

SENTECH

**STC-TB33USB-AT/AS/BT/BS
STC-TC33USB-AT/AS/BT/BS
Product Specification**

**Software Trigger USB 2.0
Color / Monochrome VGA CCD Camera**

Contents

I. Specifications

A. Electronic Specs / Mechanical Specs / Environmental Conditions

- 1. STC-TC33USB-AT / TC33USB-AS / TB33USB-AT / TB33USB-AS: Case Type..... 1
- 2. STC-TC33USB-BT / TC33USB-BS / TB33USB-BT / TB33USB-BS: Board Type..... 2

II. Dimensions

- A. STC-TC33USB-AT: Color / Right-Angle / Case Type..... 3
- B. STC-TC33USB-AS: Color / Straight / Case Type..... 3
- C. STC-TC33USB-BTCS: Color / Right-Angle / CS Mount / Board Type..... 4
- D. STC-TC33USB-BSCS: Color / Straight / CS Mount / Board Type..... 4
- E. STC-TC33USB-BTL: Color / Right-Angle / Fixed Lens / Board Type..... 5
- F. STC-TC33USB-BSL: Color / Straight / Fixed Lens / Board Type..... 5
- G. STC-TB33USB-AT: Monochrome / Right-Angle / Case Type..... 6
- H. STC-TB33USB-AS: Monochrome / Straight / Case Type..... 6
- I. STC-TB33USB-BTCS: Monochrome / Right-Angle / CS Mount / Board Type..... 7
- J. STC-TB33USB-BSCS: Monochrome / Straight / CS Mount / Board Type..... 7
- K. STC-TB33USB-BTL: Monochrome / Right-Angle / Fixed Lens / Board Type..... 8
- L. STC-TB33USB-BSL: Monochrome / Straight / Fixed Lens / Board Type..... 8

