



The Meaglow 50 series Hollow Cathode Plasma Source

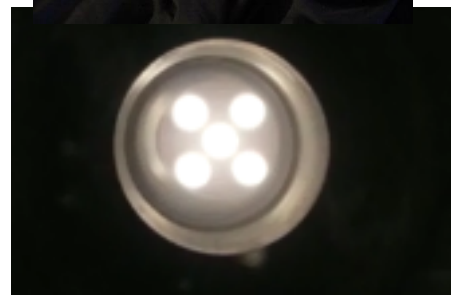
Mounted on an NW50 (KF50) vacuum flange, the 50 series Hollow Cathode source is capable of being housed in an NW50 nipple. Widely used for ALD, it features:

- 300 or 600 Watt RF or DC operation.
- 316 Stainless steel cathode construction (other materials on demand) water cooled.
- Wide range of gas usage.
- Low oxygen contamination (no dielectric windows).
- Low cost.
- High electron density – similar to inductively coupled and microwave plasma sources.
- Wide range of operating pressures (eg. from 100 mTorr to > 5 Torr). A low pressure option is also available.
- Low plasma damage.
- Customised solutions available.

Related Papers:

- K. S. A. Butcher, B. W. Kemp, I. B. Hristov, P. Terziyska, P. W. Binsted and D. Alexandrov, Japanese Journal of Applied Physics **51** (2012) 01AF02.
- C. Ozgit-Akgun, E. Goldenberg, A. Kemal Okyay and N. Biyikili, Journal of Materials Chemistry C **2** (2014) 2123.
- K. S. A. Butcher, V. Georgeiv and D. Georgieva, Coatings **11** (2021) 1506.

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The Meaglow 50 series Hollow Cathode Plasma Source specifications:

- NW50 (KF50) vacuum connection.
- NW50 (KF50) nipple housing on request.
- 300 or 600 Watt maximum applied power.
- DC or 13.56 MHz RF operation.
- N, HN or 7/16 DIN input voltage connectors, others on request.
- Male or female VCR gas input.
- Water cooling, 1-3 litres/min room temperature water (distilled or deionised preferable). Swagelok connections.
- Integrated matching box on request.
- 316 stainless is standard, but other cathode materials on request.
- Operation from 100 mTorr to > 5 Torr (low pressure option available).
- Gases to date: NH_3 , N_2 , H_2 , Ar, O, NO, others possible (Cl and F) depending on material compatibility.
- RF generator, matching network and matching network controller supplied on request. Will advise for modification of existing equipment.

For more information on Meaglow Ltd or its hollow cathode plasma sources, visit our website www.meaglow.com or contact us at info@meaglow.com.

Meaglow Ltd manufactures and sells crystal growth research reactors and supplies hollow cathode plasma sources for advanced semiconductor applications.

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