



ADVANCED SOLUTIONS FOR ADVANCED LIGHTING APPLICATIONS

GORE® Vents provide life-of-vehicle protection to maintain the reliability of lighting systems that support vehicle differentiation and functionalities — for example, in EVs where thinner modular lamps can illuminate brand signatures and integrate new sensing/communication devices.

For Headlamps

- **AVS 120:** The next-generation AVS 9. Same size, but with our highest diffusive performance, for faster clearing times.
- **AVS 9:** Industry-standard footprint with proven life-of-vehicle condensation reduction, ingress protection and pressure equalization.
- **AVS 113:** The next-generation AVS 100. Faster clearing with our highest diffusive performance, plus strong surface-bond to housing.
- **AVS 100:** Easy installation (target frame optional): spray resistance plus condensation reduction, ingress protection and pressure equalization.

For Rear Lamps

- **AVS 600/601/602:** Highest moisture diffusion per footprint minimizes lens clearing times and enables more design options.
- **AVS 2/5:** Small-footprint solution rapidly sheds contaminants and won't saturate, for extra protection from water, dust and dirt.

Varied solutions for your most challenging applications

- **When headlamp lens clarity matters**, our innovative adhesive vents meet all your performance and protection needs.
- **When you need rear lamp options** for future-focused styling and packaging, trust Gore's performance-wise solutions for both clear and colored lenses.
- **When space-limited accessory and brand-emblem lighting** create packaging challenges, choose Gore reliability in a smaller footprint.

For Accessory Lamps

- **AVS 2/5:** More design flexibility: these low-profile vents equalize pressures while quickly shedding water and blocking entry of contaminants.
- **AVS 118/119:** Our smallest-footprint vents deliver robust protection and reliable pressure equalization even after water contact.

Headlamps

| Product name (order number for samples) | AVS 120 | AVS 9 | AVS 113 | AVS 100 |
|--|---------|-----------|---------|---------|
| Order Numbers (Multi-up configuration) | VE2122 | VE0020GMC | VE2113 | VE2084 |
| Order Numbers (One-up configuration) | VE2123 | VE2068 | VE2114 | VE2086 |



Product Performance Characteristics

| | | | | |
|---|--|---|---|--|
| Main vent functionality | <ul style="list-style-type: none"> • Condensation reduction • Pressure equalization • Dust/dirt/debris protection • Water intrusion protection | | | |
| Minimum airflow (per part) at 70 mbar (1 psi) | > 31.2 l/h | > 22.2 l/h | > 33 l/h | >19.9 l/h |
| Typical airflow (per part) at 70 mbar (1 psi) | 75 l/h | 45.4 l/h | 82 l/h | 40.8 l/h |
| Water Entry Pressure (assembly) | > 345 mbar (> 5.0 psi) for 60 sec | | | |
| Moisture Vapor Transmission Rate ¹ | 700 mg moisture/day | 610 mg moisture/day | 699 mg moisture/day | 525 mg moisture/day |
| Operating temperatures | -40 °C to 150 °C | | | |
| Membrane type | 100% ePTFE (AM2XX) | | | |
| Membrane characteristic | Hydrophobic and Oleophobic | | | |
| Pressure-sensitive adhesive | AD103 Silicone | | | |
| IP Protection ² : (a) Dust (b) Water immersion (c) Spray resistance | (a) IP6KX (b) IPX7 (c) with target frame: IPX6K ³ | (a) IP6KX (b) IPX7 (c) with target frame: IPX6K ³ | (a) IP6KX (b) IPX7 (c) with target frame: IPX6K ³ without: IPX4 ⁴ / IPX9K ⁵ | (a) IP6KX (b) IPX7 (c) without target frame: IPX4 ⁴ / IPX9K ⁵ |

Design and Dimensions (mm)

| Outer dimensions (OD) Inner dimensions (ID) | AVS 120 | AVS 9 | AVS 113 | AVS 100 |
|--|---------|-------|---------|---------|
| | | | | |

1. Based on ASTM E96 Water method. MVTR is represented by average value.

2. According to ISO20653:2013.

3. IPX6K: Test performed on AVS 9 and AVS 113 with protective target frame and spray angle of 2.5 degrees from vent mounting surfaces.

