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

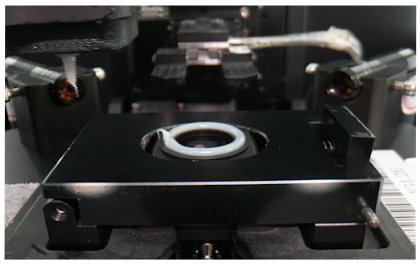
Manufactured in our IATF 16949-certified factory in Taiwan with a Class 1K cleanroom, guaranteeing consistent high-quality production with high first pass yield rate and low scrap rate.

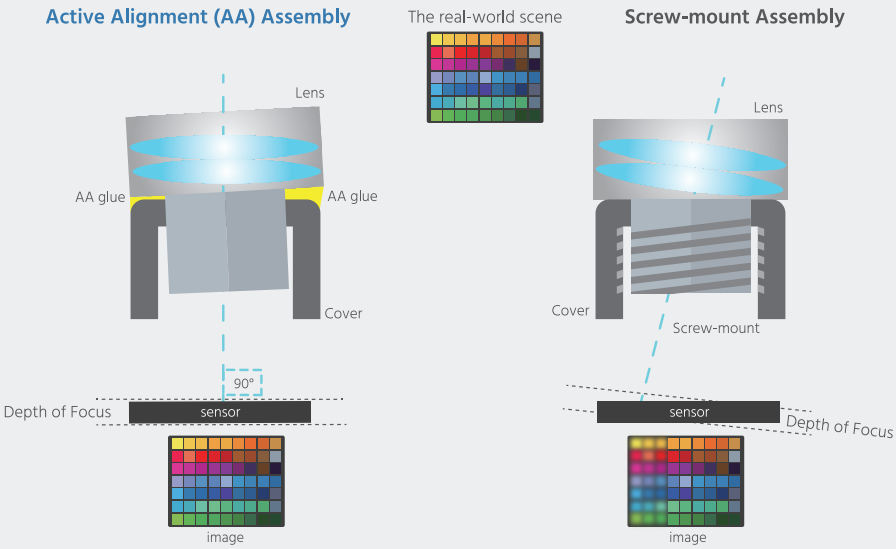
### Image Quality Optimization

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.



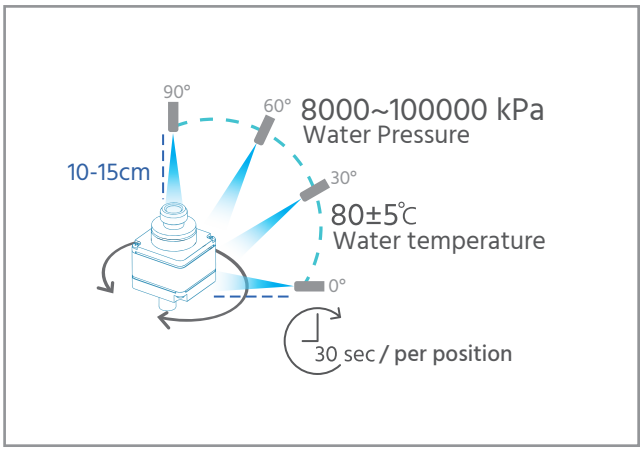



Ideal alignment & centering Perfect for autonomous driving purpose

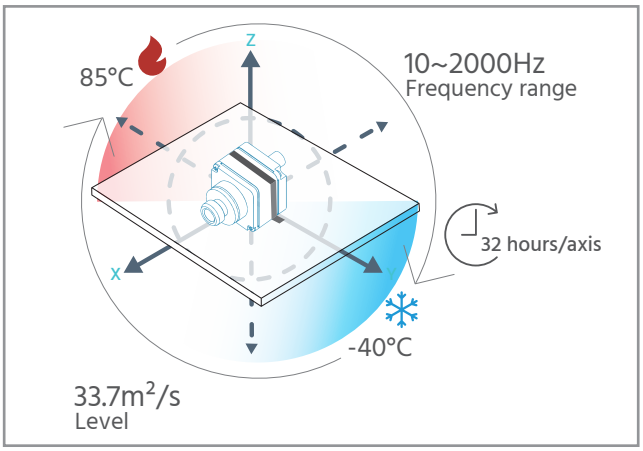
Poor tilt controlNot for autonomous driving applications

