oToBrite

Autonomous Driving / Automotive Cameras

oToBrite

Overview

Automotive cameras are crucial for ADAS, autonomous vehicles, robots, and unmanned systems operating outdoors, where extreme conditions are common. Unlike standard industrial cameras, automotive-grade modules must endure sunlight, lighting shifts, dust, rain, and wide temperature ranges from -40°C to +85°C, along with vibration, shock, and thermal cycling.

oToBrite's cameras meet these demands with high-sensitivity CMOS sensors and precision Active Alignment (AA) manufacturing. The AA process ensures pixel-level lens positioning and sharp focus, surpassing screw-mount methods. This is key for consistent image quality and accurate object detection in dynamic environments.

All modules feature rugged housings with optional IP67/IP69K ratings for water and dust protection. Combined with resistance to vibration, impact, and temperature extremes, oToBrite's automotive cameras deliver reliable performance far beyond the limits of conventional industrial imaging systems.

Key Features

Comprehensive Product Portfolio
Provides various sensor types, field-of-view (FoV) configurations, and interface options to support diverse automotive applications

Versatile Edge AI Compatibility
Supports edge AI computing modules including NVIDIA Jetson AGX Orin™, Orin™ NX, Orin™ Nano, and Intel® Core™ Ultra 7/5 processors

Ready for Mass Production
Offers over 40 production-ready camera models to meet diverse OEM requirements

Quality Guarantee

Design for Harsh Environments

Compliant with IP67/IP69K for dust and water resistance, and operates reliably in extreme temperatures from -40°C to 85°C.

Precision Manufacturing

In-house 5/6-axis active alignment (AA) ensures excellent image sharpness and flexible, scalable production, enabling the manufacturing of over 60 different specifications with pixel-level (1-pixel) precision.

Certified In-house Production

Manufactured in our IATF 16949-certified factory in Taiwan with a Class 1K cleanroom, guaranteeing consistent high-quality production with high first pass yield rate and low scrap rate.
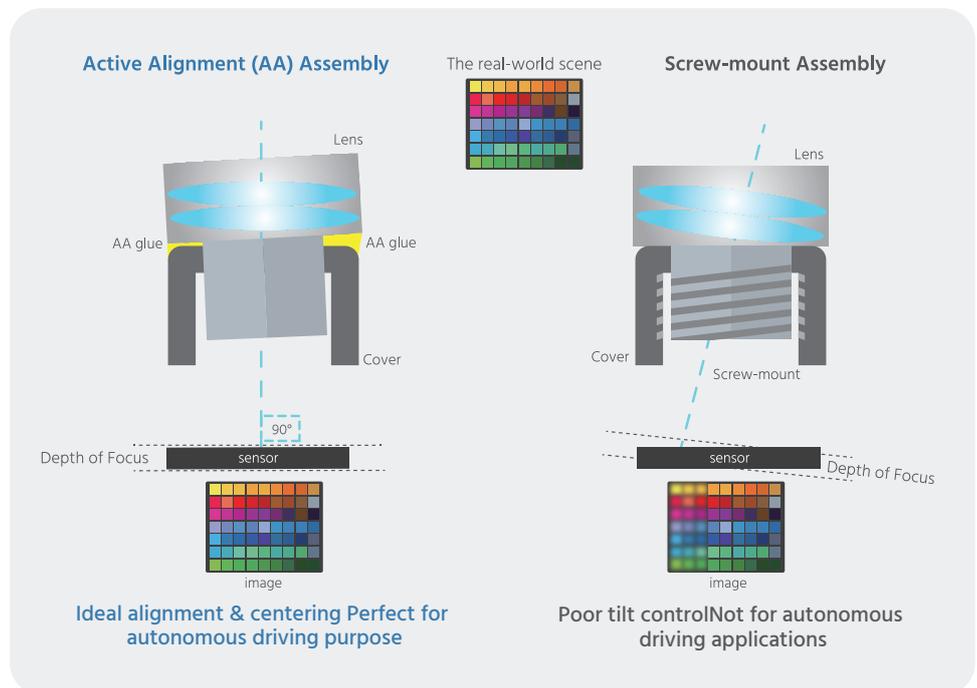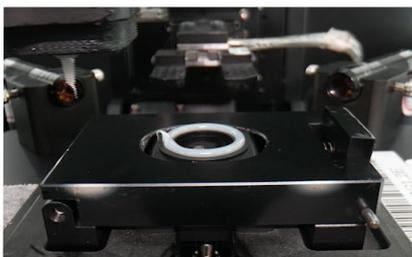
Image Quality Optimization