4. IPX4 test performed with vent in recommended lamp mounting position.

5. Gore QATM912, WEP after IPX9K modified.

Please note: Housings made of high-water-absorption plastics (above 0.15% ASTM D570 – 24 hrs. at 23 °C) must be evaluated.

Rear Lamps

| Product name (order number for samples) | AVS 2 | AVS 5 | AVS 600/610 | AVS 601/611 | AVS 602/612 |
|--|-----------|--------|-------------|-------------|-------------|
| Order Numbers (Multi-up configuration) | VE0001VAP | VE2004 | VE2100 | VE2101 | VE2102 |
| Order Numbers (One-up configuration) | VE2051 | VE2016 | VE2110 | VE2111 | VE2112 |



Product Performance Characteristics

| | | | | | |
|---|--|------------------------|---|------------------------|------------------------|
| Main vent functionality | <ul style="list-style-type: none"> • Condensation reduction • Pressure equalization • Dust / dirt / debris protection • Water intrusion protection | | | | |
| Minimum airflow (per part) at 70 mbar (1 psi) | > 3.0 l/h | > 4.8 l/h | > 123.5 l/h | > 49.8 l/h | > 14.2 l/h |
| Typical airflow (per part) at 70 mbar (1 psi) | 6.3 l/h | 9.7 l/h | 153.7 l/h | 62.0 l/h | 17.6 l/h |
| Water Entry Pressure (assembly) | > 345 mbar (> 5.0 psi) for 60 sec | | > 206 mbar (> 3.0 psi) for 60 sec | | |
| Moisture Vapor Transmission Rate ¹ | 69 mg moisture/day | 132 mg moisture/day | 710 mg moisture/day | 338 mg moisture/day | 107 mg moisture/day |
| Operating temperatures | -40 °C to 150 °C | | | | |
| Membrane type | 100% ePTFE (AM2XX) | | 100% ePTFE (AM6XL) | | |
| Membrane characteristic | Hydrophobic and Oleophobic | | | | |
| Pressure-sensitive adhesive | AD103 Silicone | | | | |
| IP Protection ² : (a) Dust (b) Water immersion (c) Spray resistance | (a) IP6KX (b) IPX7 (c) with target frame: IPX6K ³ | | (a) IP6KX (b) IPX7 (c) Protective target frame required for spray resistance | | |

Design and Dimensions (mm)

| Outer dimensions (OD) Inner dimensions (ID) | OD = 12.70 ID = 7.11 | OD = 19.05 ID = 8.89 | OD = 42.50 ID = 18.00 | OD = 19.00 ID = 15.00 | OD = 12.00 ID = 8.00 |
|--|-------------------------|-------------------------|--------------------------|--------------------------|-------------------------|
| | | | | | |

Storage and Handling Recommendations

W. L. Gore & Associates recommends that adhesive parts be stored in cool dry conditions (22 °C / 50% RH) and out of direct sunlight. Adhesive vents are most easily removed from the product carrier within one year of packaging date.

Accessory Lamps

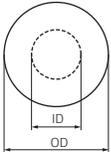
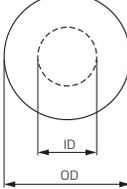
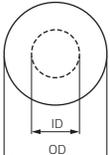
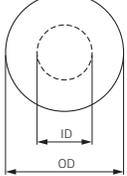
| Product name (order number for samples) | AVS 2 | AVS 5 | AVS 118 | AVS 119 |
|--|-----------|--------|---------|---------|
| Order Numbers (Multi-up configuration) | VE0001VAP | VE2004 | VE2117 | VE2119 |
| Order Numbers (One-up configuration) | VE2051 | VE2016 | VE2118 | VE2120 |