## Proven Reliability with 20+ Automotive-grade Tests

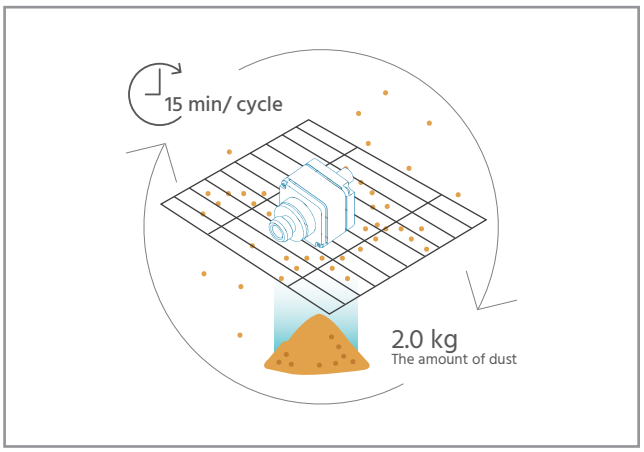
### IPX9K Rating Waterproof



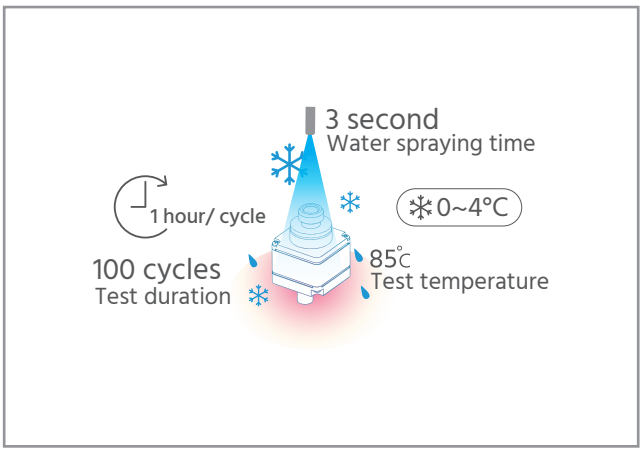

### Vibration (ISO 16750)



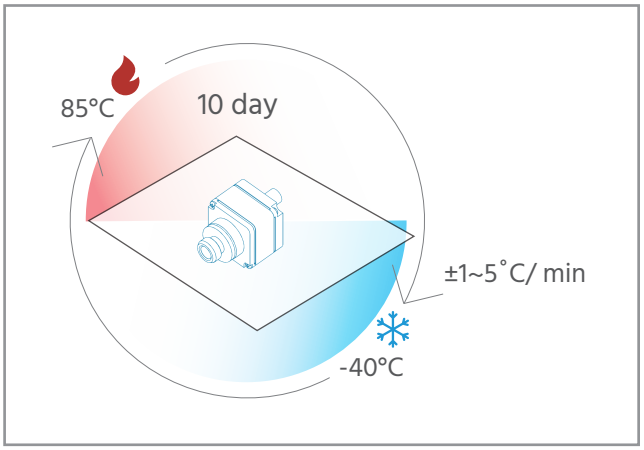

### IP6X Rating Dustproof



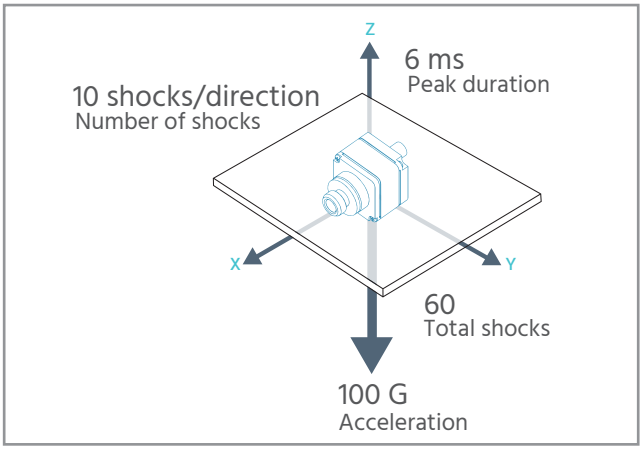

### Splash Ice Water Shock (ISO16750)




### Temperature Cycling (ISO16750)




### Mechanical Shock (ISO 16750)



## 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*

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