

Heralux[®] plus / Heraldux[®] VUV

Flame fused multi-step quartz tube



Product Overview

Heralux plus / VUV is a flame fused quartz made from semi-synthetic grain, designed for demanding lamp requirements. The tube is fabricated using the unique Heraeus multi-step process.

Key Features

- good radiation resistance
- very low bubble content
- nearly blemish free surface
- wide range of geometries
- improved VUV resistance (Heralux VUV)

Applications (e.g.)

- laser excitation lamp
- VUV lamp (185nm)

Geometrical Data

Outer Diameter (OD) [mm]	Tolerance [mm] ¹	Wall Thickness Range [mm]
> 2 - ≤ 8	± 0.2	≥ 0.4 - ≤ 2.0
> 8 - ≤ 17	± 0.3	≥ 0.8 - ≤ 3.5
> 17 - ≤ 25	± 0.4	≥ 1.0 - ≤ 4.5
> 25 - ≤ 30	± 0.5	≥ 1.2 - ≤ 4.5
> 30 - ≤ 35	± 0.6	≥ 1.2 - ≤ 4.5
> 35 - ≤ 40	± 0.8	≥ 1.2 - ≤ 4.5
> 40 - ≤ 50	± 1.0	≥ 2.0 - ≤ 4.5
> 50 - ≤ 60	± 1.3	≥ 2.0 - ≤ 4.5
> 60 - ≤ 90	± 2.0	≥ 2.0 - ≤ 4.5

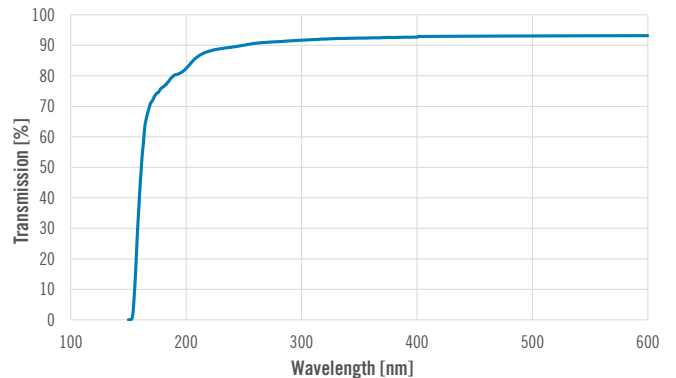
Wall Thickness (WT) [mm]	Tolerance [mm]	Cumulative length of bubbles ²
≥ 0.4 - ≤ 0.5	± 0.15	< 2.0%
≥ 0.5 - ≤ 1.2	± 0.2	< 2.0%
> 1.2 - ≤ 2.0	± 0.3	< 2.5%
> 2.0 - ≤ 2.8	± 0.4	< 3.0%
> 2.8 - ≤ 3.7	± 0.5	< 3.5%
> 3.7 - ≤ 4.5	± 0.6	< 4.0%

Feature	Dimension	Tolerance	Note
Ovality	manufactured length	≤ ½ OD tolerance	(e.g. ± 0.20 OD tolerance = ovality of 0.20)
Siding	manufactured length	≤ ½ WT tolerance	(e.g. ± 0.20 WT = siding of 0.20)
Bow	all dimensions	≤ 1.0mm / 1m ≤ 1.5mm / 1m	non annealed annealed
Length	-	+ 25mm / - 0mm	snap cut ³

¹ Additional tolerances are available on request
² Closed bubbles less than 0.5 mm are not counted
³ Other cutting methods on request

Optical Properties

Typical transmission values for 2mm wall thickness at 20°C



Visual Features

Tolerance

Surface Impurities (adherent)	none
Open Bubbles	none
Inclusions	none
Discoloration	none

Chemical Properties

OH Content [ppm]	130 - 220	no change in OH content through annealing									
Chemical Impurities [ppm]	Li	Na	K	Mg	Ca	Fe	Cu	Cr	Mn	Al	Ti
	0.6	0.1	0.05	0.05	0.05	0.1	0.05	0.05	0.05	8	0.1

Physical Properties

Softening Temperature	~ 1660°C
Annealing Temperature	~ 1160°C
Strain Temperature	~ 1070°C
Viscosity at 1300°C	~ 11.5 dPas
Maximum Working Temperature	continuous operation ~ 1110°C short-term operation ~ 1250°C
Density	2.2 g/cm ³

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The data given here is correct as of July 2021 and is subject to change.

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