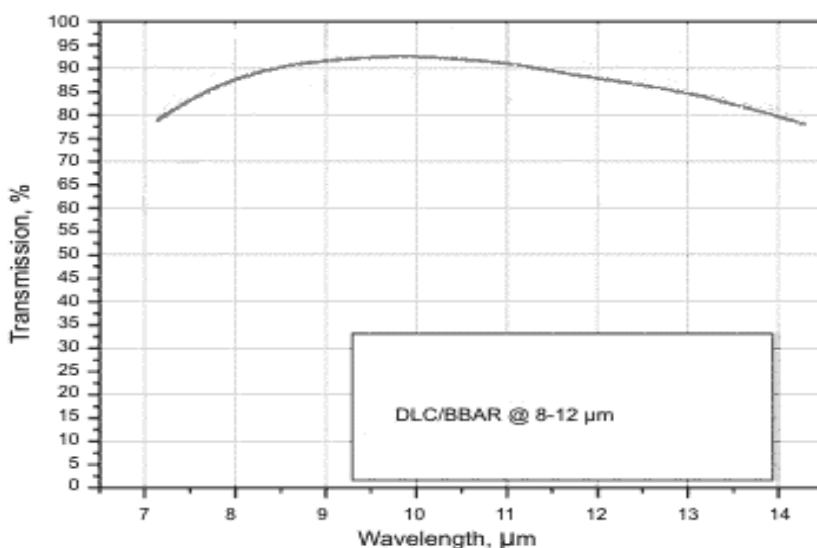




## GERMANIUM WINDOW DATA SHEET

### 12.7mm diameter Germanium Window AR/DLC Thermal Imaging Germanium Cover window

Part number:	GE12-1-AR-DLC
Diameter	12.7mm +0.0 / -0.1
Thickness	1.0mm thick +/- 0.1
Side1	AR Antireflection coated 8-12 $\mu$ m
Side2	DLC coated
Average transmission %	89%



Transmission Range	1.8 to 23 $\mu$ m
Refractive Index	4.0026 at 11 $\mu$ m
Reflection Loss	53% at 11 $\mu$ m ---- Two surfaces
Absorption Coefficient	<0.027 cm <sup>-1</sup> @ 10.6 $\mu$ m
Density	5.33 g/cc
Melting Point	936 °C (3)
Thermal Expansion	6.1 x 10 <sup>-6</sup> /°C at 298K (3)(4)
Hardness	Knoop 780
Specific Heat Capacity	310 J Kg <sup>-1</sup> K <sup>-1</sup> (3)
Youngs Modulus (E)	102.7 GPa (4)
Shear Modulus (G)	67 GPa (4)
Bulk Modulus (K)	77.2 GPa (4)
Solubility	Insoluble in water
Molecular Weight	72.59
Class/Structure	Cubic Diamond, Fd3m

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