Desert Silicon
LIQUID SOURCE SOLUTIONS

Spin-on-Glass P-220

Elements of Interest	Key Element atoms/cm^3	Key Element % in Film
Si, O, P	P, 2x10^{21}	Phosphorus
Viscosity	**Thickness**	**Shelf Life**
1.0 cps	Coats 2200 Å at 3000 rpm Refractive Index 1.46	20°C 3 months 4°C 9 months

Benefits

- Light phosphorus doping level
- Easy shipping without $POCl_3$ complications
- Lower maintenance and cost of ownership
- High purity materials
- Uniform coatings
- Lower melting point than silica alone
- Stable processing independent of flow rates
- Available with impurity specification of less than 1 ppm or less than 50 ppb

Typical Application

This is a standard phosphorous doped silicate glass very typical for semiconductor applications. It begins curing at about 200°C to give a less dense but solid film. It continues to become increasingly stronger as bake temperatures rise to 650°C or higher. We recommend baking at the highest temperature the material will see in any post processing. For doping applications the glass is often removed after the drive-in procedure.

The phosphorous in the glass matrix can act as a getter for sodium and other mobile ions. This reduces the effective concentration of unwanted ionic species.

Packaging

- 240ml
- 500ml
- 1 l
- 2.5 l
- 4 l

Alternative Products

P-210
P-230
P-240
P-250

Elements Available to Add

- As
- Sb
- Bi
- Blends of two or more elements
- Other elements available for compound semiconductor use

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