

Glow igniters

Basic values:

Parameter	Value
Dimensions	60 x 8.0 x 2.5 mm
Heated area	10 x 8.0 x 2.5 mm
T _{max}	1 000 °C

Details of Standard, left:

Description

The glow igniters of the IP type (IPR/IPL) make it possible to achieve (ignition) temperatures of up to 1 000 °C with a very compactly built heating element with a rated voltage of 24 V. The two available versions, IPR and IPL, differ in the orientation of the electrical contacts. The small glow igniters can be used not only as igniters - for example of wood pellets - but can also be used for contact heating of various substrates as well as for the ignition of process gases.

- position of the contact pad: left
- surface as fired

* The actual power depends on resistance, temperature and voltage.

Parameter	Value
Article no.	GLZ 100 153
Resistance @ 20 °C	4.8 Ω ±50 %
Nominal voltage	24 V
Nominal power @ 20 °C	120 W*

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.





