STC-N63S / STC-P63S
Product Specification

NTSC / PAL Color Analog CCD Camera

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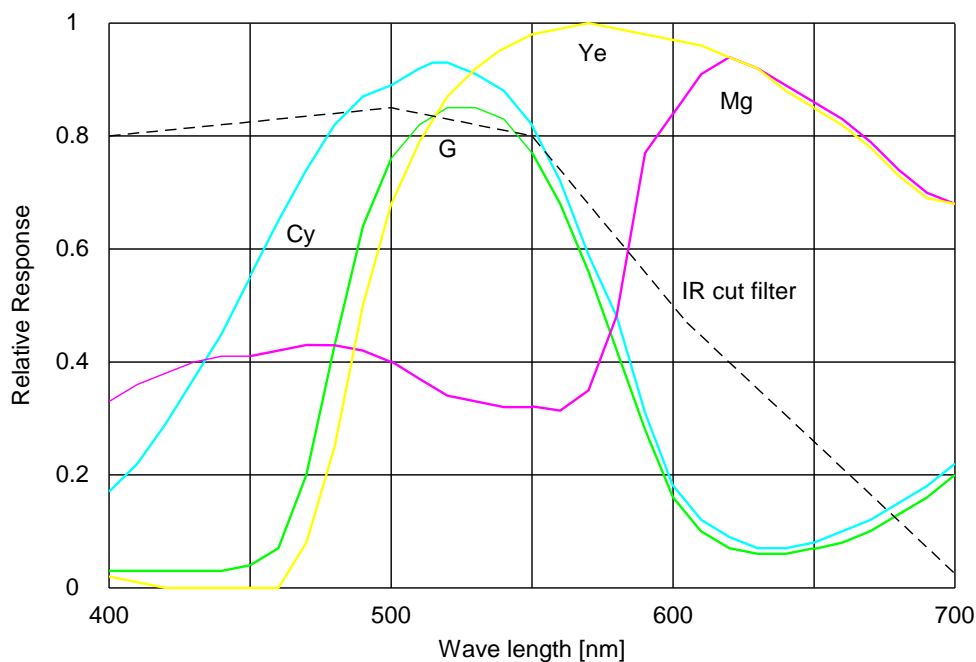
2. STC-P63S (including the IR cut filter)
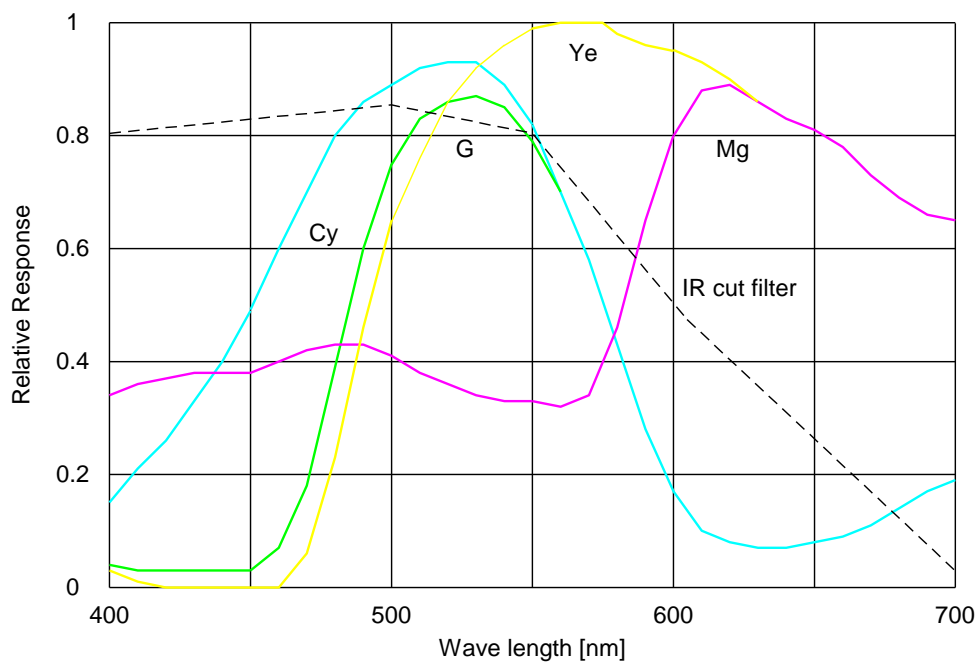
III. Product Variations

