

PQI-SPEC-1002

Pacific Quartz, Inc	PRODUCT SPECIFICATION INSPECTION CRITERIA: GE-124 & GE-144	Date: 11/14/02 No. 1002 Rev. C
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Material shall meet all published GE Quartz Specifications

1. DISCOLORATION:

➤ Definition: Areas, volumes, streaks of colored materials that are other than “water white” but exclude inclusions.

Limits: None visible to the unaided eye permitted.

2. INCLUSIONS:

➤ Definition: Non-quartz particles imbedded within the material

Limits: None over .020 in.

3. BUBBLES

➤ Definition: An approximately spherical void in the material.

Limits:

- a. No bubble clusters; 15 bubbles/ cubic cm or more.
- b. No bubble veils
- c. Bubble size: Three options:

GE-124 Standard:

No bubbles 0.040 in. or greater

GE-124 Select:

No bubbles 0.030 in. or greater

GE-124 AA Select:

No bubbles 0.020 in. or greater

4. OPEN BUBBLES

➤ Definition: Open bubble to a surface

Limits: Unless otherwise specified on drawing no open bubbles .020 or greater

5. CONTAMINATION

➤ Definition: Surface shall be clean, free of dirt, wax, oil, etc. The customer must specify additional cleaning for micro-contamination.

6. CHIPS:

➤ Definition: A localized fracture at the end of a cleaved optical fiber or on a glass surface.

Limits: Maximum chip of .030 in. allowed – Must be blended.

7. FRACTURES:

Definition: A crack in the material

Limits: No fractures allowed

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8. TRACEABILITY:

Material used shall be traceable to GE Quartz Ingot Number and identified on PQI Certificate of Conformance.

9. SURFACE CONDITION

➤ Definition:

Glass Subsurface Damage:

- a. Fracturing of material from diamond tools during the process of material removal.
- b. Subsurface Stress in material, below the fracturing from diamond tool pressure during the process of material removal.

Limits:

1. Diamond finish: minimal subsurface damage
 - a. To minimize Subsurface Damage sufficient material must be removed to eliminate the previous diamond tool process fracturing. The superior finish will come from less pressure (diamond, bond, speed, coolant, etc.) during cutting.
2. Lapped (ground) finish: No subsurface damage.