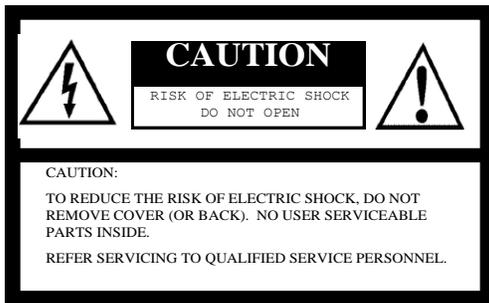


The logo for SENTTECH, featuring the word "SENTTECH" in a bold, blue, sans-serif font. The letters "S", "E", "N", and "T" are larger and more prominent than the others. The word is set against a white rectangular background with a thin blue border. The background of the entire page is a light blue gradient with abstract, curved white lines.

STC-N63S / STC-P63S
Product Specification

**NTSC / PAL Color Analog CCD
Camera**

Safety Precautions



For U.S.A.

Warning:

This equipment generates and uses radio frequency energy and if not installed and used properly, I.e., in strict accordance with the instruction manual, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

For Canada

Warning:

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

Product Precautions

- Handle the camera with care. Do not abuse the camera. Avoid striking or shaking it. Improper handling or storage could damage the camera.
- Do not pull or damage the camera cable.
- During camera use, do not wrap the unit in any material. This will cause the internal temperature of the unit to increase.
- Do not expose the camera to moisture, or do not try to operate it in wet areas.
- Do not operate the camera beyond its temperature, humidity and power source ratings.
- While the camera is not being used, keep the lens or lens cap on the camera to prevent dust or contamination from getting in the CCD or filter area and scratching or damaging this area.
- Do not keep the camera under the following conditions:
 - In wet, moist, and high humidity areas
 - Under hot direct sunlight
 - In high temperature areas
 - Near an object that releases a strong magnetic or electric field
 - Areas with strong vibrations
- Use a soft cloth to clean the camera. Use pressured air spray to clean the surface of the glass. DO not scratch the surface of the glass.

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I. Features

Compact high performance color analog camera.

Simple one board configuration is for the base module.

Two board configuration models for additional robust functions.

Board Size: 32 x 32 mm

Case Size: 36 x 36 mm

Push to Set white balance function and auto white balance.

Mirror image is selectable.

User programmable DSP software available.

Both board and case models are available.

