

Glow igniters

Basic values:

Parameter	Value
Dimensions	75 x 14.7 x 4.4 mm
Heated area	50 x 14.7 x 4.4 mm
T _{max}	1 000 °C

Details of Standard, 230 V:

Description

Glow igniters with the dimensions 75 mm x 14.7 mm x 4.4 mm are available in a huge number of versions for different performance classes. With free convection and radiation into air at room temperature, these heating elements are laid out so that they reach their target temperature when operating at rated voltage without additional control technology. The robust design of these heating elements, in conjunction with the good oxidation resistance of the silicon-nitride ceramics, ensures a long service life - both during continuous operation and during cyclic demand. Glow igniters are mainly used to ignite wood pellets in heating systems.

- surface as fired

Parameter	Value			
Article no.	GLZ 100 094	GLZ 100 130	GLZ 100 128	GLZ 100 109
Nominal power (hot)	190 W ±20 W	200 W ±20 W	230 W ±30 W	260 W ±30 W
Nominal voltage	230 V	230 V	230 V	230 V

Basic Material

Parameter	Scale unit	Si ₃ N ₄
max. temperature (T _{max})	°C	1 000
thermal conductivity (l)	W/mK	40
temperature shock resistance (ΔT)	K	500
emissivity (1 100 °C) (ε)	-	0.96
Young's modulus (E)	GPa	320
bending strength (δ _{BB})	MPa	400
compressive strength (δ _D)	MPa	2 000
coefficient of thermal expansion (α)	10 ⁻⁶ K ⁻¹	3
density (g)	g/cm ³	3.21
specific heat (c _p)	J/kgK	750
porosity (100 - % t.D.)	%	0
critical stress intensity factor (K _{IC})	MPa m ^{1/2}	6
Weibull - modulus (m)	-	7.9

The thermal shock resistance depends on the geometric shape of the heater.

Electrical parameters

Parameter	Scale unit	Si ₃ N ₄
resistivity	Ω cm	5 · 10 ⁻³ - 5 · 10 ⁻¹
isolation resistivity	Ω mm (20 °C)	10 ¹³
dielectric strength	kV/mm	25

Emission spectrum

Fully ceramic heating elements are long-wave infrared heaters with a maximum emission of 5 to 10 μm and a radiation coefficient of ε > 0.9.



