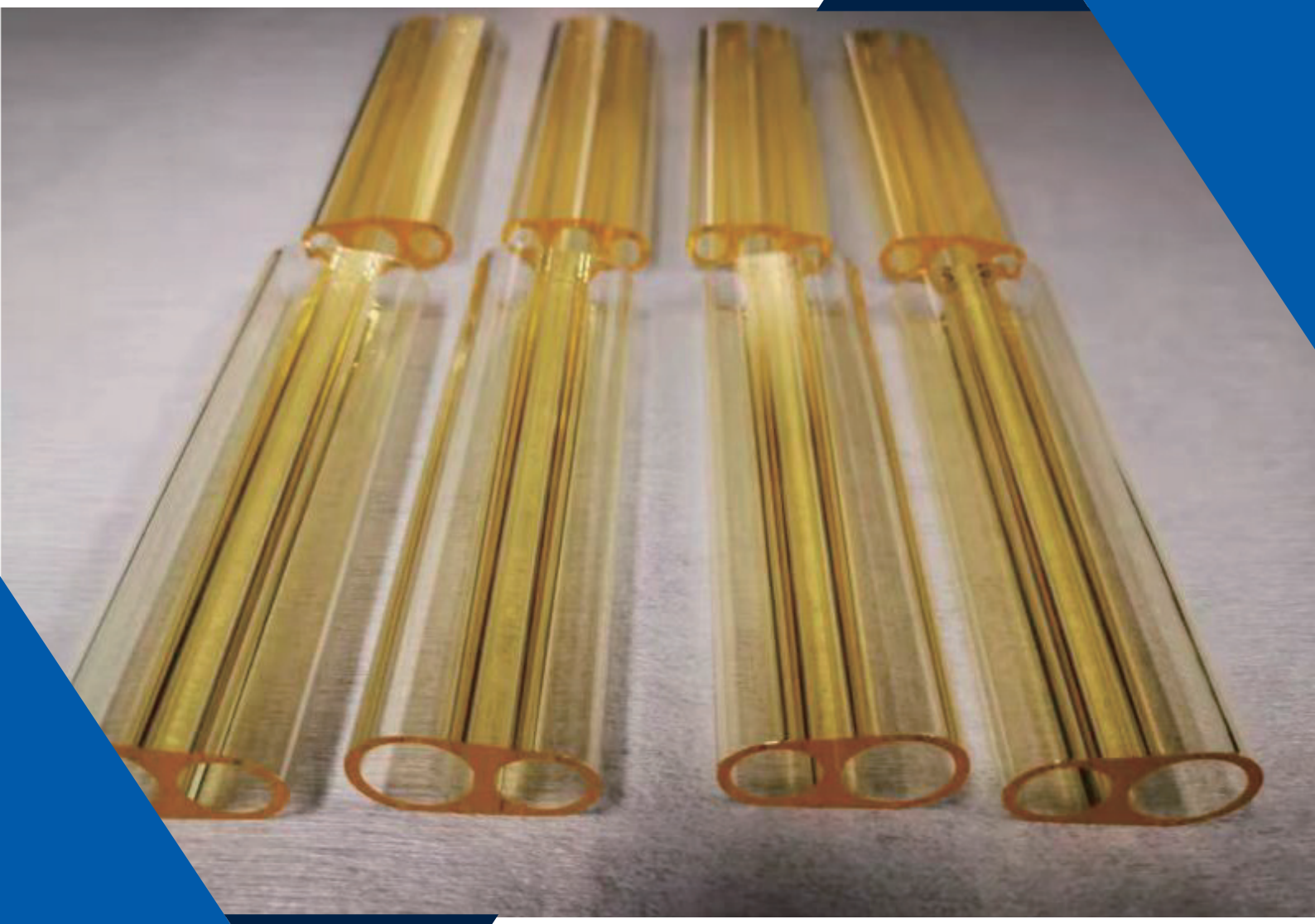

Crylink Sm:Glass

For laser cavity filtering

Scan for more detail

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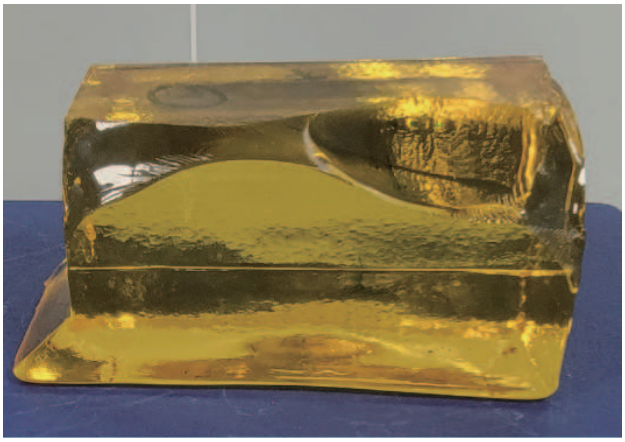
Crylink Sm:Glass · Superior Quality

Shanghai Crylink Technology Co., Ltd. is one of the manufacturers of CLS Filter Glass.

Crylink's CLS Filter Glass is a samarium doped silicate glass, which can be used as a filter for the pump cavity to prevent color centers from appearing in the laser medium and to reduce thermal effects.

CLS silicate glass has strong absorption at the Nd3+ emission peak, which helps to reduce the radial ASE and structure for uniform pump distribution and high pumping efficiency, which is very important for good beam quality.