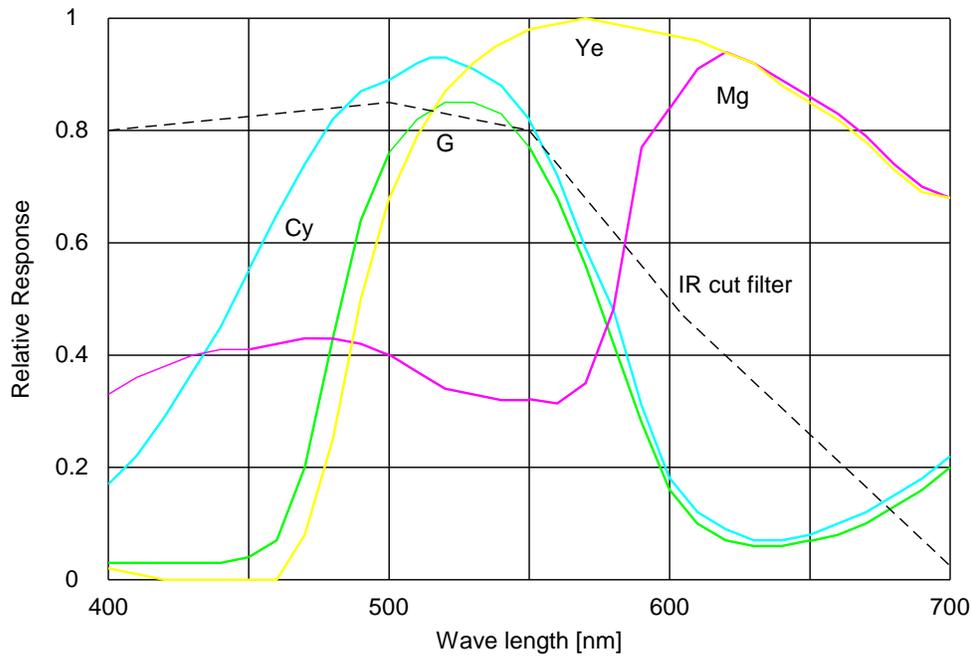
II. Specifications

B. General Specifications

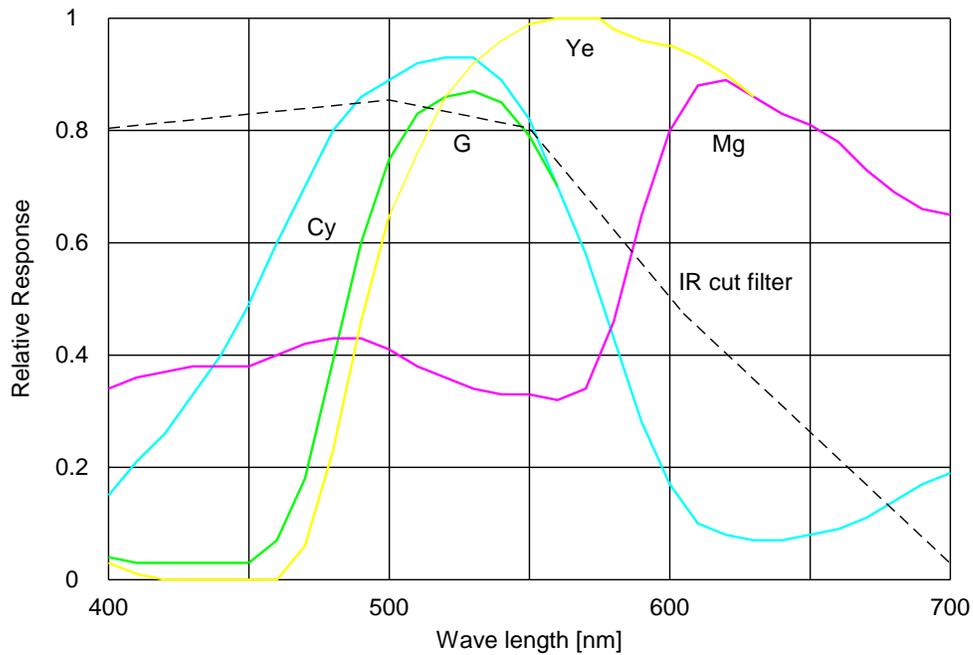
Product		STC-N63S series	STC-P63S series	
Electronic specifications	Imager	1/3" NTSC interline CCD (Sony: ICX638BKA)	1/3" PAL interline CCD (Sony: ICX639BKA)	
	Active picture elements	768 (H) x 494 (V)	752 (H) x 582 (V)	
	Cell size	6.35 (H) x 7.4 (V) μm	6.35 (H) x 7.4 (V) μm	
	Scanning system	2:1 interlace		
	Horizontal frequency	15.734 kHz	15.625 kHz	
	Vertical frequency	59.94 Hz	50.00 MHz	
	Sync. System	Internal		
	Horizontal resolution	480 TV Lines		
	Video out	VBS 1.0Vp-p 75ohm Y/C output (available for certain models)		
	Minimum scene illumination	0.30 Lux at F1.2	0.27 Lux at F1.2	
	S/N ratio	More than 48 dB		
	Electronic shutter	1/60 to 1/100,000 seconds, Fixed 1/60 seconds selectable by DIP switch	1/50 to 1/100,000 seconds, Fixed 1/50 seconds selectable by DIP switch	
	Flicker compensation	ON / OFF (selectable by DIP switch)		
	Gain	AGC ON		
	Gamma	0.45		
	White balance	ATW (Auto white balance) (White balance lock and push to set white balance are available for certain models)		
	Mirror image	Normal / mirror image (selectable by DIP switch)		
	Back light compensation	ON / OFF (selectable by DIP switch)		
	Power	Voltage	+ 8 to + 13 Vdc	
		Consumption	Less than 1.0 W	
Mechanical specifications	Demensions	Cased models	36 (W) x 42.5 (H) x 36.5 (D) mm *including the tripod, excluding the connectors	
		Board models	32 (W) x 32 (H) x ** (D) mm *excluding the connectors	
	Optical filter	IR cut filter on it		
	Lens mount	CS mount / Fixed lens mount		
Weight	Cased models	Approximately 70 g		
	Board models	Approximately 10 to 20 g		
Environmental specifications	Operational temperature	Environmental temperature: -5 to +45 deg. C		
	Storage temperature	Environmental temperature: -30 to +65 deg. C		
	RoHS	RoHS compliant		

B. Spectral Sensitivity Characteristics

1. STC-N63S (including the IR cut filter)



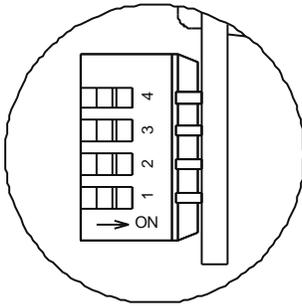
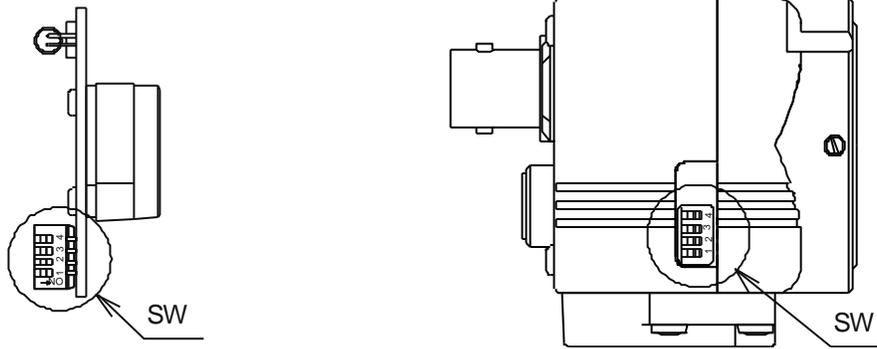
2. STC-P63S (including the IR cut filter)



III. Product Variations

			Number of boards	Lens mount	Iris lens driver	Output format	White balance	Power connection
Board models	N63S	P63S	1	-	-	VBS	Auto, WB-Lock	-
	N63SL	P63SL		Fixed lens				
	N63SCS	P63SCS		CS mount				
	N63SBCS	P63SBCS	2	CS mount	DC iris lens	VBS & Y/C	Auto, WB-Lock, PWB	
	N63SCL	P63SCL		Fixed lens				
	N63SCCS	P63SCCS		CS mount				
Cased models	N63SBJ	P63SBJ	2	CS mount	DC iris lens	VBS	Auto, WB-Lock	Jack
	N63SBT	P63SBT						Terminal
	N63SCJ	P63SCJ	3		-	VBS & Y/C	Auto, WB-Lock, PWB	Jack
	N63SCT	P63SCT						Terminal
	N63SCC	P63SCC						12Pin

IV. DIP Switch Operations



STC-N63S (NTSC)

SW No.	OFF	ON
4	Back light compensation: OFF	Back light compensation: ON
3	Flicker compensation: OFF	Flicker compensation: ON
2	Electronic iris (1/60 to 1/100,000 seconds)	Fixed shutter (1/60 seconds)
1	Normal image	Mirror image

STC-P63S (PAL)

SW No.	OFF	ON
4	Back light compensation: OFF	Back light compensation: ON
3	Flicker compensation: OFF	Flicker compensation: ON
2	Electronic iris (1/50 to 1/100,000 seconds)	Fixed shutter (1/50 seconds)
1	Normal image	Mirror image

V. White Balance Lock & Push to Set White Balance

A. White Balance Lock

1. Board Models

As long as “WB-Lock” and GND wires are opened, the camera operates in auto white balance mode continuously. Then the white balance will be locked when these wires are shorted together. After this, as long as the wires are continuously shorted, the white balance is continuously locked until power is turned off.

