

GORE® Automotive Vents

for exterior lighting
AVS 3000 Series



ADVANCED MEMBRANE TECHNOLOGY SUPPORTS “DESIGN TO COST” GOALS

GORE® Automotive Vents AVS 3000 Series represents a breakthrough in adhesive vents for headlamps, rear and accessory lamps. Our new membrane technology can enable higher airflow and more effective condensation reduction, in a more cost-effective portfolio — with the reliable ingress protection, pressure equalization and proven footprints you expect from Gore. AVS 3000 Series delivers life-of-vehicle performance and, with a target frame, provides up to IPX9K modified spray protection.

With Gore, supply chain security is assured. And, Gore customers can access additional support for their sampling, validation and PPAP processes.

For Headlamps

- **AVS 30GMC/AVS 3068 and AVS 3084/AVS 3086:** High airflow in an industry-standard footprint designed for effective condensation reduction, ingress protection and pressure equalization.

For Rear Lamps

- **AVS 3100/AVS 3110 and AVS 3101/AVS 3111 and AVS 3102/AVS 3112:** Highest moisture diffusion per footprint minimizes lens clearing times and enables more design options.

For Rear and Accessory Lamps

- **AVS 3VAP/AVS 3051 and AVS 3004/AVS3016:** More design flexibility: these low-profile vents equalize pressures while quickly shedding water and blocking entry of contaminants.

For Accessory Lamps

- **AVS 3037/AVS 3040 and AVS 3031/AVS 3039:** Our smallest-footprint vents deliver robust protection and reliable pressure equalization even after water contact.

A more cost-effective condensation solution, with:

- Our industry-standard footprints/geometries
- The same Gore-proven WEP and Oil Resistance
- Higher airflow for all Headlamp, Rear and Accessory Lamps, and Accessory Lamps.
- Comparable or better MVTR for reliable condensation reduction
- Robust surface-bond durability
- Up to IPX9K modified spray protection with target frame
- “Genuine Gore” logo deboss on all vents with I.D. (active area) > 8.5 mm

Together, improving life



Headlamps

Sample Part Number	AVS 30GMC	AVS 3068	AVS 3084	AVS 3086
Production Part Number	VE0030GMC	VE3068	VE3084	VE3086
Configuration	Multi-up	One-up	Multi-up	One-up
Parts per roll	10,000	4,000	5,000	2,500



Product Performance Characteristics

Main vent functionality	• Condensation reduction • Pressure equalization • Dust / dirt / debris protection • Water intrusion protection		
Minimum airflow (per part) at 70 mbar (1 psi)	42.8 l/h		40.8 l/h
Typical airflow (per part) at 70 mbar (1 psi)	102 l/h		99.2 l/h
Water Entry Pressure (assembly)	345 mbar 5.0 psi / 60 sec		
Moisture Vapor Transmission Rate ¹	665 mg moisture/day		565 mg moisture/day
Operating temperatures	- 40 °C to 150 °C		
Membrane type	100% ePTFE (AM9XX)		
Membrane characteristic	Hydrophobic and Oleophobic		
Pressure-sensitive adhesive	AD109 Acrylic		
IP Protection ² : (a) Dust (b) Water immersion (c) Spray resistance	(a) IP6KX (b) IPX7 (c) IPX9K modified with target frame ³		

Design and Dimensions (mm)

Outer dimensions (OD) Inner dimensions (ID)				
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1. Based on ASTM E96 Water method. MVTR is represented by average value.

2. According to ISO20653:2013.

3. IPX9K: ISO20653 modified for room-temp water; nozzle position 30 cm from vent.

Rear Lamps

Sample Part Number	AVS 3100	AVS 3110	AVS 3101	AVS 3111	AVS 3102	AVS 3112
Production Part Number	VE3100	VE3110	VE3101	VE3111	VE3102	VE3112
Configuration	Multi-up	One-up	Multi-up	One-up	Multi-up	One-up
Parts per roll	10,000	2,000	15,000	3,000	20,000	4,000



Product Performance Characteristics

Main vent functionality	• Condensation reduction • Pressure equalization • Dust / dirt / debris protection • Water intrusion protection				
Minimum airflow (per part) at 70 mbar (1 psi)	65.7 l/h		26.5 l/h		7.5 l/h
Typical airflow (per part) at 70 mbar (1 psi)	148.6 l/h		60.0 l/h		19.5 l/h
Water Entry Pressure (assembly)	206 mbar 3.0 psi / 60 sec				
Moisture Vapor Transmission Rate ¹	732 mg moisture/day		365 mg moisture/day		107 mg moisture/day
Operating temperatures	- 40 °C to 150 °C				
Membrane type	100% ePTFE (AM9XX)				
Membrane characteristic	Hydrophobic and Oleophobic				
Pressure-sensitive adhesive	AD109 Acrylic				
IP Protection ² : (a) Dust (b) Water immersion (c) Spray resistance	(a) IP6KX (b) IPX7 (c) IPX4				