I. Specifications

A. Electronic Specifications / Mechanical Specifications / Environmental Conditions

1. STC-TC33USB-AT / TC33USB-AS / TB33USB-AT / TB33USB-AS: Case Type

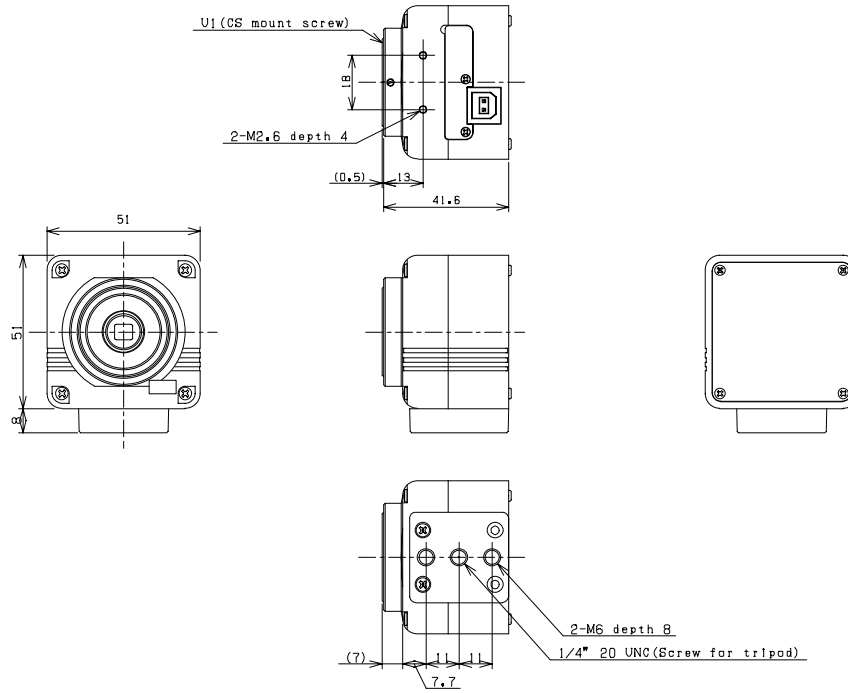
Product		STC-TC33USB-AT	STC-TC33USB-AS	STC-TB33USB-AT	STC-TB33USB-AS	
Electronic Specification	Imager	1/3" Interline VGA Color Progressive CCD: ICX424Q		1/3" Interline VGA Monochrome Progressive CCD: ICX424AL		
	Total Picture Elements	692 (H) x 504 (V)				
	Effective Picture Elements	659 (H) x 494 (V)				
	Chip Size	5.79 (H) x 4.89 (V) mm				
	Cell Size	7.40 (H) x 7.4 (V) μm				
	Scanning System	Progressive				
	Scanning Methods	Full scanning, 1/1 Partial Scanning, 1/2 Partial Scanning, 1/4 Partial Scanning, Variable Partial Scanning		Full Scanning, 1/1 Partial Scanning, 1/2 Partial Scanning, 1/4 Partial Scanning, Variable Partial Scanning, Binning, Binning 1/1 Partial Scanning, Binning 1/2 Partial Scanning, Binning 1/4 Partial Scanning, Binning Variable Partial Scanning		
	Pixel Frequency	24.5454 MHz				
	Maximum Frame Rate	Full Scanning	59.94 fps			
		1/2 Partial	120.11 fps			
		1/4 Partial	240.22 fps			
	Resolution	640 (H) x 480 (V) (Full Scanning) 640 (H) x 224 (V) (1/2 Partial Scanning) 640 (H) x 80 (V) (1/4 Partial Scanning)				
	Minimum Scene Illumination	0.4 Lux at F1.2		0.2 Lux at F1.2		
	Sync. System	Internal				
	Electronic Shutter	Auto / Manual (Software Selectable)				
	Gain	Auto / Manual (Software Selectable)				
	Gamma	Manual (Software Selectable)				
	White Balance	Auto / Manual / OneShot (Software Selectable)		-		
	Trigger Mode	Free-run / Edge Preset Trigger (Software Selectable)				
	Input / Output	USB 2.0 High Speed				
Power Supply	Input Voltage	+5V through USB Connector				
	Consumption	Less than 350 mA				
Mechanical Specifications	Dimensions	51 (W) x 51 (H) x 41.6 (D) mm	51 (W) x 51 (H) x 44.3 (D) mm	51 (W) x 51 (H) x 41.6 (D) mm	51 (W) x 51 (H) x 44.3 (D) mm	
	Lens Mount	CS Mount				
	Tripod	2 screws on the bottom plate				
	Weight	Approximately 145g				
Environmental Conditions	Temperature and Humidity	Operational	Temperature: 0 to 40° C, RH: 0 to 85% (No Condensation)			
		Storage	Temperature: -30 to 65° C, RH: 0 to 90% (No Condensation)			
	Vibration	20 Hz to 200 Hz to 20 Hz (5min./cycle), acceleration 10G, 3 directions 30 min. each				
	Shock	Acceleration 70G, half amplitude 6ms, 3 directions 3 times each				
	Standard Compliancy	TBDEMS :EN61000-6-2, EMI: EN61000-6-3 (Class B)				
	RoHS	RoHS Compliant				

2. STC-TC33USB-BT / TC33USB-BS / TB33USB-BT / TB33USB-BS: Board Type

Product		STC-TC33USB-BT	STC-TC33USB-BS	STC-TB33USB-BT	STC-TB33USB-BS	
Electronic Specification	Imager	1/3" Interline VGA Color Progressive CCD: ICX424Q		1/3" Interline VGA Monochrome Progressive CCD: ICX424AL		
	Total Picture Elements	692 (H) x 504 (V)				
	Effective Picture Elements	659 (H) x 494 (V)				
	Chip Size	5.79 (H) x 4.89 (V) mm				
	Cell Size	7.40 (H) x 7.4 (V) μm				
	Scanning System	Progressive				
	Scanning Methods	Full scanning, 1/1 Partial Scanning, 1/2 Partial Scanning, 1/4 Partial Scanning, Variable Partial Scanning		Full Scanning, 1/1 Partial Scanning, 1/2 Partial Scanning, 1/4 Partial Scanning, Variable Partial Scanning, Binning, Binning 1/1 Partial Scanning, Binning 1/2 Partial Scanning, Binning 1/4 Partial Scanning, Binning Variable Partial Scanning		
	Pixel Frequency	24.5454 MHz				
	Maximum Frame Rate	Full Scanning	59.94 fps			
		1/2 Partial	120.11 fps			
		1/4 Partial	240.22 fps			
	Resolution	640 (H) x 480 (V) (Full Scanning) 640 (H) x 224 (V) (1/2 Partial Scanning) 640 (H) x 80 (V) (1/4 Partial Scanning)				
	Minimum Scene Illumination	0.4 Lux at F1.2		0.2 Lux at F1.2		
	Sync. System	Internal				
	Electronic Shutter	Auto / Manual (Software Selectable)				
	Gain	Auto / Manual (Software Selectable)				
	Gamma	Manual (Software Selectable)				
	White Balance	Auto / Manual / OneShot (Software Selectable)		-		
	Trigger Mode	Free-run / Edge Preset Trigger (Software Selectable)				
	Input / Output	USB 2.0 High Speed				
Power Supply	Input Voltage	+5V through USB Connector				
	Consumption	Less than 350 mA				
Mechanical Specifications	Dimensions	45 (W) x 45 (H) x ** (D) mm				
	Lens Mount	CS mount / fixed lens				
	Weight	Approximately 45g				
Environmental Conditions	Temperature and Humidity	Operational	Temperature: 0 to 40° C, RH: 0 to 85% (No Condensation)			
		Storage	Temperature: -30 to 65° C, RH: 0 to 90% (No Condensation)			
	RoHS	RoHS Compliant				

