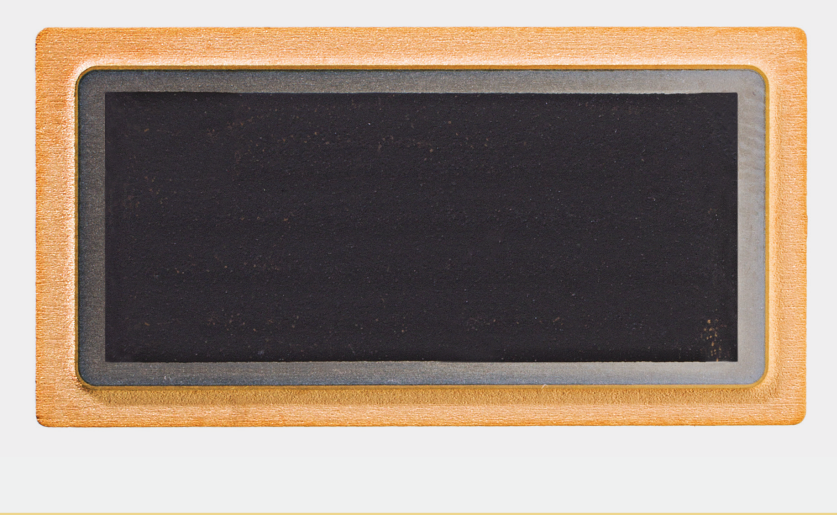
ZeDry®/H2 Lid



HIGHLIGHTS

General Features

- ☐ Lid design and materials according to customers' specs
- ☐ High moisture and hydrogen sorption capacity
- ☐ Reversible getter for moisture and irreversible getter for hydrogen
- ☐ Moisture sorption is thermally activated
- ☐ Solvent free getter, epoxy based
- ☐ Extremely low outgassing
- ☐ Compatible with seam welding or laser welding processes
- ☐ No loose particles

Applications

- ☐ Microelectronic devices
- ☐ Optoelectronic devices
- ☐ Optical modules
- ☐ Hermetic packages

Product Description

ZeDry®/H2 Lid consists of a metal lid, coated with a solventless, thermally cured getter layer engineered for high capacity moisture and hydrogen uptake. Lid material, shape, dimensions and finishing are specified by customers: SAES provides the ZeDry/H2 Lid according to their specific design, plating layers and with the getter coating size optimized in relation to the amount of moisture and hydrogen to be sorbed, taking into account any technical constraints of the final device packaging.
ZeDry/H2 Lid is designed for hermetic optoelectronic and microelectronic device packaging. The ZeDry/H2 getter coating deposited on the lid works as a reversible getter for moisture and irreversible getter for hydrogen: it has to be activated with a thermal process at 100°C-120°C, just before the device sealing.
The high decomposition temperature of the getter assures full compatibility with seam or laser sealing processes, without affecting the functional properties

Material Property	Value
Appearance	Black Film
Nominal moisture capacity (wt %) (*)	13
Nominal hydrogen capacity (Pa·l/g) (*)	3,400
Decomposition temperature (°C)	> 350

(*) guaranteed capacity is 20% less than the nominal one

How it Works

ZeDry/H2 Lids can be provided in a variety of metals (e.g. Al, Ni, Au, Stainless Steel, KOVAR) and engineered metal alloys (e.g. Ni/Au-plated KOVAR). Ceramic and glass can also be considered as options, for special applications.
The getter layer is deposited and cured by SAES in suitable conditions to maximize sorption performances. The ZeDry/H2 Lid can be easily handled in air until the device module packaging process, when the activation procedure must be performed, in order to achieve the product nominal performances in terms of moisture getter capacity.
The proper activation procedure consists of a single heating step at 120 °C under vacuum conditions for 1 hour, at least.
Different activation procedures could be also considered and tailored according to specific sealing processes. For example, the getter layer can be activated by heating under dry nitrogen or dry air conditions for few hours.

Additional Processing and Storage Information

Before use, the ZeDry/H2 Lids can be stored at ambient temperature and atmosphere in close bag or box. Once activated, the ZeDry/H2 Lids must be handled in inert atmosphere (< 10 ppm H_2O) or vacuum, in order to ensure the nominal gettering properties.

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