

VCS-AR0235-SL

TechNexion
INNOVATORS OF TECHNOLOGY

- onsemi AR0235 2.3MP Global Shutter Sensor
- S-Mount for Interchangeable Lenses
- UVC USB Type-C 5 Gbps Connector
- Plug & Play with Windows & Linux OS
- VizionViewer™ configuration utility
- VizionSDK for custom development



VizionSDK



VizionViewer™

Camera Information

CMOS Sensor	onsemi AR0235
Active Pixels	1920 (H) x 1200 (V) = 2.3MP
Pixel Size	2.8 μm x 2.8 μm
Illuminated Type	Front Side Illuminated (FSI)
Maximum S/N Ratio	37 dB
Optical Format	1/2.8" (Diagonal 6.34 mm)
Shutter Type	Global Shutter
Chromaticity	Color / Mono
Maximum Frame Rate (YUV422-UYYV)	1920 x 1200 @ 60 fps 1920 x 1080 @ 60 fps 1280 x 720 @ 120 fps 640 x 480 @ 120 fps
Maximum Frame Rate (MJPEG)	1920 x 1200 @ 100 fps 1920 x 1080 @ 100 fps 1280 x 720 @ 120 fps 640 x 480 @ 120 fps
Output Format	YUV422-UYYV MJPEG (JPG)

Camera Interface

Connector	USB Type-C 5 Gbps
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Power

Supply Voltage	5V $\pm$ 5%
Power Consumption	1920 x 1200 @ 60FPS $\leq$ 1.2W
Standby Power	$\leq$ 0.1W Standby

Software Support

Operation System	UVC Plug-and-play Windows 10/11 Linux Yocto
Software	VizionViewer™
Development SDK	VizionSDK

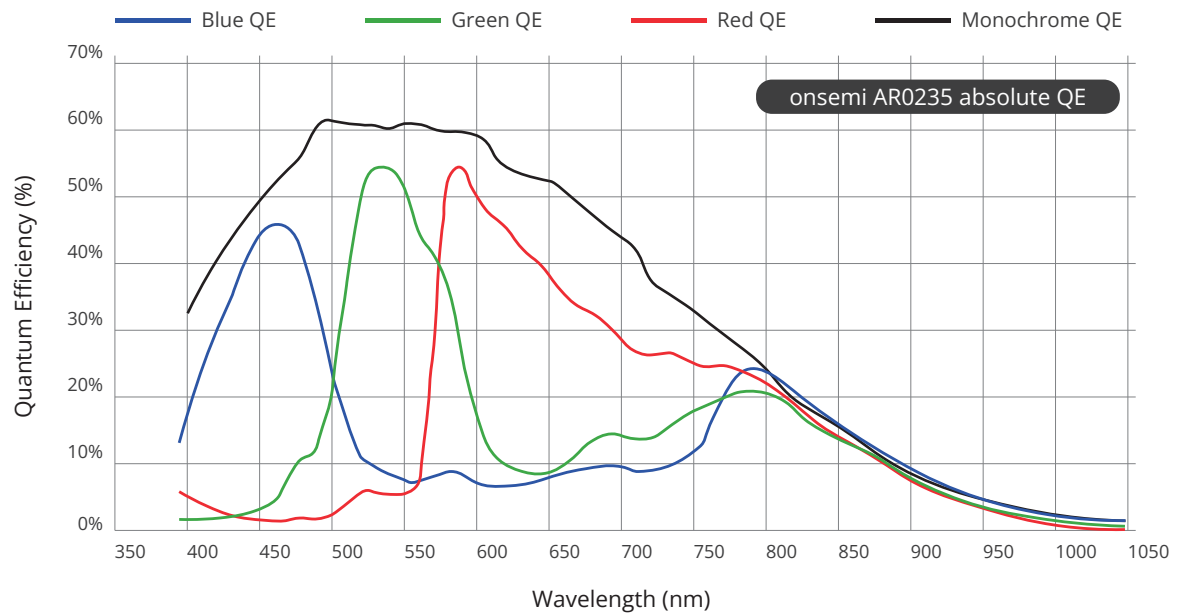
Environmental and Mechanical

Dimensions	29.5(W) x 29.5(H) x 28.5(D) mm
Weight	$\leq$ 44 grams
MTBF	50,000 Hours
Shock	15G half-sine 11 ms duration
Vibration	1 Grms random 5-500Hz hr/axis
Relative Humidity	10 to 90 %
Operating Temperature	- 30°C to + 70°C