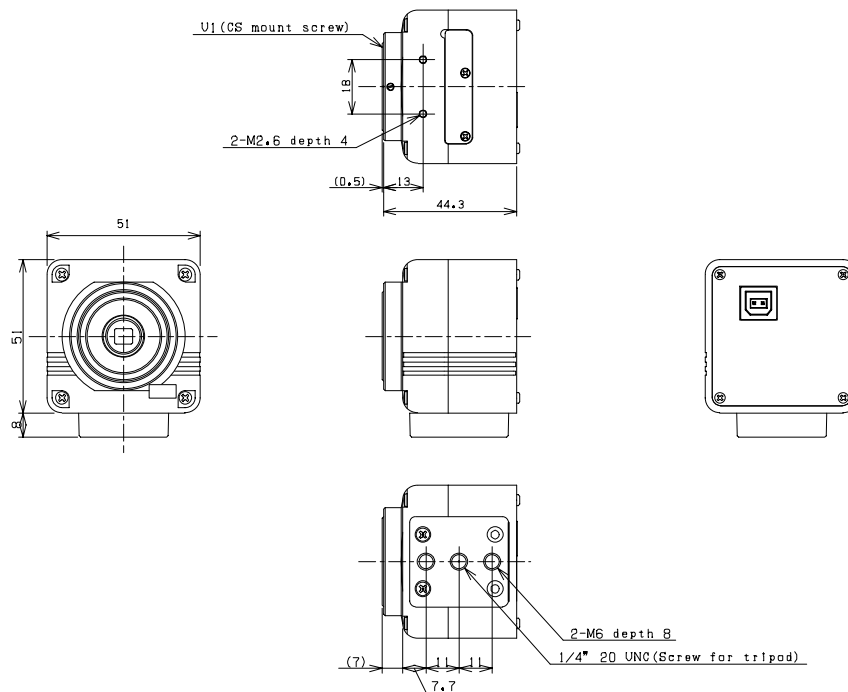
Dimensions

Dimensions (STC-TC33USB-AT: Color / Right-Angle / Case Type)