2. Cased Models

As long as select “AUTO” for “White balance auto / lock select switch”, the camera operates in auto white balance mode continuously. Then the white balance will be locked when select “LOCK” (Push switch side). After this, as long as select “LOCK”, the white balance is continuously locked until power is turned off.

B. Push to Set White Balance

1. Board Models

While “WB-Lock” and GND wires are shorted together (this means the camera is in white balance lock mode), if “P.W.B” and GND wires shorted, the camera goes back to auto white balance while “P.W.B” and GND wires shorted together. Then the white balance will be locked again when “P.W.B” wire is opened from GND.

2. Cased Models

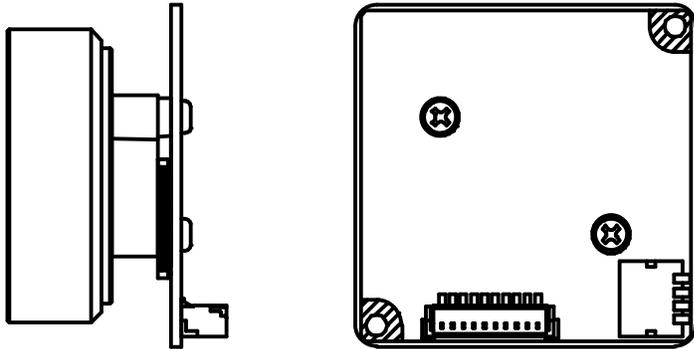
While “LOCK” for “White balance auto / lock select switch” (this means the camera is in white balance lock mode), if PUSH “Push switch of push to set white balance”, the camera goes back to auto white balance while PUSH this push switch. Then the white balance will be locked again when RELEASE this push switch.

Notes:

- 1) If the camera power is turned off while the white balance is locked, the camera does not retain the white balance value.
- 2) If the camera is white balance locked and the camera power is turned on, the camera will operate in auto white balance for a few seconds and then will fix and retain the white balance value.

VI. Connector Pin Assignment

A. Main Board

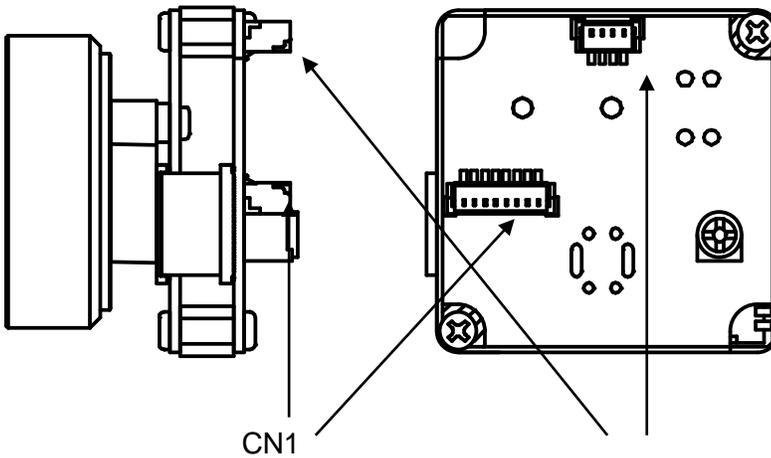


CN1

No.	Signal type
1	GND
2	+12V
3	GND
4	VIDEO
5	EXSI
6	EXSO
7	WB-LOCK
8	GND
9	NC
10	NC

B. DC Iris Models

1. Board Model

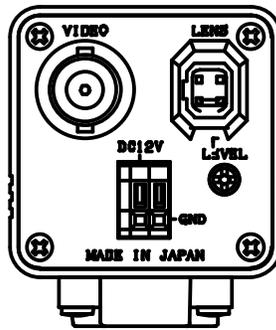
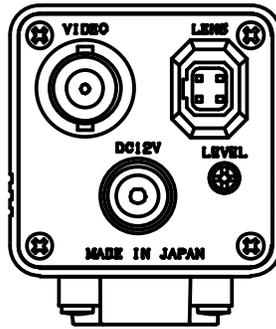
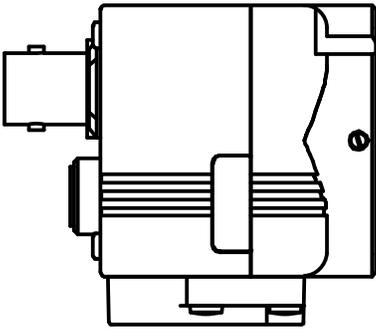


CN1

No.	Signal type
1	GND
2	+12V
3	GND
4	VIDEO
5	EXSI
6	EXSO
7	WB-LOCK
8	GND

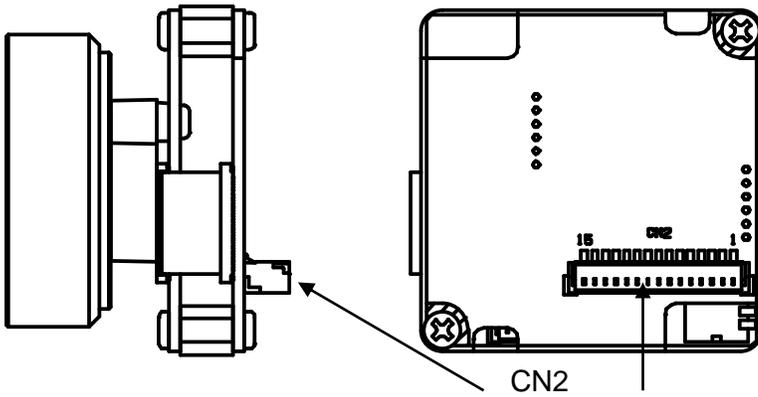
No.	Signal type
1	DAMP -
2	DAMP +
3	DRIVE +
4	DRIVE -