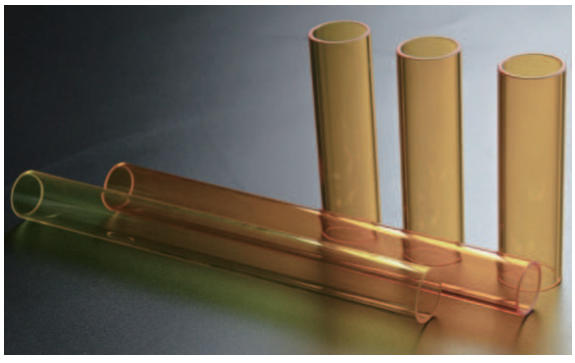
Crylink adopts unique growth, processing, polishing and coating process to make samarium doped filter glass show excellent laser performance.



Crylink Sm:Glass · Melt Quenching Method

Crylink adopts the melt quenching method to grow samarium-doped filter glass, which is to mix the raw materials uniformly according to a certain proportion, melt at high temperature, then pour at low temperature, and finally anneal at the corresponding annealing temperature. This method is not only a simple preparation process, but also the prepared glass has a very good light transmission performance.

Crylink Sm:Glass · Applications



Samarium-doped filter glass is mainly used in xenon pumped Nd:YAG lasers and neodymium glass lasers, because it has high UV cutoff and infrared cutoff ability, which can effectively prevent the solarization phenomenon.

Samarium-doped glass can inhibit the ineffective emission peaks of xenon lamp at 875-1000nm and reduce the thermal aberration in the gain medium on the one hand, and inhibit the parasitic oscillation to improve the laser efficiency on the other hand.

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Crylink Sm:Glass · Types

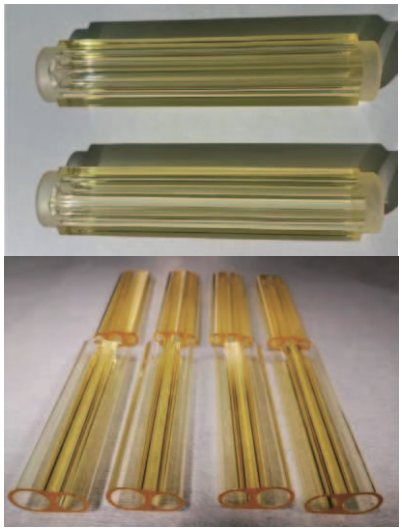
Crylink offers the following models of samarium-doped or cerium-doped filter glass:

CLC: cerium filter glass

CLS-5:5% samarium doped filter glass

CLS-10:10% samarium doped filter glass

Crylink can supply flow plates or flow tubes with samarium or cerium doped filter glass.



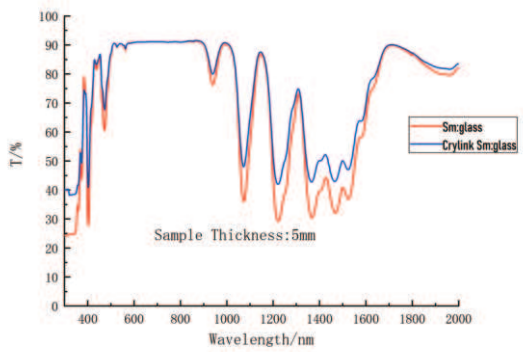
Crylink Sm:Glass · Internal Quality Testing

Hydroxyl Testing

Bubbles and streaks in glass can directly impact laser efficiency. Crylink employs instrument-assisted visual inspection to detect the distribution and location of microbubbles and grain boundaries.

Hydroxyl groups in glass can significantly affect performance. Crylink uses Agilent spectrophotometers to detect hydroxyl groups, effectively identifying and quantifying their content. This ensures high purity and excellent optical performance of the glass.

Crylink Sm:Glass · Transmission Curve



5mm CLS Silicate Glass Transmittance Curve

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Crylink Sm:Glass · Specification

Optical Specifications	
UV Cutoff (5mm,2% transmission) (nm)	350
IR Cutoff (nm)	2500
Refractive Index (d 589.3nm)	1.563
Refractive Index (1053nm)	1.57
Abbe Value	56.6
Other Specifications	
Density (g/cm^3)	2.87
Dw(H_2O 98℃) ($mg/(cm^2/day)$)	0.109

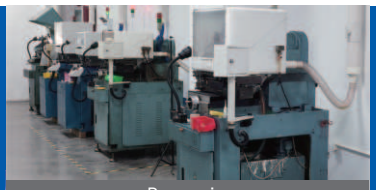
Thermal Specifications	
Transformation Temp. (℃)	490
Softening Temp. (℃)	540
Coeff.of Linear Thermal Expansion ($10^{-7}/K$) (30~100℃)	87
Coeff.of Linear Thermal Expansion ($10^{-7}/K$) (30~300℃)	100
Thermal Conductivity (25 ℃) (W/mK)	1.1

Crylink Sm:Glass · Service

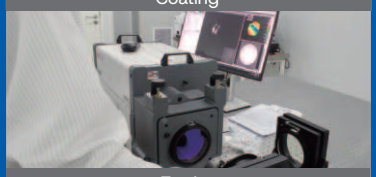
Product customization: Samarium doped filter glass with different concentration and size can be customized according to customers' requirements. [1]

Product Rework: Repolishing service is available for products with damaged surfaces.

[1] Please consult sales for details.


Processing


Coating


Testing

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