		Product Standard Opaque Fused Quartz Cylinder ilmasil® PO-1		
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ilmasil® PO-1 is an electrically fused opaque quartz, manufactured by fusing high purity quartz sand using QSIL's propriety plasma melting process.

Application: This criteria is applicable to cylinder produced with **ilmasil® PO-1** opaque fused quartz material

1 Visual Characteristic

This specification applies to the specified bulk. The range above the nominal outer diameter and below the nominal inner diameter may not meet the specification. All products are inspected visually at a distance of 0.3 – 0.6 meter from the inspector, under controlled illumination conditions. For opaque fused quartz cylinders, only inspection of visible glass surfaces is possible.

1.1. Opacity / Bubbles

The opacity of the electrically fused quartz **ilmasil PO-1** is achieved by controlled distribution of fine microbubbles. There are no chemical additives used to achieve opacity.

Typical bubble diameter: 0.01 ...0.15 mm.

Limit: Bubbles in size > 2mm are not permitted.

1.2 Inclusions

Definition: Foreign particles found within the glass, causing visible discoloration

Limit:

Inclusions ³ diameter in mm	Max. Number per 1000 cm ³
0.1 - 0.3	10
0.3 – 1	0.22
> 1 – 2	0.1
> 2	0

³ Inclusions smaller than 0.1 mm in diameter are disregarded.


Comment:

This specification applies to cylinder as shipped to the customer (cut segments). Any claims regarding defects must be declared prior to modification. Any section of the cylinder found to be out of specification by QSIL prior to shipment will be clearly marked and deducted from the invoiced length.

1.3 Inhomogeneities

Definition: a visual difference in opacity

Limit not permitted if visible by unaided eye under general inspection conditions.

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2 Dimensional Characteristics

2.1 Outer diameter (OD)

Definition: all outer diameter values of the cross sectional plane along the entire length of the cylinder

Limit: Nominal Outer Diameter +10 / - 0 mm

2.2 Inside Diameter (ID)

Definition: all inner diameter values of the cross sectional plane along the entire length of the cylinder

Limit: Nominal Inner Diameter +0 /-30

2.3 Length (L)

Definition: Distance of the finished cylinder from end to end

Limit: Nominal Length +10/-0

3 Surface Characteristics

Outer surface: Ground
Roughness Limit: not specified

Inner surface: typically firepolished or surface may be ground at manufacturer's discretion

Roughness Limit: not specified

4 Further applicable documents

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