2. Cased Model



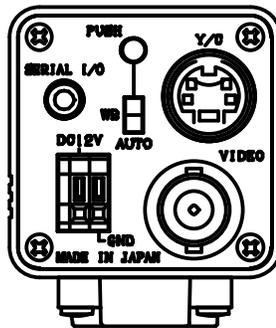
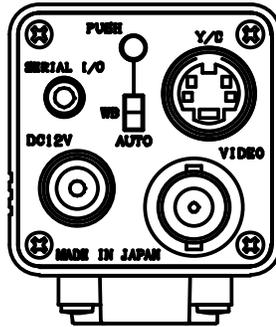
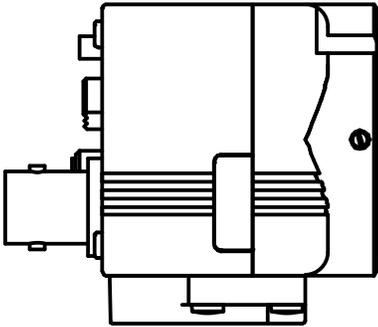
- 1) Video Output
- 2) Connector of DC Iris Lens
- 3) +12Vdc input
- 4) Volume of the iris adjustment for DC Iris Lens
- 5) DIP Switch Cover

C. CL / CCS Models



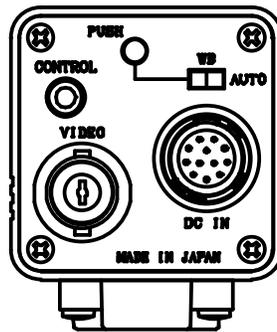
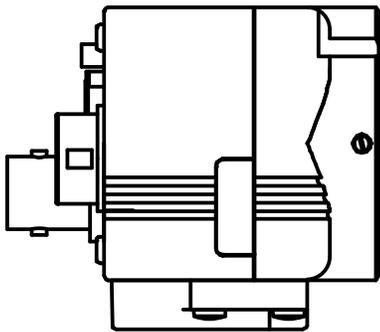
No.	Signal type
1	GND
2	+12V
3	GND
4	VIDEO
5	EXSI
6	EXSO
7	WB-LOCK
8	GND
9	Y
10	GND
11	C
12	PWB
13	GND
14	NC
15	NC

D. CJ / CT Models

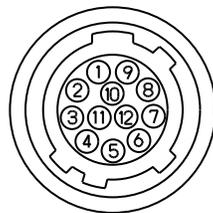


- (1) VIDEO output
- (2) Y/C output
- (3) White balance auto / lock select switch
- (4) Push switch for push to set white balance
- (5) PC communications terminal (3.3V UART)
- (6) +12Vdc input
- (7) DIP switch cover

E. CC Model



(1) 12pin connector (+12Vdc input, VIDEO output, Y/C output)

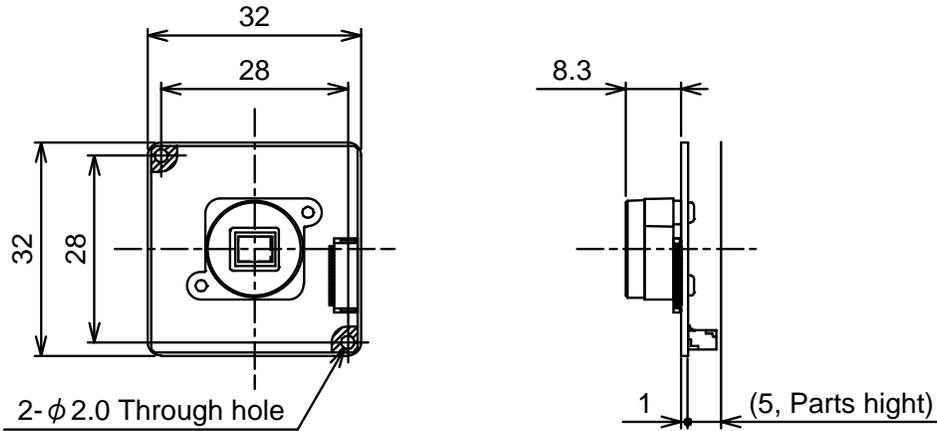


PIN No.	Function
1	GND
2	+12V
3	GND
4	VIDEO
5	GND
6	NC
7	NC
8	GND
9	C
10	GND
11	Y
12	GND

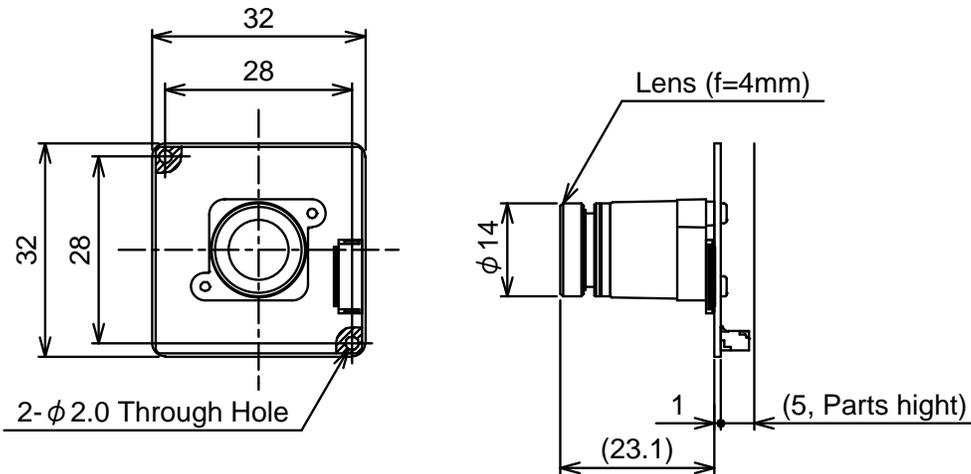
- (2) White balance auto / lock select switch
- (3) Push switch for push to set white balance
- (4) PC communications terminal (3.3V UART)
- (5) VIDEO output
- (7) DIP switch cover