Sensor and ISP image quality (IQ) are fine-tuned through both lab and field testing to ensure optimal performance tailored to real-world applications.
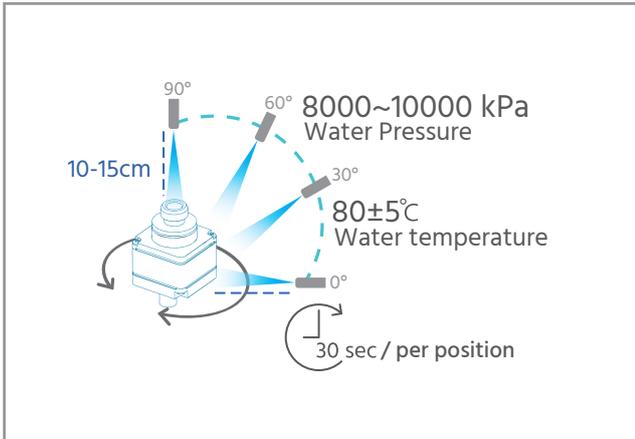
Trusted by Global OEMs

Adopted by several automotive OEMs, including Daimler Truck, Toyota, and Xpeng, with over 1 million automotive cameras shipped to date.

Active Alignment (AA) Assembly

The real-world scene

Screw-mount Assembly

Lens

AA glue — AA glue

Cover

90°

Depth of Focus — sensor

image

Ideal alignment & centering Perfect for autonomous driving purpose

Lens

Cover

Screw-mount

sensor

Depth of Focus

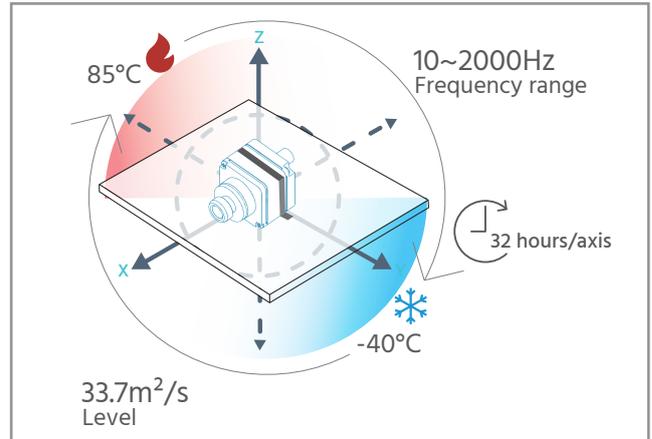image

Poor tilt controlNot for autonomous driving applications

Proven Reliability with 20+ Automotive-grade Tests

IPX9K Rating Waterproof

10-15cm

90°
60°
30°
0°

8000~10000 kPa
Water Pressure

80±5℃
Water temperature

30 sec / per position

Vibration (ISO 16750)

85°C

10~2000Hz
Frequency range

32 hours/axis

-40°C

z

x

33.7m²/s
Level

IP6X Rating Dustproof

15 min/ cycle

2.0 kg
The amount of dust
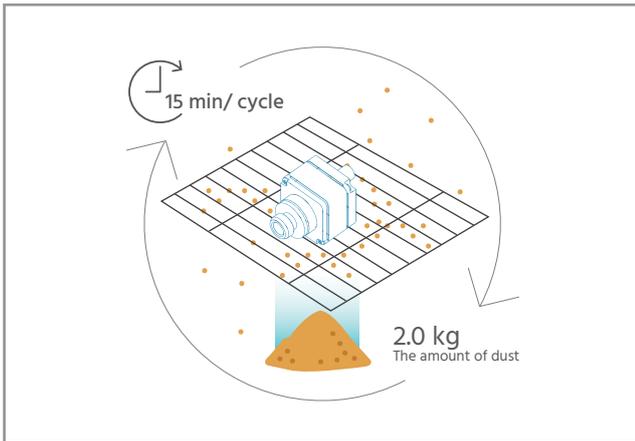
Splash Ice Water Shock (ISO16750)

3 second
Water spraying time

1 hour/ cycle

0~4°C

100 cycles
Test duration

85℃
Test temperature
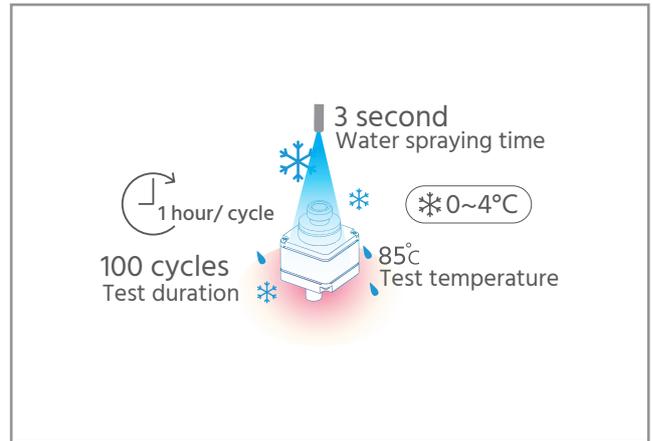
Temperature Cycling (ISO16750)