Product Performance Characteristics

| | | | | |
|---|--|------------------------|--|-----------------------|
| Main vent functionality | <ul style="list-style-type: none"> • Condensation reduction • Pressure equalization • Dust / dirt / debris protection • Water intrusion protection | | <ul style="list-style-type: none"> • Pressure equalization • Dust / dirt / debris protection • Water intrusion protection | |
| Minimum airflow (per part) at 70 mbar (1 psi) | > 3.0 l/h | > 4.8 l/h | 0.5 l/h | 1.8 l/h |
| Typical airflow (per part) at 70 mbar (1 psi) | 6.3 l/h | 9.7 l/h | 0.8 l/h | 2.8 l/h |
| Water Entry Pressure (assembly) | > 345 mbar (> 5.0 psi) for 60 sec | | 345 mbar (> 5 psi) for 60 sec | |
| Moisture Vapor Transmission Rate ¹ | 69 mg moisture/day | 132 mg moisture/day | 18 mg moisture/day | 40 mg moisture/day |
| Operating temperatures | -40 °C to 150 °C | | | |
| Membrane type | 100% ePTFE (AM2XX) | | | |
| Membrane characteristic | Hydrophobic and Oleophobic | | | |
| Pressure-sensitive adhesive | AD103 Silicone | | | |
| IP Protection ² : (a) Dust (b) Water immersion (c) Spray resistance | (a) IP6KX (b) IPX7 (c) with target frame: IPX6K ³ | | | |

Design and Dimensions (mm)

| | | | | |
|-----------------------|---|---|---|---|
| Outer dimensions (OD) | OD = 12.70 | OD = 19.05 | OD = 7.00 | OD = 10.00 |
| Inner dimensions (ID) | ID = 7.11 | ID = 8.89 | ID = 3.00 | ID = 5.50 |
| |  |  |  |  |

Please contact your local GORE® Automotive Vents representative to request our updated installation guide for exterior lighting applications.



GORE® Automotive Vents For Exterior Lighting

Our all-membrane adhesive vents enable OEMs and Tiers to advance the reliability and longevity of their lighting components by providing enhanced condensation reduction, pressure equalization and protection against entry of water, fine dust and dirt. These adhesive vents bond firmly and perform reliably under the most challenging environmental conditions.

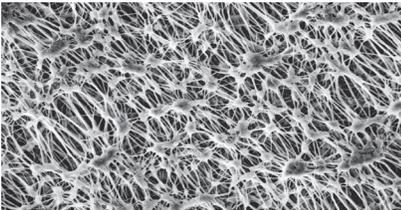
Billions of adhesive GORE® Vents have been installed in automotive platforms worldwide. Decades ago, Gore developed the industry's first headlamp vents that offered the benefit of condensation reduction.

Since then, we've continued to advance and enhance our offering, with performance options designed around a wide range of applications, specifications and sizes.

For further details on our venting solutions, to request samples or to discuss your newest application, contact your local Gore representative or connect with us via email or phone, as shown on the back cover.

Why the GORE Membrane matters

Only GORE® Automotive Vents incorporate the performance benefits of the GORE Membrane. Made of expanded polytetrafluoroethylene (ePTFE), it's engineered with billions of pores. These pores are 700X larger than an air molecule, to ensure reliable airflow and pressure equalization. Yet at 20,000X smaller than a drop of water, these pores effectively block entry of liquids, dirt and debris.



The GORE Membrane magnified 40,000 times

The GORE Membrane is:

- chemically inert
- non-shedding
- UV-resistant
- temperature-resistant
- hydrophobic and oleophobic

What GORE® Automotive Vents can offer you

GORE® Automotive Vents deliver innovative technology, backed by decades of research and testing. Our product portfolio has proven itself in the harshest environments: literally billions of our vents have been installed in automotive applications worldwide. Today, virtually every global OEM trusts GORE® Automotive Vents to extend the reliability and longevity of their exterior lighting, electronics and powertrain products and assemblies.

With worldwide technical support and testing centers based in the US, Germany, Japan and China, our application engineers are easily accessible — and ready to work in close partnership with your design team, from product concept through manufacturing integration.

Contact Us

To discuss options and solutions for your newest application, call your local Gore representative or send your inquiry from our website: gore.com/autovents

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