VII. Dimensions

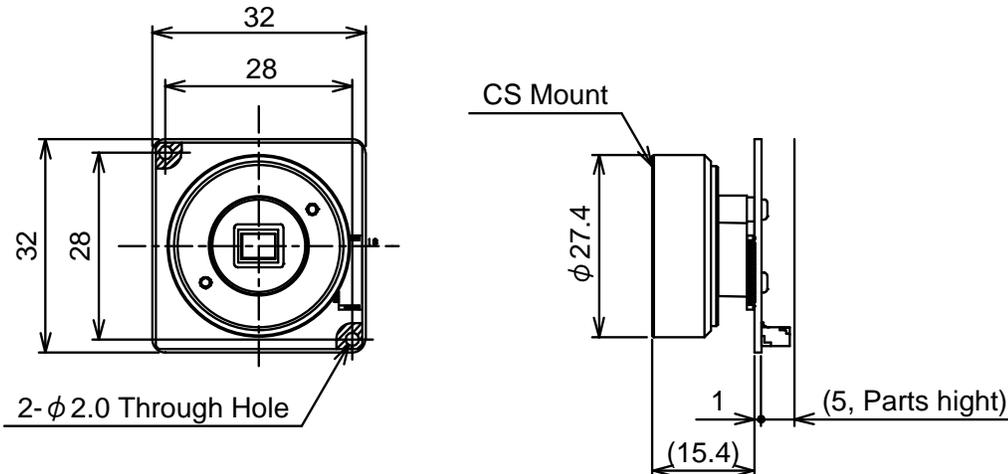
A. STC-N63S / P63S



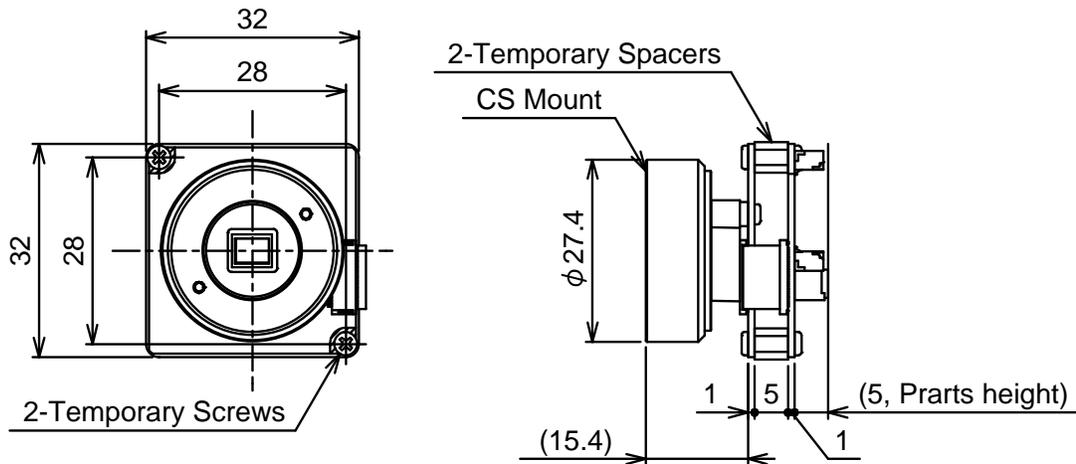
B. STC-N63SL / P63SL



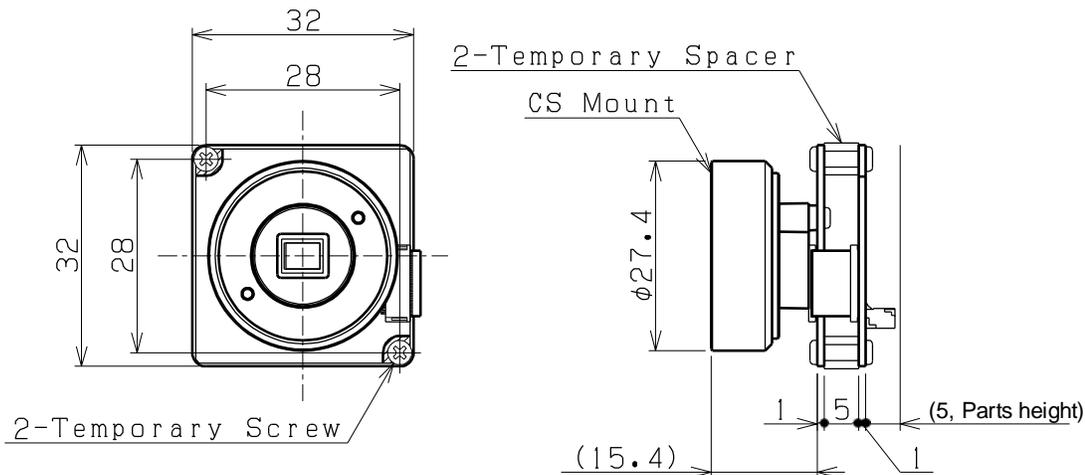
C. STC-N63SCS / P63SCS



