

Data Sheet Photoionisation (PID) Lamps

PID lamps exactly matched to instrument requirements

Heraeus has many years of experience in providing DC and RF energized PID lamps to leading instrument manufacturers. Applications include gas chromatography, portable gas sniffers and sample ionisation for mass spectrometry. The Heraeus engineering team works closely with instrument development engineers to design lamps matched to the instrument. Miniature PID lamps for very compact handheld applications, e.g. in gas monitoring, are a Heraeus speciality. The Heraeus engineers can be contacted online at www.heraeus-noblelight.com/analytics for more information.



Key features of Heraeus PID lamps:

- different gas fills (e.g. Xenon, Krypton, Deuterium, Argon)
- different window materials with different cut-off wavelengths
- DC or RF (electromagnetic field) excited lamps
- ionising energy from 8.4 eV to 11.8 eV

Technical data:

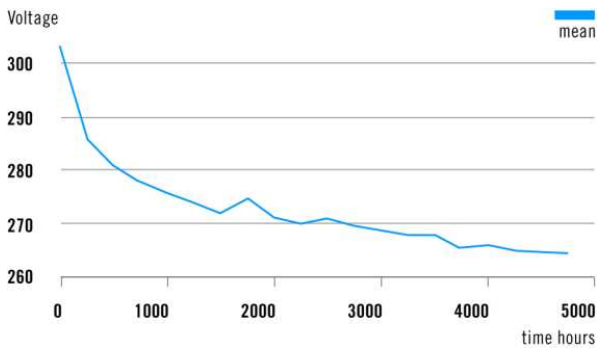
Lamp type	PXS 084	PXS 096	PKS 106	PAS 118	PXL 084	PKL 102	PAL 118
Excitation	DC	DC	DC	DC	DC	DC	DC
Photon energy (eV)	8.4	9.6	10.6	11.8	8.4	10.6	11.8
Operating current (mA)	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2
Ignition time (s)	1-2	1-2	1-2	1-2	1-2	1-2	1-2
Dimensions (Length x Diameter in mm)	52 x 19.6	52 x 19.6	52 x 19.6	52 x 19.6	56 x 34.7	56 x 34.7	56 x 34.7

Lamp type	PXR 084	PXR 096	PKR 100	PDR 102	PKR 106	PAR 118
Excitation	RF	RF	RF	RF	RF	RF
Photon energy (eV)	8.4	9.6	10.0	10.2	10.6	11.8
Operating current (mA)	80 - 150	80 - 150	80 - 150	80 - 150	80 - 150	80 - 150
Ignition time (mS)	100	100	100	100	100	100
Dimensions (Length x Diameter in mm)	58 x 12.7	58 x 12.7	58 x 12.7	58 x 12.7	58 x 12.7	58 x 12.7

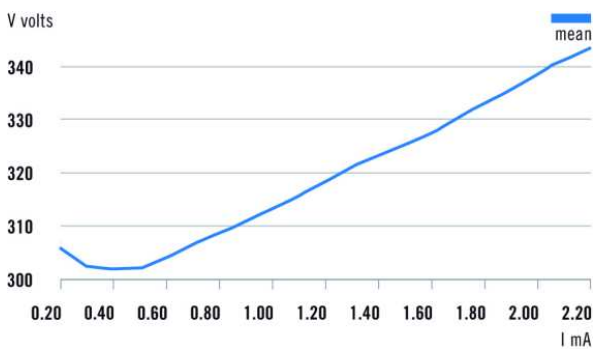
Fill gas lines and photon energies

Gas	Xenon	Krypton	Hydrogen	Argon	Mercury vapour
Photon energy (eV)	8.4	10.0	10.2	11.6	4.9
	9.6	10.6		11.8	6.7
Wavelength (nm)	147.0	123.6	121.6	106.7	253.7
	129.5	116.5		104.8	185.0

Typical voltage – lifetime characteristic (mean; run at 0.5 mA and room temperature)



Typical voltage – current characteristic (mean of several PID lamp types)



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