			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			
	N63SCL	P63SCL		Fixed lens	-	VBS & Y/C	Auto, WB-Lock, PWB	
	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

SW

SW
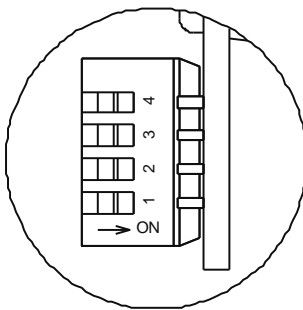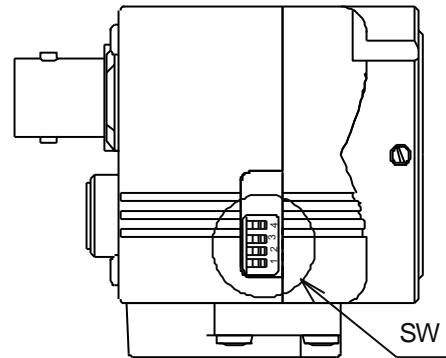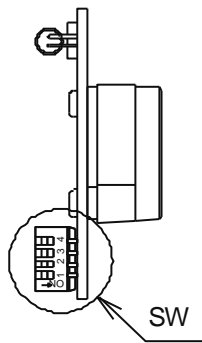
STC-N63S (NTSC)

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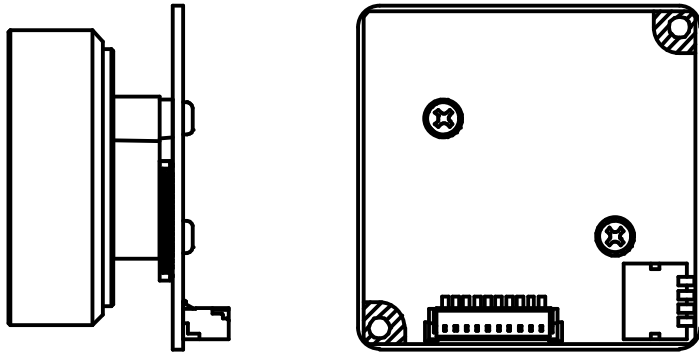
2. Cased Models
While "LOCK" for "White balance auto / lock select switch" (this means the camera is in white balance lock mode), if PUSH "Push switch of push to set white balance", the camera goes back to auto white balance while PUSH this push switch. Then the white balance will be locked again when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

