



SHEBA

MICROSYSTEMS

Image details matter.™



Sheba MEMS AF Actuator for
Active Athermalization in
Automotive Cameras

SH-OX08B40-AM



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PRODUCT DESCRIPTION

Introducing the Sharp-7 by Sheba Microsystems: the world's first autofocus automotive camera. Powered by Sheba's revolutionary micro-actuator technology.

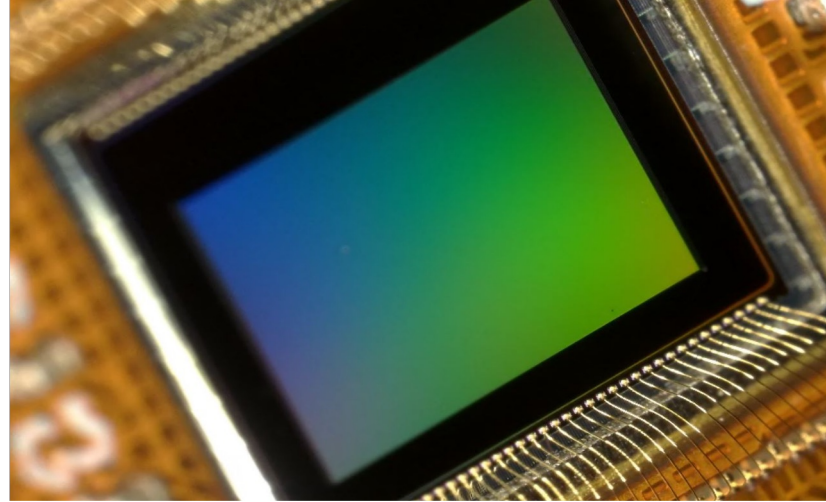
WHAT IT SOLVES

Automotive cameras often face challenges in maintaining image quality and focus stability during temperature fluctuations as the optics undergo thermal expansion.

Sheba's active athermalization and autofocus MEMS actuator provides consistent highest-quality imaging for automotive cameras regardless of temperature fluctuations and mechanical shocks.

KEY ADVANTAGES

- Thermally stable (-40 to 150 deg. Celcius)
- Fast < 5ms response time
- Low power
- High precision <0.5 um
- Less sensitive to mechanical shocks
- No hysteresis
- No electromagnetic interference



Sheba's wire-bonded sensor on MEMS

Launched May 2024



**New* Product SH-OX08B40-AM*

SPECIFICATIONS

Module Part #		SH-OX08B40-AM	
Module Size		25 mm (L) x 25 mm (W) x 55 mm (H)	
Serializer		Maxim MAX96717	
Connector		FAKRA Z TYPE	
Sensor Specs	Sensor model		OX08B40*
	Array Size		3840x2160
	Power Supply	Analog	2.9V
		Core	1.1V
		I/O	1.8V/3.3V
	Output Format		12-bit / 14-bit / 16-bit / 20-bit RAW
	Optical Size		1/1.73"
	Pixel Size		2.1 μm x 2.1 μm
	Die Dimensions		9.26 mm x 5.66 mm x 0.3 mm
Lens Specs	Lens model		CIL078
	Lens mount		M12 Lens
	F-number		2
	Focal Length		7.8 mm
	FOV (Diagonal)		54
	TV Distortions		< 1%
MEMS Specs	MEMS displacement		> 30 μm @94V
	Settling time		5ms
	Size		12 mm x 8.6 mm x 0.62 mm
	MEMS Driver		MAX14515

* Sheba actuators are compatible with large format sensors and can be customized based on customer needs.