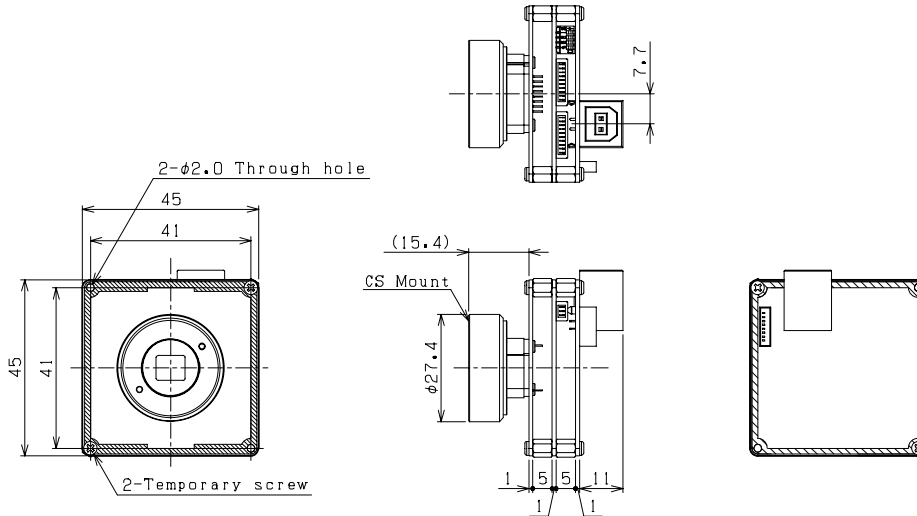
Unit: mm

Dimensions (STC-TC33USB-AS: Color / Straight / Case Type)



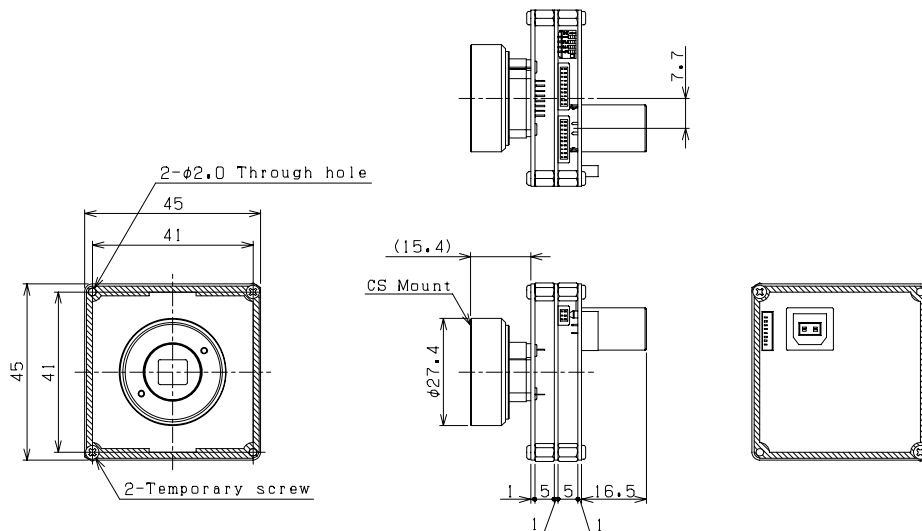
Unit: mm

Dimensions (STC-TC33USB-BTCS: Color / Right-Angle / CS Mount / Board Type)



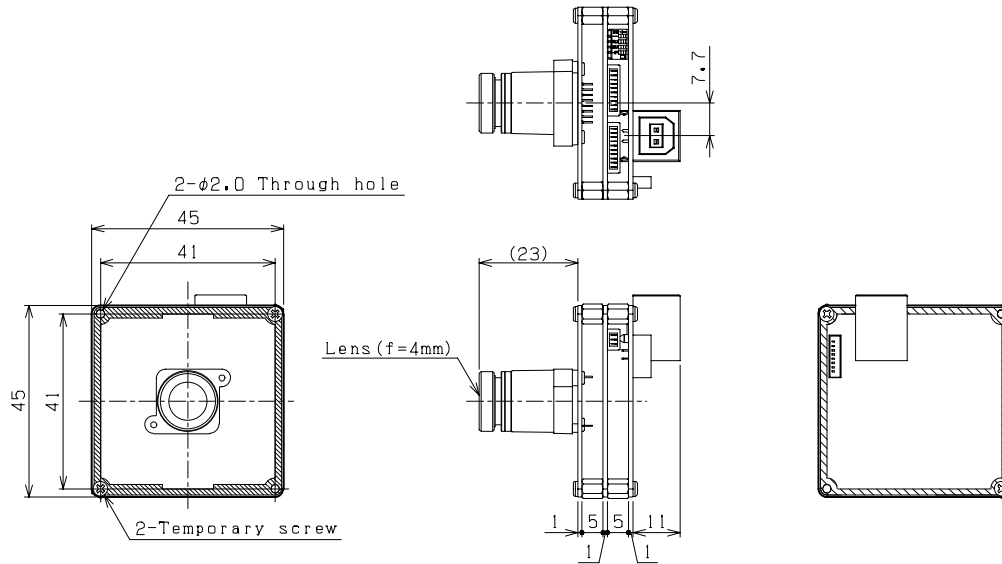
Unit: mm

Dimensions (STC-TC33USB-BSCS: Color / Straight / CS Mount / Board Type)