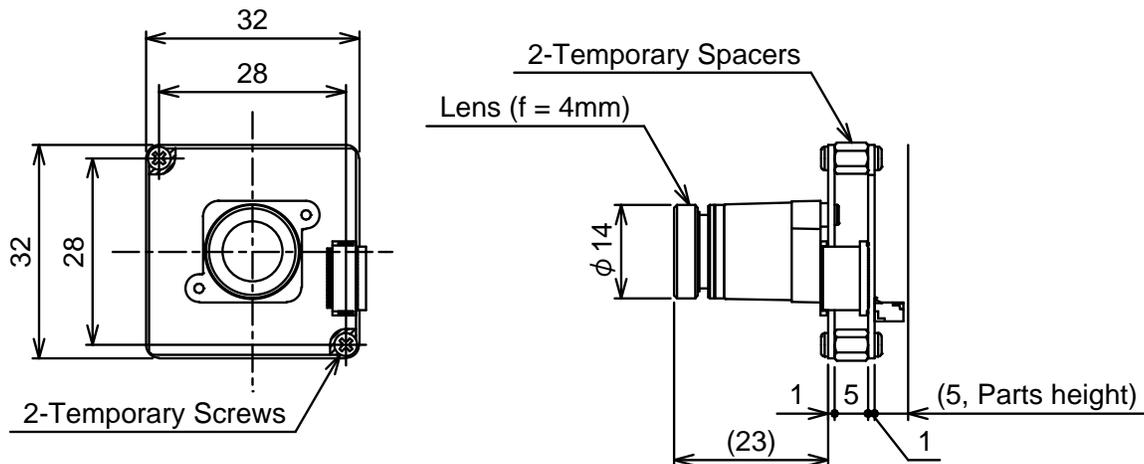
D. STC-N63SBCS / P63SBCS



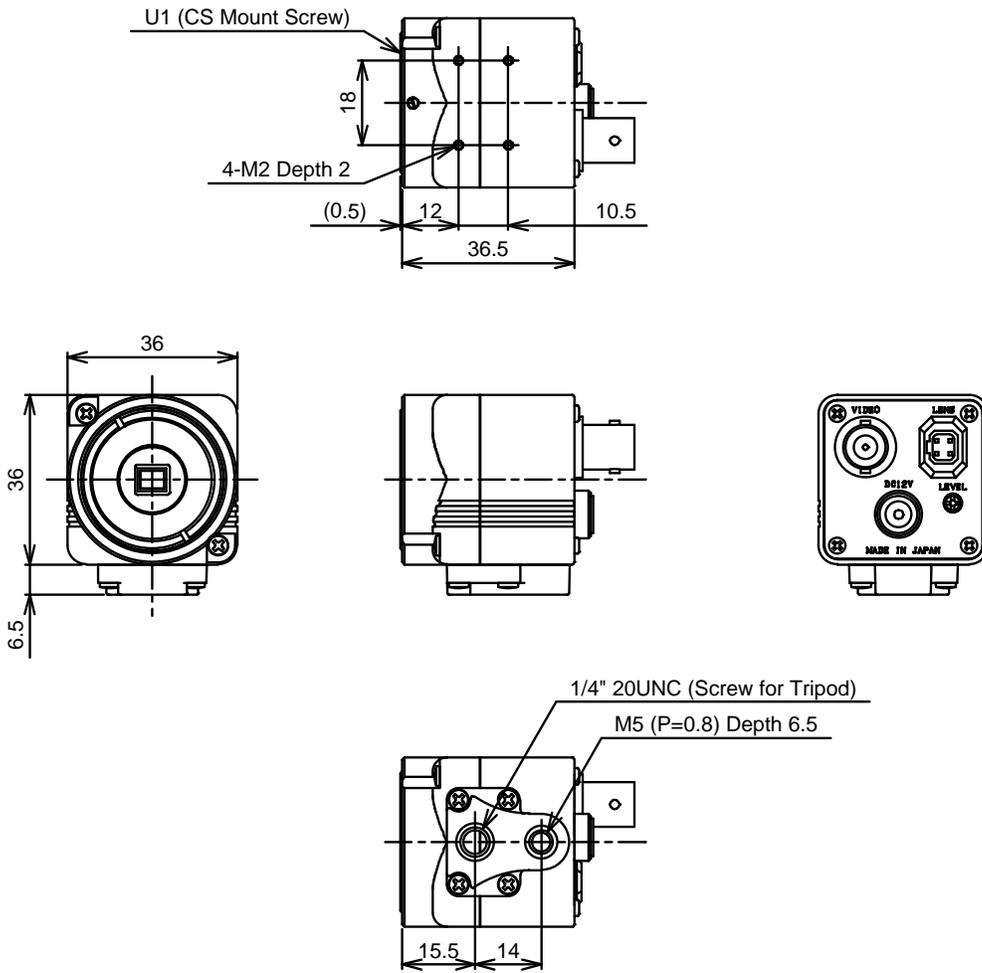
E. STC-N63SCCS / P63SCCS



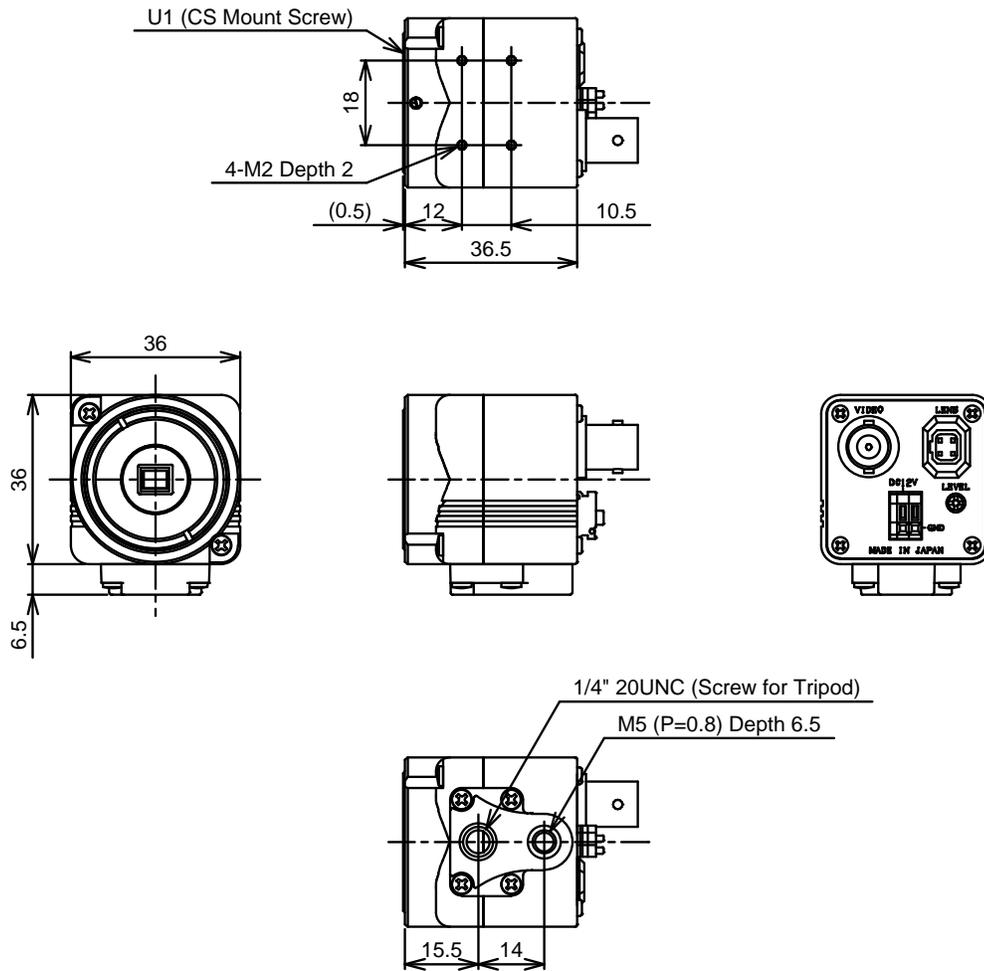
F. STC-N63SCL / P63SCL



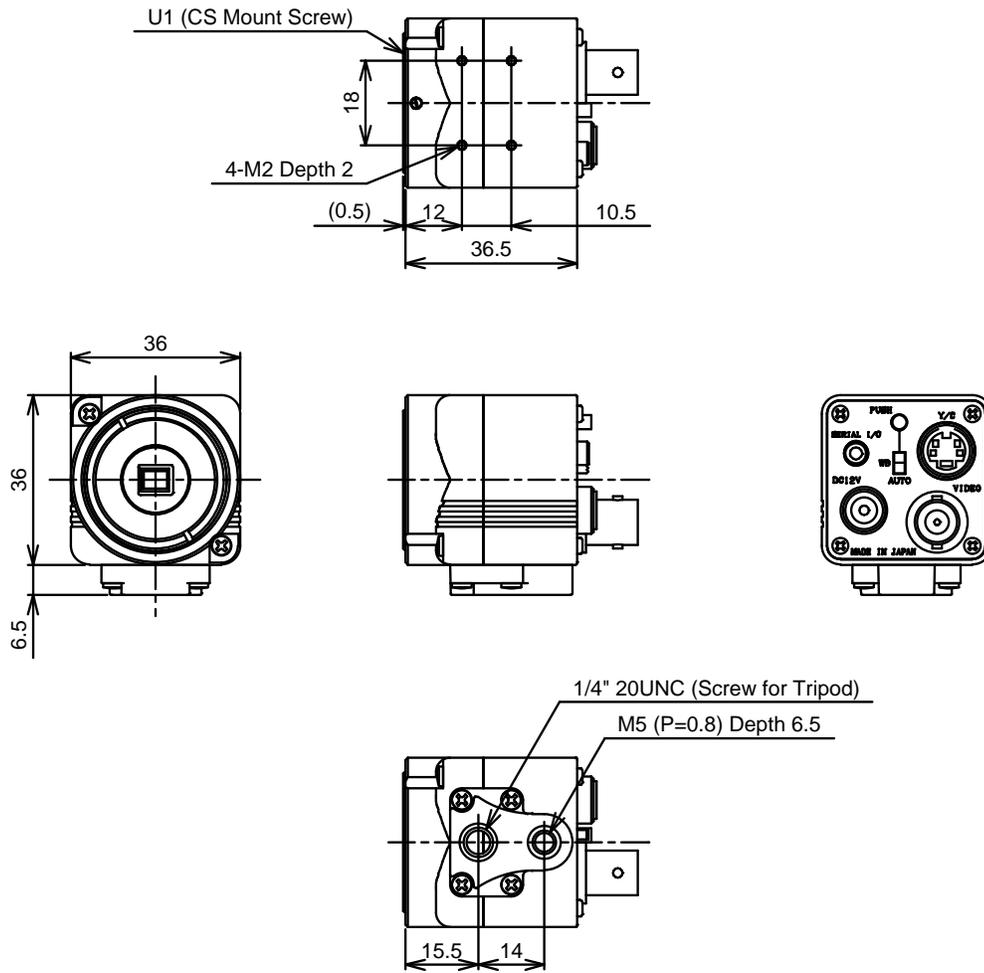