85°C

10 day

±1~5°C/ min

-40°C
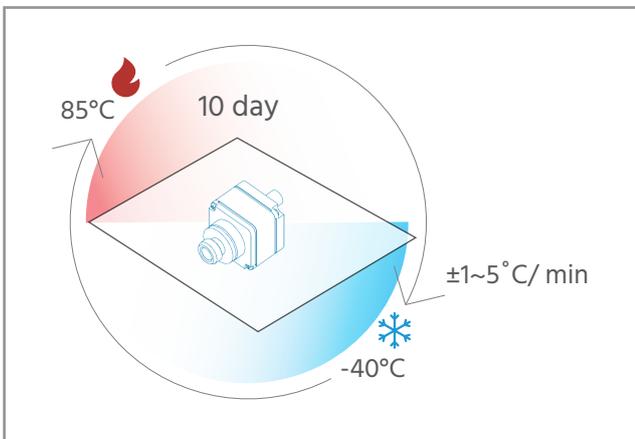
Mechanical Shock (ISO 16750)

6 ms
Peak duration

10 shocks/direction
Number of shocks

60
Total shocks

100 G
Acceleration

z

x

y
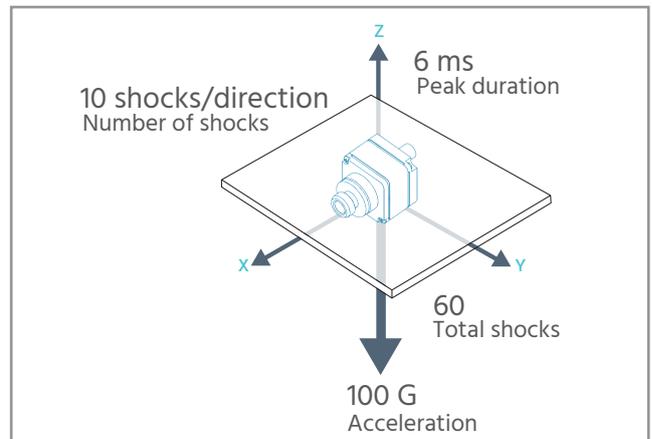
List of Cameras

Model	Resolution	Sensor Type	View Angle	Output Interface	Output Format
oToCAM162	1MP	ISX019	189°	TVI / Differential	YUV422
oToCAM163	1MP	OV9716	183.6°	TVI / Differential	YUV422
oToCAM165	1MP	OV9716	122.5°	TVI / Differential	YUV422
oToCAM204	1MP	ISX019	189.2°	FPD-Link III (TI913)	YUV422
oToCAM206	1MP	ISX019	189°	FPD-Link III (TI913)	YUV422
oToCAM206-L137T	1MP	ISX019	137°	FPD-Link III (TI913)	YUV422
oToCAM264ISP-H61M	2MP / 3MP	IMX390CQV	63.9°	GMSL2™ (MAX9295)	YUV422
oToCAM264ISP-N73M	2MP / 3MP	IMX390CQV	73°	GMSL2™ (MAX9295)	YUV422
oToCAM264ISP-C120M	2MP / 3MP	IMX390CQV	120.6°	GMSL2™ (MAX9295)	YUV422
oToCAM264ISP-N186M	2MP / 3MP	IMX390CQV	186°	GMSL2™ (MAX9295)	YUV422
oToCAM264ISP-H61T	2MP / 3MP	IMX390CQV	63.9°	FPD-Link III (TI953)	YUV422
oToCAM264ISP-N73T	2MP / 3MP	IMX390CQV	73°	FPD-Link III (TI953)	YUV422
oToCAM264ISP-C103T	2MP / 3MP	IMX390CQV	103°	FPD-Link III (TI953)	YUV422
oToCAM264ISP-C120T	2MP / 3MP	IMX390CQV	120.6°	FPD-Link III (TI953)	YUV422
oToCAM264ISP-N186T	2MP / 3MP	IMX390CQV	186°	FPD-Link III (TI953)	YUV422
oToCAM264-H61M	2MP / 3MP	IMX390CQV	63.9°	GMSL2™ (MAX9295)	RAW
oToCAM264-N73M	2MP / 3MP	IMX390CQV	73°	GMSL2™ (MAX9295)	RAW
oToCAM264-C120M	2MP / 3MP	IMX390CQV	120.6°	GMSL2™ (MAX9295)	RAW
oToCAM264-N186M	2MP / 3MP	IMX390CQV	186°	GMSL2™ (MAX9295)	RAW
oToCAM264-H61T	2MP / 3MP	IMX390CQV	63.9°	FPD-Link III (TI953)	RAW
oToCAM264-N73T	2MP / 3MP	IMX390CQV	73°	FPD-Link III (TI953)	RAW
oToCAM220-C103T	2MP / 3MP	IMX390CQV	103°	FPD-Link III (TI953)	RAW
oToCAM264-C120T	2MP / 3MP	IMX390CQV	120°	FPD-Link III (TI953)	RAW
oToCAM264-N186T	2MP / 3MP	IMX390CQV	186°	FPD-Link III (TI953)	RAW