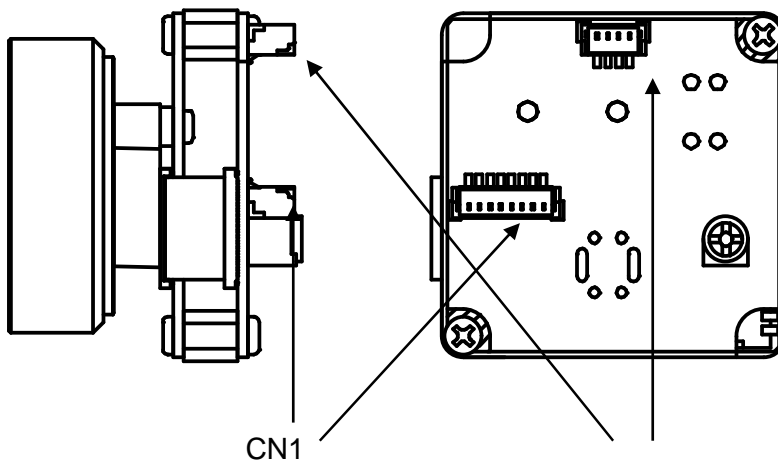## VI. Connector Pin Assignment

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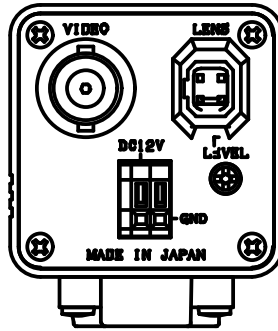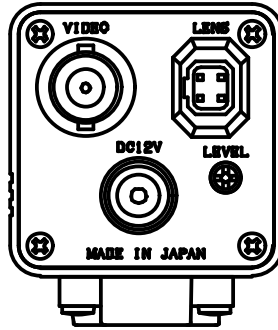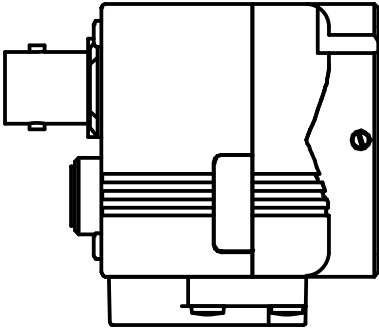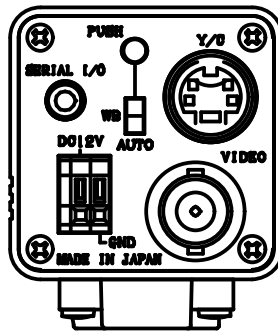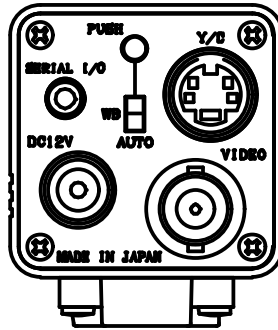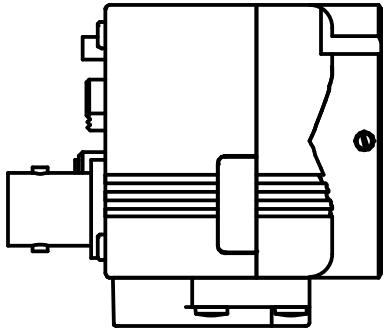
1) Video Output
2) Connector of DC Iris Lens
3) +12Vdc input
4) Volume of the iris adjustment for DC Iris Lens
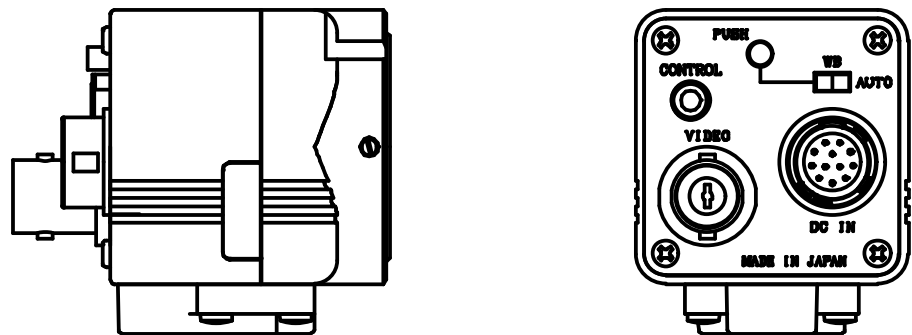5) DIP Switch Cover

C. CL / CCS Models

CN2
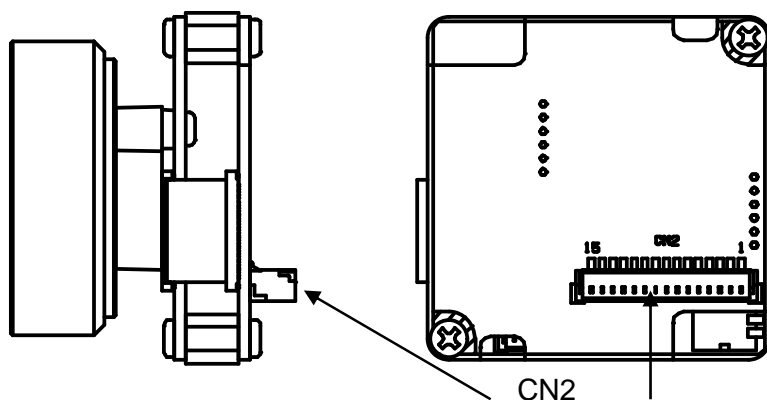
No.	Signal type
1	GND
2	+12V
3	GND
4	VIDEO
5	EXSI
6	EXSO
7	WB-LOCK
8	GND
9	Y
10	GND
11	C
12	PWB
13	GND
14	NC
15	NC