G. STC-N63SBJ / P63SBJ



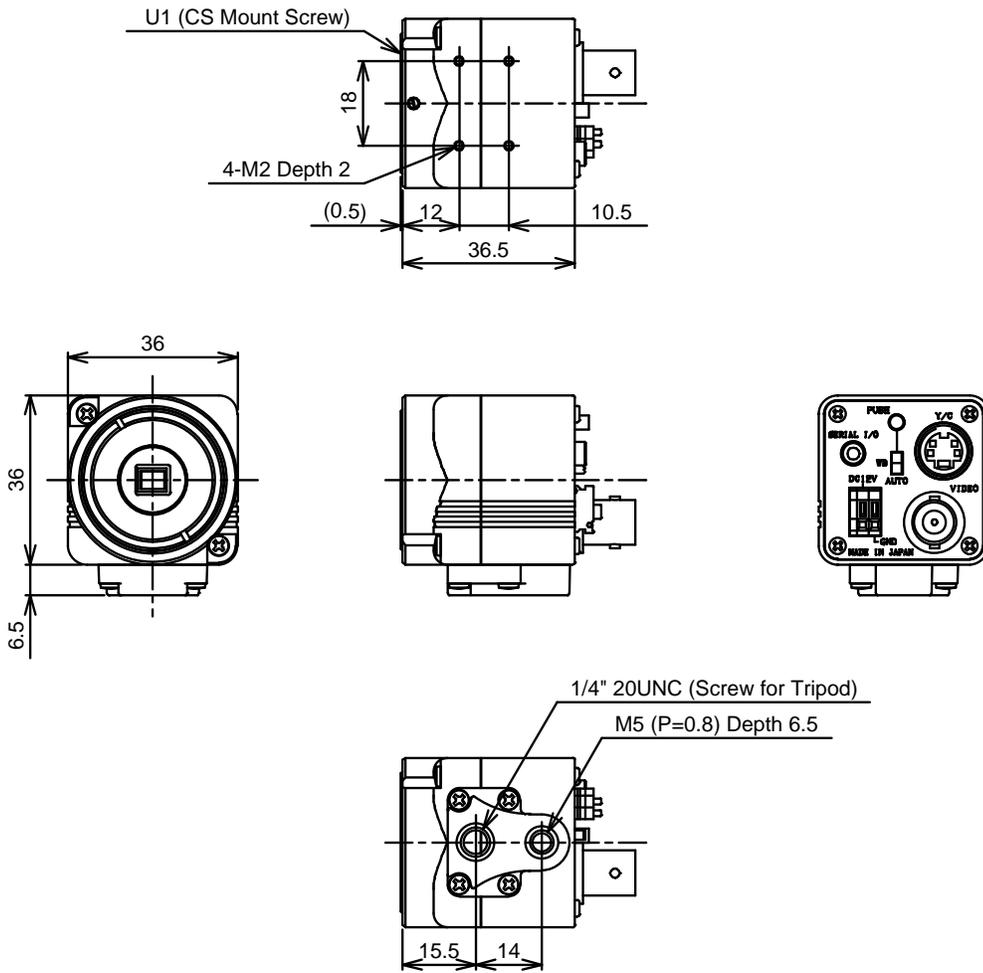
H. STC-N63SBT / P63SBT



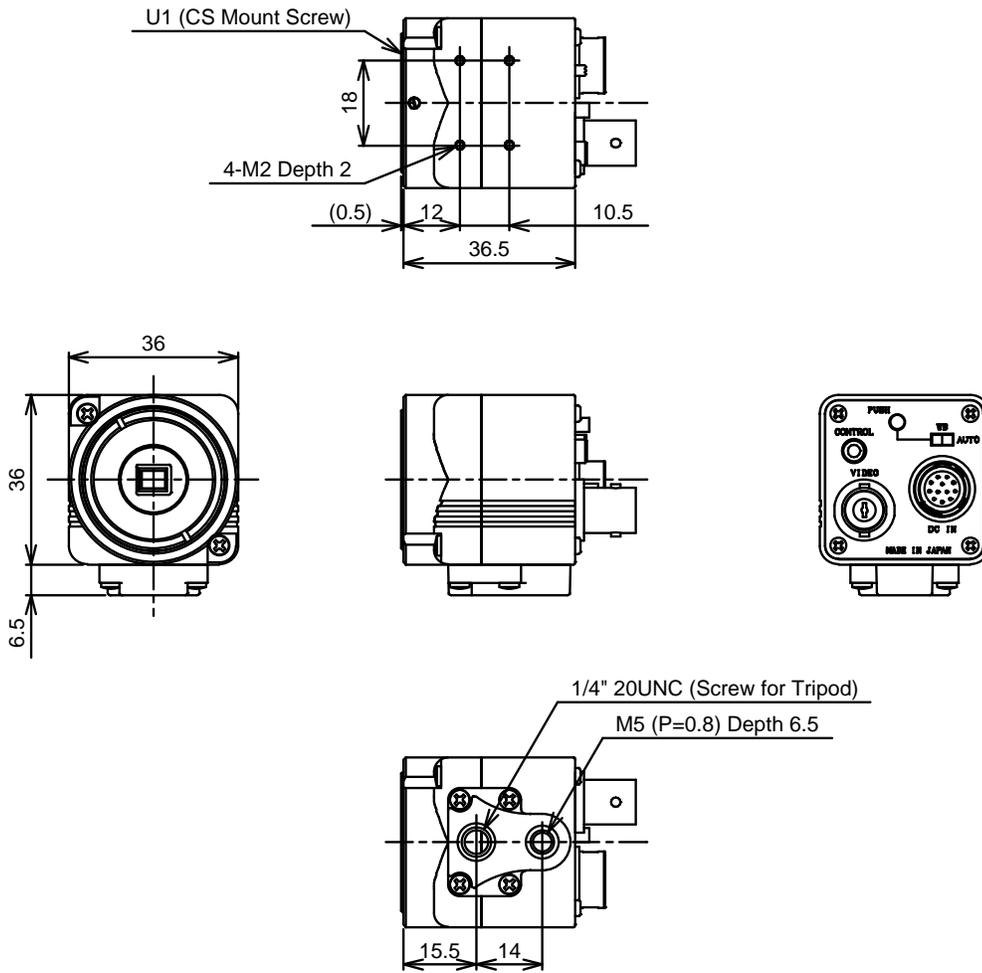
I. STC-N63SCJ / P63SCJ



J. STC-N63SCT / P63SCT



K. STC-N63SCC / P63SCC



Revisions

Rev	Date	Changes	Note
1.0	December, 9 th 2013	New document	
1.01	January 28, 2013	Updated Dimensions	
1.03	January 20, 2015	Updated Document to Version 1.03 - Added Pin out for CC Model	RM

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