Design and Dimensions (mm)

Outer dimensions (OD) Inner dimensions (ID)	AVS 3100	AVS 3110	AVS 3101	AVS 3111	AVS 3102	AVS 3112
			OD = 19.00 ID = 15.00 	OD = 19.00 ID = 15.00 	OD = 12.00 ID = 8.00 	OD = 12.00 ID = 8.00

Rear and Accessory Lamps

Sample Part Number	AVS 3VAP	AVS 3051	AVS 3004	AVS 3016
Production Part Number	VE0003VAP	VE3051	VE3004	VE3016
Configuration	Multi-up	One-up	Multi-up	One-up
Parts per roll	20,000	5,000	10,000	4,000



Product Performance Characteristics

Main vent functionality	• Condensation reduction • Pressure equalization • Dust / dirt / debris protection • Water intrusion protection	
Minimum airflow (per part) at 70 mbar (1 psi)	6.0 l/h	9.3 l/h
Typical airflow (per part) at 70 mbar (1 psi)	16.5 l/h	26.0 l/h
Water Entry Pressure (assembly)	345 mbar 5.0 psi/60 sec	
Moisture Vapor Transmission Rate ¹	67 mg moisture/day	141 mg moisture/day
Operating temperatures	- 40 °C to 150 °C	
Membrane type	100% ePTFE (AM9XX)	
Membrane characteristic	Hydrophobic and Oleophobic	
Pressure-sensitive adhesive	AD109 Acrylic	
IP Protection ² : (a) Dust (b) Water immersion (c) Spray resistance	(a) IP6KX (b) IPX7 (c) IPX9K modified with target frame ³	

Design and Dimensions (mm)

Outer dimensions (OD)	OD = 12.70	OD = 12.70	OD = 19.05	OD = 19.05
Inner dimensions (ID)	ID = 7.11	ID = 7.11	ID = 8.89	ID = 8.89

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

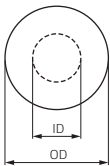
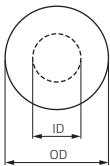
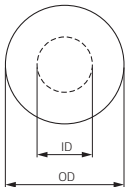
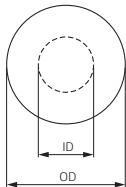
Sample Part Number	AVS 3037	AVS 3040	AVS 3031	AVS 3039
Production Part Number	VE3037	VE3040	VE3031	VE3039
Configuration	Multi-up	One-up	Multi-up	One-up
Parts per roll	5,000	5,000	5,000	5,000



Product Performance Characteristics

Main vent functionality	• Pressure equalization • Dust / dirt / debris protection • Water intrusion protection	
Minimum airflow (per part) at 70 mbar (1 psi)	1.1 l/h	3.6 l/h
Typical airflow (per part) at 70 mbar (1 psi)	2.8 l/h	10.0 l/h
Water Entry Pressure (assembly)	345 mbar 5.0 psi/60 sec	
Moisture Vapor Transmission Rate ¹	19 mg moisture/day	41 mg moisture/day
Operating temperatures	- 40 °C to 150 °C	
Membrane type	100% ePTFE (AM9XX)	
Membrane characteristic	Hydrophobic and Oleophobic	
Pressure-sensitive adhesive	AD109 Acrylic	
IP Protection ² : (a) Dust (b) Water immersion (c) Spray resistance	(a) IP6KX (b) IPX7 (c) IPX9K modified with target frame ³	

Design and Dimensions (mm)

Outer dimensions (OD)	OD = 7.00	OD = 7.00	OD = 10.00	OD = 10.00
Inner dimensions (ID)	ID = 3.00	ID = 3.00	ID = 5.50	ID = 5.50
				

Please contact your local GORE® Automotive Vents representative to request our AVS 3000 Series 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 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.

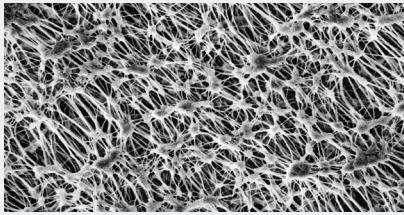


Why the GORE Membrane matters

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 is:

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



The GORE Membrane
magnified 40,000 times

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, powertrains and batteries, as well as exterior-mounted microphones.

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 contact us at our website: gore.com/autovents

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