APPLICATIONS

ADAS

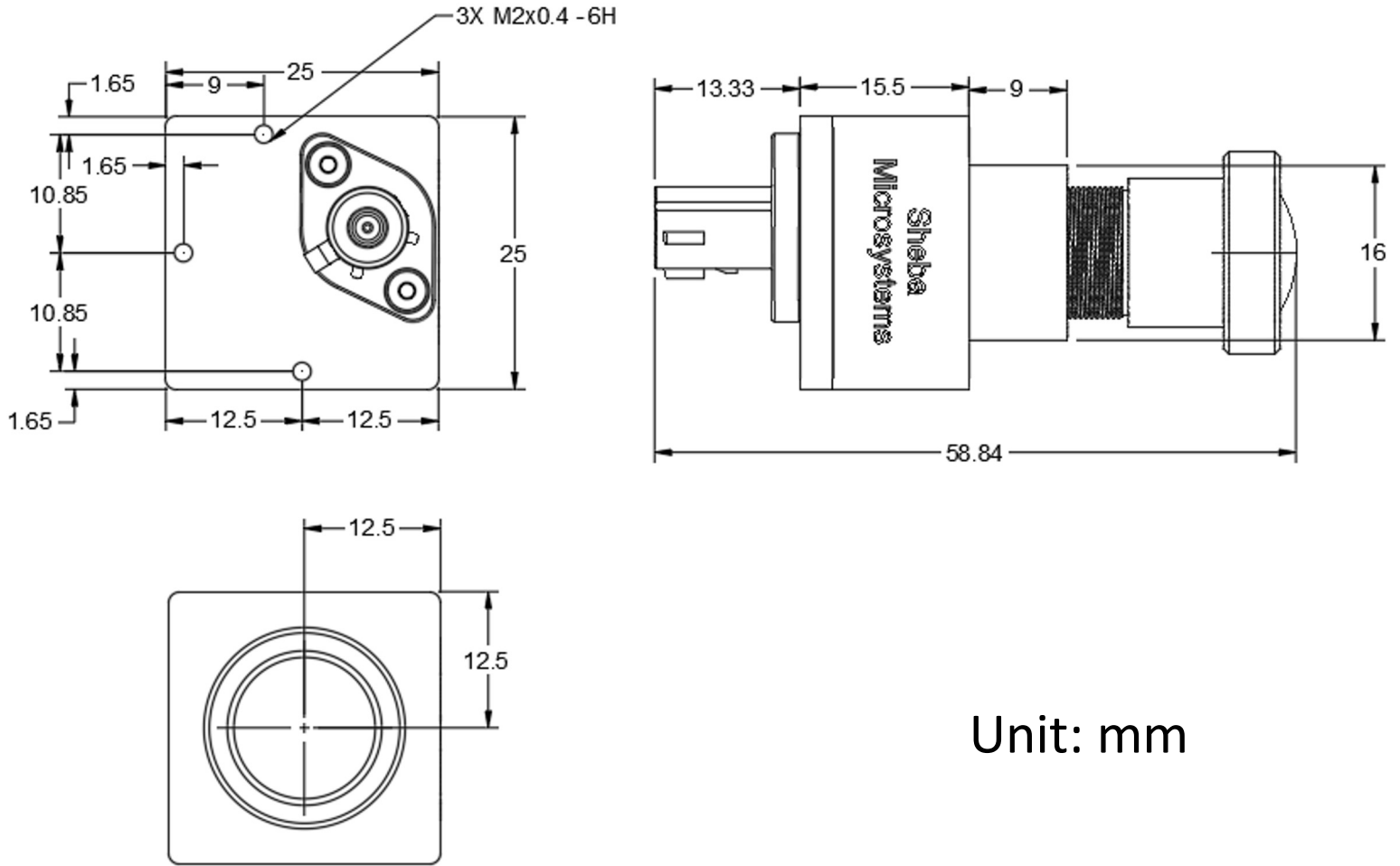
High Resolution Front Viewing

Machine Vision

Autonomous Driving

Digital Video Recording

CAMERA DRAWING



VERSION HISTORY

Version	Description	Release Date
1.0	First Release	May 21, 2024



Rugged

Thermally stable

Fast

Highest precision

... and more

Capture life's most important moments.

Learn more about Sheba Microsystems today.



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