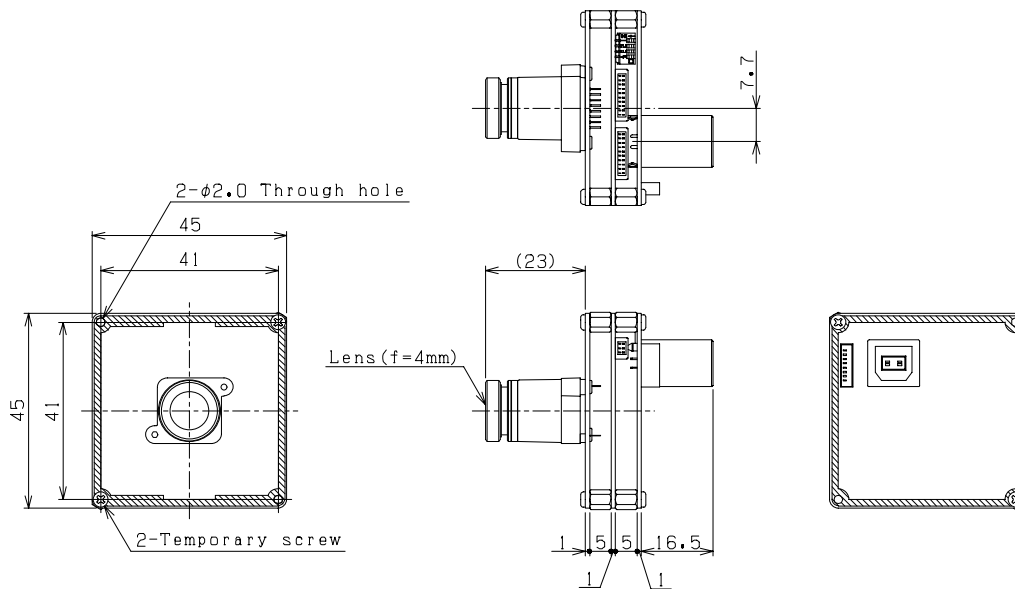
Unit: mm

Dimensions (STC-TC33USB-BTL: Color / Right-Angle / Fixed Lens / Board Type)



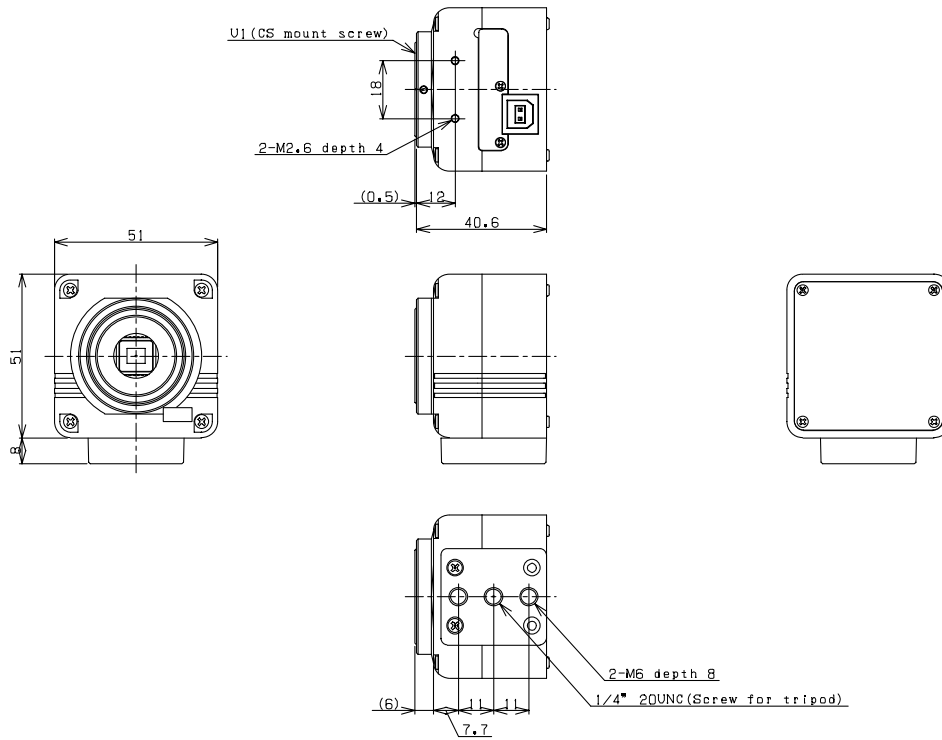
Unit: mm

Dimensions (STC-TC33USB-BSL: Color / Straight / Fixed Lens / Board Type)