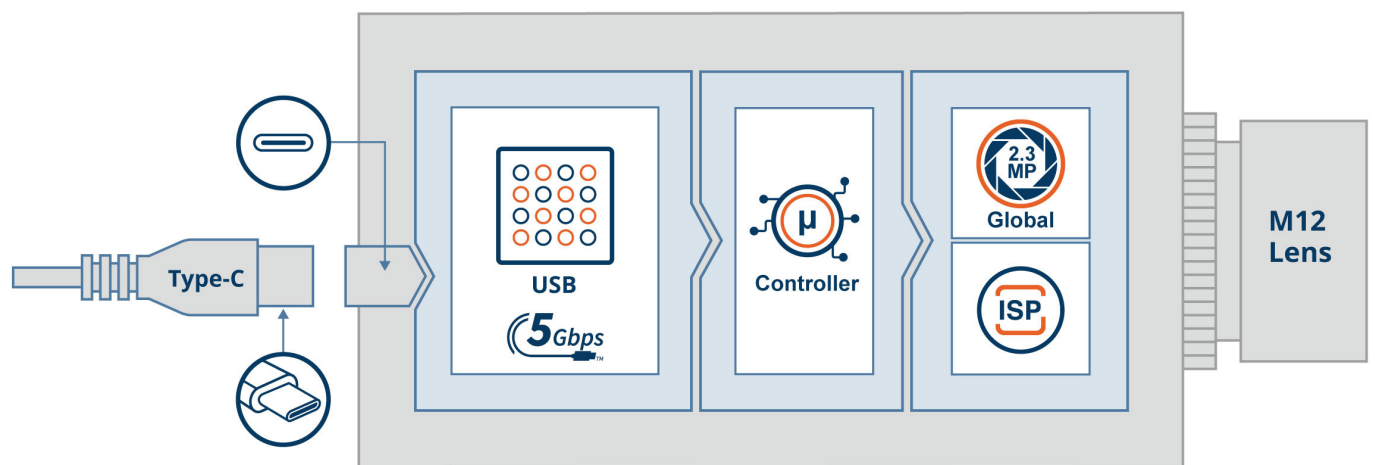
Certification and Compliance

Certification	Compliant with CE / FCC / RoHS / REACH directives
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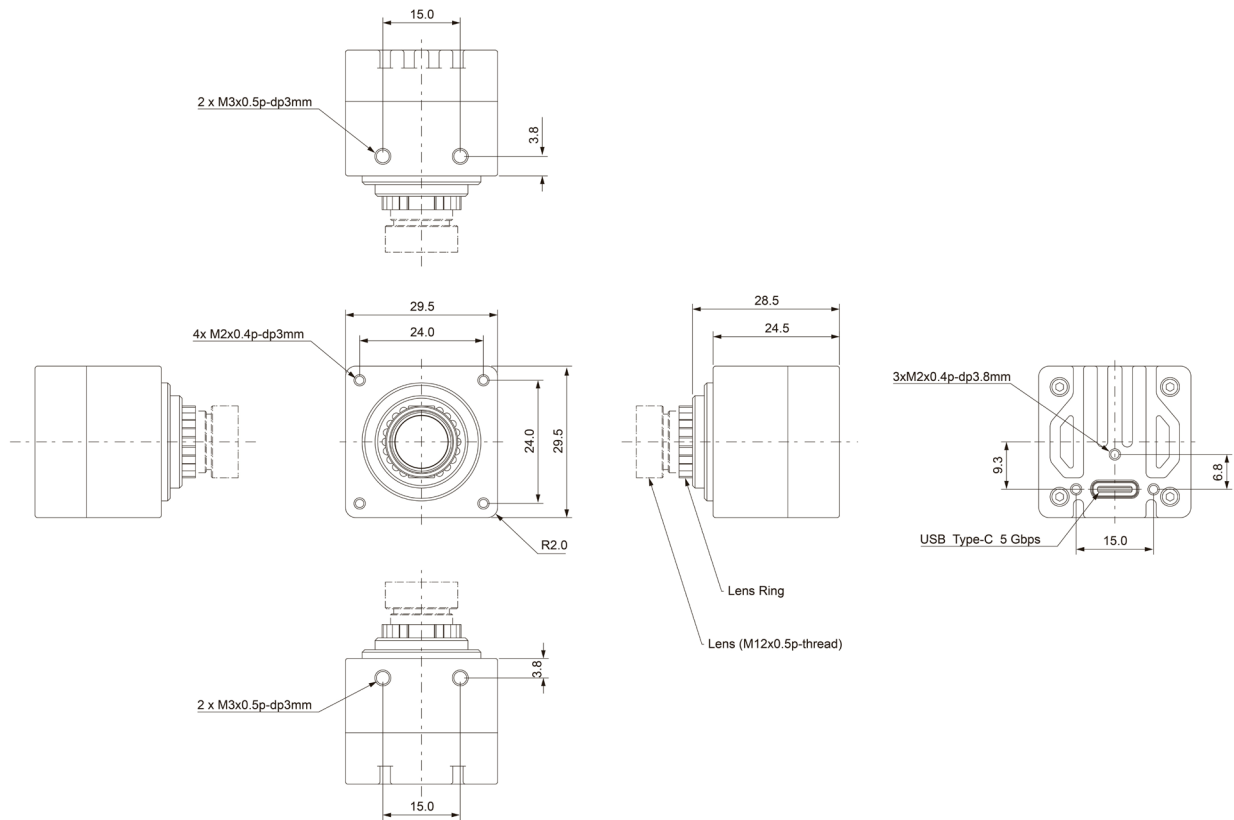
Spectral Characteristics



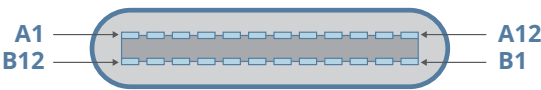
Block Diagram



Dimensions



Connector Pin Definition



No.	Pin Define	No.	Pin Define
A1	GND	B12	GND
A2	TXP1	B11	RXP1
A3	TXN1	B10	RXN1
A4	VBUS1	B9	VBUS3
A5	CC1	B8	SBU2
A6	DP1	B7	DN2
A7	DN1	B6	DP2
A8	SBU1	B5	CC2
A9	VBUS2	B4	VBUS4
A10	RXN2	B3	TXN2
A11	RXP2	B2	TXP2
A12	GND	B1	GND

Lens Information

			
	VCS-AR0235-C-S30-IR	VCS-AR0235-C-S79-IR	VCS-AR0235-C-S120-IR
Focus Type	Fixed Focus	Fixed Focus	Fixed Focus
Focal Length	12 mm	3.9 mm	2.87 mm
Aperture	F2.0	F2.8	F2.8
Module D-FOV	29.6° ± 5%	78.9° ± 5%	120.3° ± 5%
Module H-FOV	25.3° ± 5%	69.6° ± 5%	104.6° ± 5%
Module V-FOV	15.9° ± 5%	46.6° ± 5%	62.1° ± 5%
TTL	23.2 mm	22 mm	21 mm
BFL	7.3 mm	4.54 mm	5.27 mm
MOD	0.3 m	0.3 m	0.3 m
Distortion	<-2.50%	<1.26%	<-20%
IR-Filter	650 nm	650 nm	650 nm
Lens Structure	5G + IR	2G + 2P + IR	4G + 1P + IR
First layer material	Glass	Plastic	Glass

Order Information

VCS-AR0145-x-Sxx-xx-xxxx

Option	Code	Description
Chromaticity	C	Color
	M	Monochrome
Lens	S31	S-Mount Module D-FOV 31°
	S78	S-Mount Module D-FOV 78°
Filter	-	-
	IR	IR Cut Filter 650nm
Custom ID	XXXX	Custom Part number ID

For customization, please contact your TechNexion sales representative.

Optional Accessories

An easy to attach A-Mount bracket for TechNexion 30mm enclosed cameras.



300-MOUNT-BRACKET



300-MOUNT-BRACKET on tripod
(tripod not included)