

## Oxygen Dispensers



Many types of HID (High-Intensity Discharge) lamps lose luminosity due to a carbon build up on the arc tube. The carbon is the result of the cracking of organic contaminants present in the outer envelope of the lamp.

SAES Getters Oxygen Dispensers have been developed to deliver a calibrated quantity of oxygen able to remove the carbon deposits thus improving the luminous flux. The dispenser can cope with the processing and the operational conditions of HID lamps.

### Features include:

- Ability to withstand the bake-exhaust process with little or no loss of oxygen
- Quick release of oxygen after tip-off, in early lamp operation
- Ability to release a calibrated dose of oxygen



### Configuration and Sizes

The SAES Getters Oxygen Dispensers are formed of a sheet-metal container with a dimple containing the silver-oxide fill. There are two sizes, containing 10 and 38 mg of silver oxide.

### Use and Yield

The Oxygen Dispenser is mounted in a location that will operate at 350°C. Baking of the lamp at 200°C will not cause a decrease of the oxygen yield. The average filling weights of 10 and 38 mg yield about 0.5 and 1.2 millibar-liter of oxygen, respectively.

The Oxygen Dispenser releases its oxygen shortly after the lamp is turned on. Once released, the oxygen reacts with carbon on the hot arc tube to form CO and CO<sub>2</sub>. Both of these are sorbed by the Strip or DF getter in the lamp jacket. The lamp with the Oxygen Dispenser retained nearly all of its original brightness after 2000 hours of operation, while a lamp produced without an Oxygen Dispenser lost nearly 20% and a lamp intentionally contaminated with diluted oil lost 40%.

### Order and Yield Information

Code	Description	Yield (mbar-l)
5F5105	OXD/LN/20-3.5/38	1.2
5F5108	OXD/LN/20-3.5/10	0.5

Use of Oxygen Dispensers in lamps is subjected to third party intellectual property rights Please enquiry with SAES GETTERS how to treat this matter.

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