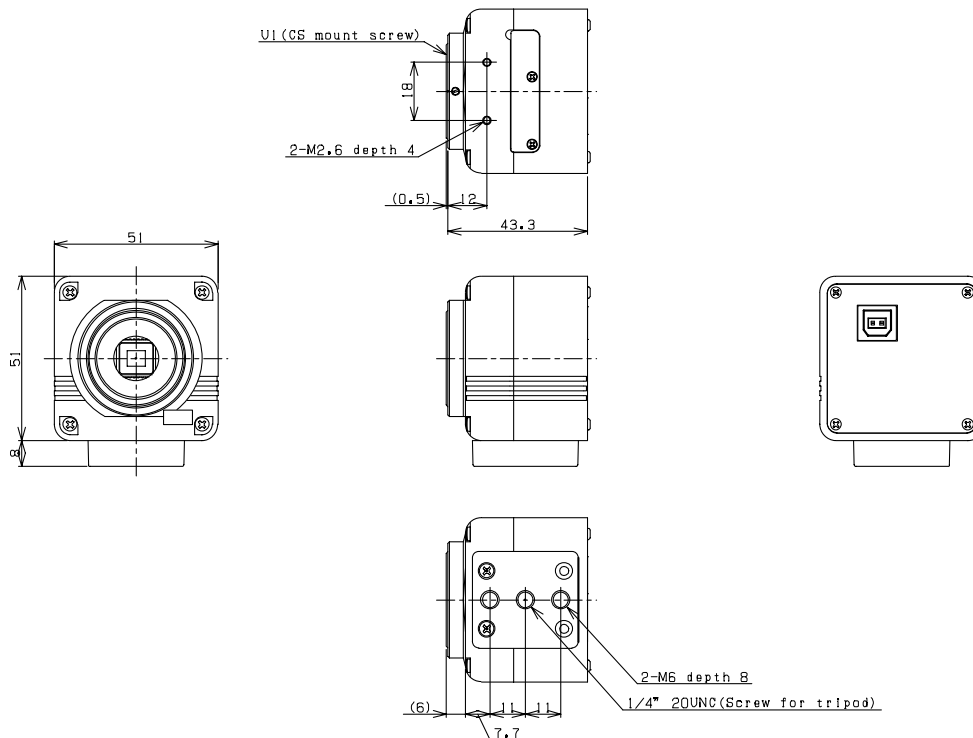
Unit: mm

Dimensions (STC-TB33USB-AT: Monochrome / Right-Angle / Case Type)



