

# Glass 8660

## Technical Data

**GlassType/Application** Borosilicate glass for sealing to tungsten, of high cesium content  
Red eye reduction flash for electronic flashbulbs, longer life in comparison with glass 8487

<b>Physical Data</b> (approx. value)	<b>Coefficient of mean linear thermal expansion</b>		
	$\alpha(20^{\circ}\text{C}; 300^{\circ}\text{C})$ (ISO 7991) .....	4.1	$10^{-6}\text{K}^{-1}$
	Transformation temperature $T_g$ (ISO 7884-8).....	550	$^{\circ}\text{C}$
	<b>Glass temperature at viscosity <math>\eta</math> in dPa·s</b>		
	$10^{13}$ (annealing point) (ISO 7884-4).....	-	$^{\circ}\text{C}$
	$10^{7.6}$ (softening point) (ISO 7884-3).....	830	$^{\circ}\text{C}$
	$10^4$ (working point) (ISO 7884-2).....	1215	$^{\circ}\text{C}$
	Stress-optical coefficient K (DIN 52314).....	-	$10^{-6}\text{mm}^2 \cdot \text{N}^{-1}$
	Density $\rho$ at $25^{\circ}\text{C}$ .....	2.44	$\text{g} \cdot \text{cm}^{-3}$
	Modulus of elasticity E (Young's modulus) .....	-	$10^3\text{N} \cdot \text{mm}^{-2}$
	Poisson's ratio $\mu$ .....	-	
	Thermal conductivity $\lambda_w$ at $90^{\circ}\text{C}$ .....	-	$\text{W} \cdot \text{m}^{-1} \cdot \text{K}^{-1}$
	<b>Log of the electric volume resistivity (<math>\Omega \cdot \text{cm}</math>)</b>		
	at $250^{\circ}\text{C}$ .....	12.7	
	at $350^{\circ}\text{C}$ .....	10.7	
	$t_{k100}$ .....	550	$^{\circ}\text{C}$
Dielectric constant $\epsilon$ for 1 MHz at $25^{\circ}\text{C}$ .....	-		
Dielectric loss factor $\tan \delta$ for 1 MHz at $25^{\circ}\text{C}$ .....	-	$10^{-4}$	
Refractive index $n_d$ ( $\lambda = 587.6 \text{ nm}$ ) .....	1.486		

<b>Chemical Resistance</b>	Hydrolytic resistance (ISO 719) .....	Class	HGB 3
	Acid resistance (DIN 12116) .....	Class	S 3
	Alkali resistance (ISO 695) .....	Class	A 3

The heavy metal content for the elements lead, cadmium, mercury and hexavalent chromium is below 100 ppm