oToCAM222-H61M	2MP / 3MP	ISX021	64°	GMSL2™ (MAX9295)	YUV422
oToCAM222-C120M	2MP / 3MP	ISX021	120.6°	GMSL2™ (MAX9295)	YUV422
oToCAM222-S195M	2MP / 3MP	ISX021	195.9°	GMSL2™ (MAX9295)	YUV422
oToCAM222-H61T	2MP / 3MP	ISX021	64°	FPD-Link III (TI953)	YUV422
oToCAM222-C103T	2MP / 3MP	ISX021	103°	FPD-Link III (TI953)	YUV422
oToCAM222-C120T	2MP / 3MP	ISX021	120.6°	FPD-Link III (TI953)	YUV422
oToCAM222-S195T	2MP / 3MP	ISX021	195.9°	FPD-Link III (TI953)	YUV422
oToCAM223-H61M	2MP / 3MP	ISX031	63.9°	GMSL2™ (MAX9295)	YUV422
oToCAM223-C120M	2MP / 3MP	ISX031	120.6°	GMSL2™ (MAX9295)	YUV422
oToCAM223-S195M	2MP / 3MP	ISX031	195.9°	GMSL2™ (MAX9295)	YUV422
oToCAM269IMU-C120M	2MP / 3MP	ISX031	120.6°	GMSL2™ (MAX9295)	YUV422
oToCAM274ISP-H100M	2MP / 3MP	IMX623	100°	GMSL2™ (MAX9295)	YUV422
oToCAM274ISP-S195M	2MP / 3MP	IMX623	195°	GMSL2™ (MAX9295)	YUV422
oToCAM260ISP-C30M	5MP	IMX490	30°	GMSL2™ (MAX9295)	YUV422
oToCAM260ISP-C62M	5MP	IMX490	62.5°	GMSL2™ (MAX9295)	YUV422
oToCAM260ISP-C120M	5MP	IMX490	120°	GMSL2™ (MAX9295)	YUV422

Model	Resolution	Sensor Type	View Angle	Output Interface	Output Format
oToCAM260	5MP	IMX490	30°	GMSL2™ (MAX9295)	RAW
oToCAM260-N92M	5MP	IMX490	92°	GMSL2™ (MAX9295)	RAW
oToCAM261	5MP	IMX490	120°	GMSL2™ (MAX9295)	RAW
oToCAM262	5MP	IMX490	62.5°	GMSL2™ (MAX9295)	RAW
oToCAM271-N70T	7MP / 8MP	IMX728	70°	FPD-Link IV (DS90UB971)	RAW
oToCAM271ISP-N120M	7MP / 8MP	IMX728	120°	GMSL2™ (MAX9295)	YUV422
oToCAM276ISP-N30M	7MP / 8MP	AR0823	30°	GMSL2™ (MAX9295)	YUV422
oToCAM276ISP-N120M	7MP / 8MP	AR0823	120°	GMSL2™ (MAX9295)	YUV422
oToCAM251	1.5MP	VB56G4A	31°	FPD-Link III (TI953)	RAW
oToCAM251-A34M	1.5MP	VB56G4A	34°	GMSL2™ (MAX9295)	RAW

Applications

◉ ADAS

◉ Self-driving Truck

◉ Smart Agriculture

◉ Autonomous Logistics

◉ Delivery Robot

driving easier and safer

9F-2, No. 8, Keyan Rd., East Dist., Science-Based Industrial Park,
Hsinchu, Taiwan (R.O.C.)

oToBrite.com   Facebook   LinkedIn   X.com