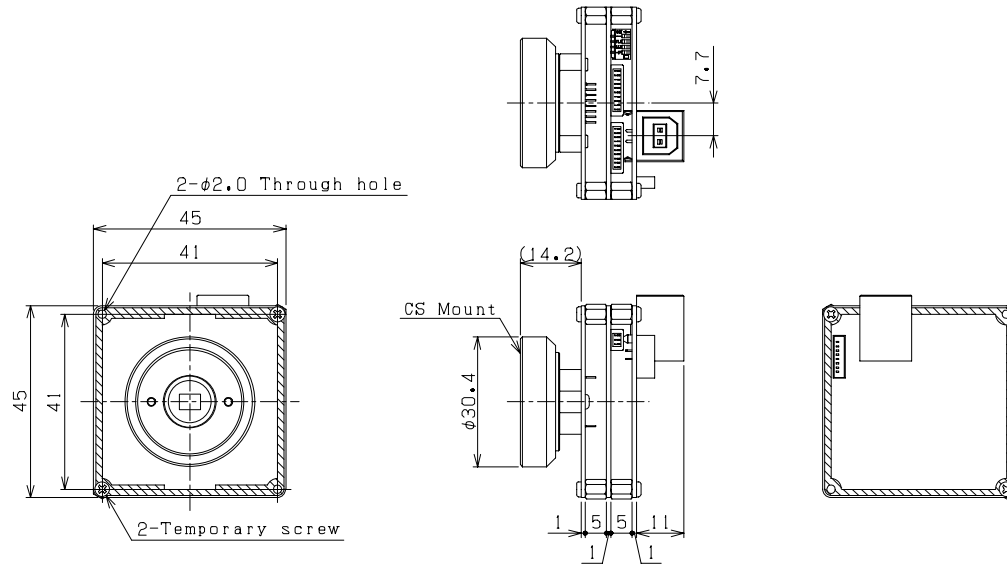
Unit: mm

Dimensions (STC-TB33USB-AS: Monochrome / Straight / Case Type)

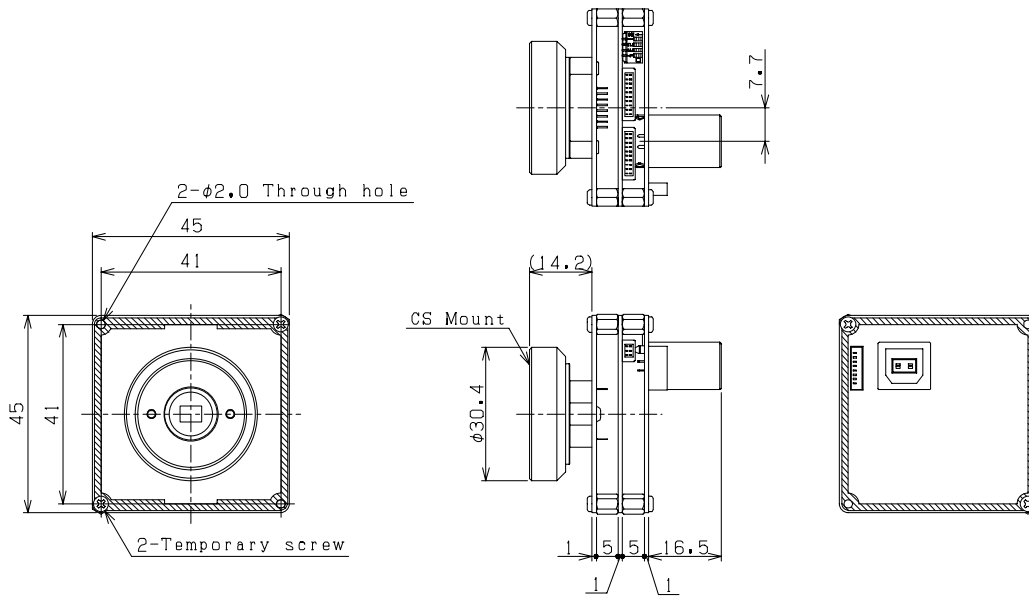


Unit: mm

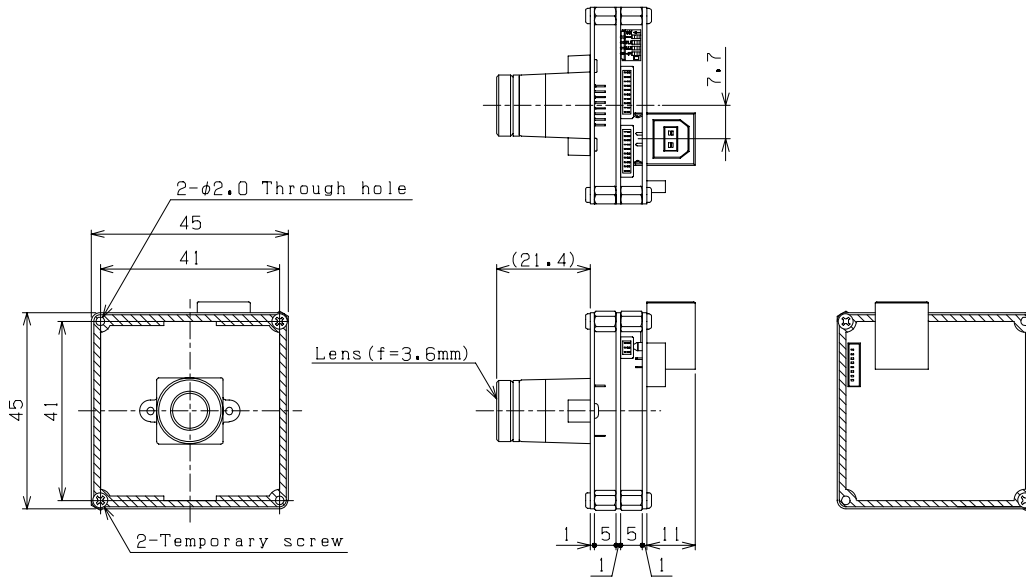
Dimensions (STC-TB33USB-BTCS: Monochrome / Right-Angle / CS Mount / Board Type)



Dimensions (STC-TB33USB-BSCS: Monochrome / Straight / CS Mount / Board Type)

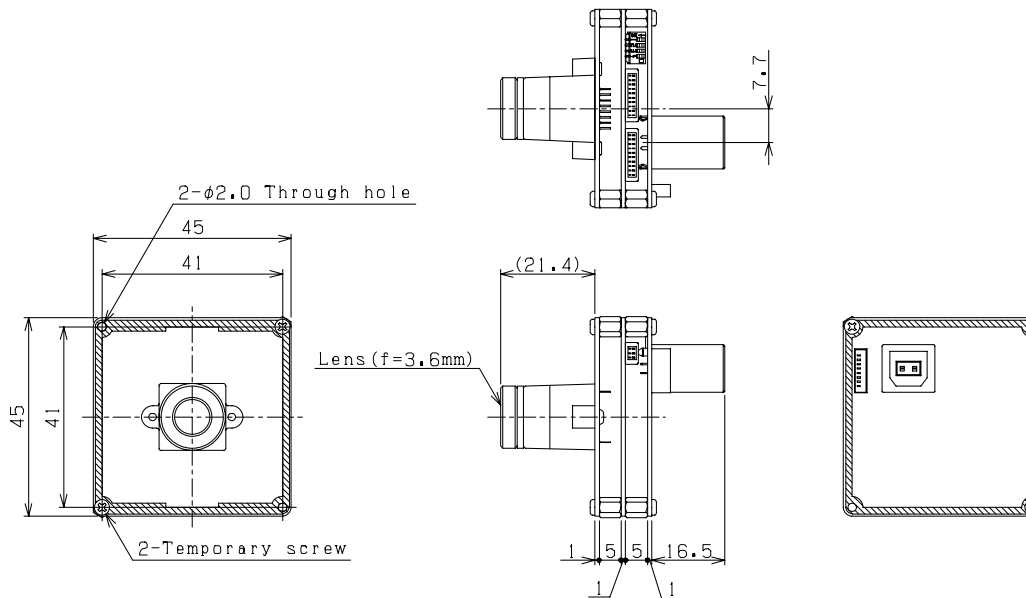


Dimensions (STC-TB33USB-BTL: Monochrome / Right-Angle / Fixed Lens / Board Type)



Unit: mm

Dimensions (STC-TB33USB-BSL: Monochrome / Straight / Fixed Lens / Board Type)



Unit: mm

Revisions

Revision	Date (D/M/Y)	Changes	Name	Changes
1.0	24/01/2008	New Document	Sam Aimono	
1.1	26/03/2008	Specifications update (Scanning methods) Add Binning and binning partial (1/1, 1/2, 1/4, variable) for the monochrome type	Sam Aimono	
1.2	14/05/2008	Edited English	Michelle Campbell	

Sensor Technologies America, Inc.

1345 Valwood Pkwy, Suite 320
Carrollton, Texas 75006-6891
TEL (972) 481-9223 FAX (972) 481-9209
URL <http://www.sentechamerica.com/>

Sensor Technology Co., Ltd.

7F, Harada Center Building
9-17, Naka cho 4chrome
Atsugi-city, Kanagawa
243-0018 Japan
TEL +81-46-295-7061 FAX +81-46-295-7066
URL <http://www.sentech.co.jp/>

Taiwan Sensor Technology, Inc.

3F-6, No. 9, Aiguo W, Rd., Jhong Jheng District
Taipei City 100, Taiwan, R.O.C.
TEL 886-2-2383-2331 FAX 886-2-2370-8775
EMAIL: sentech0501@yahoo.com.tw