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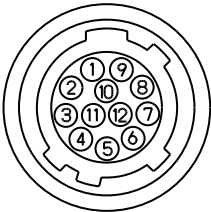
(1) VIDEO output
(2) Y/C output
(3) White balance auto / lock select switch
(4) Push switch for push to set white balance
(5) PC communications terminal (3.3V UART)
(6) +12Vdc input
(7) DIP switch cover

E. CC Model

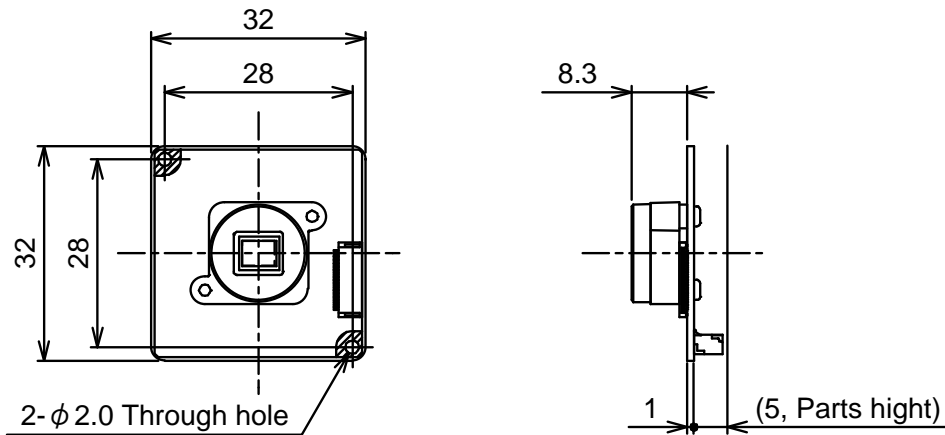(1) 12pin connector (+12Vdc input, VIDEO output, Y/C output)

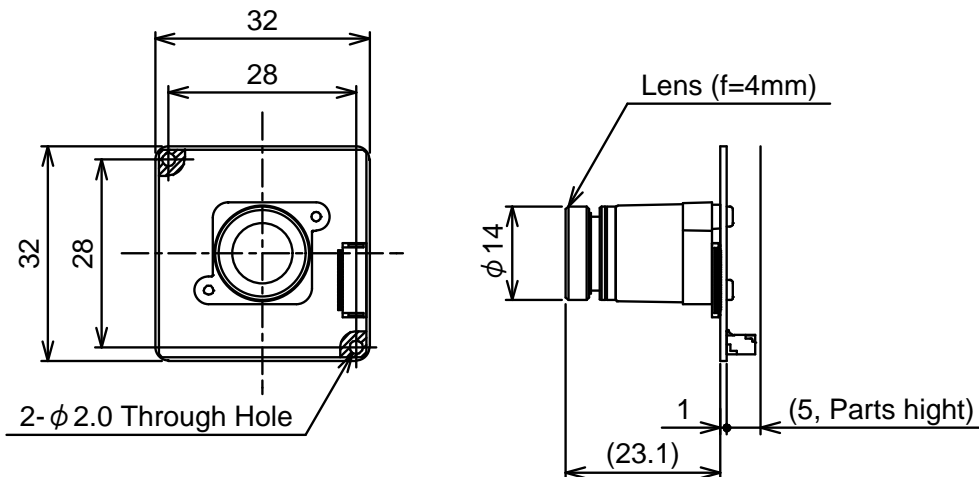| PIN No.	Function
1	GND
2	+12V
3	GND
4	VIDEO
5	GND
6	NC
7	NC
8	GND
9	C
10	GND
11	Y
12	GND

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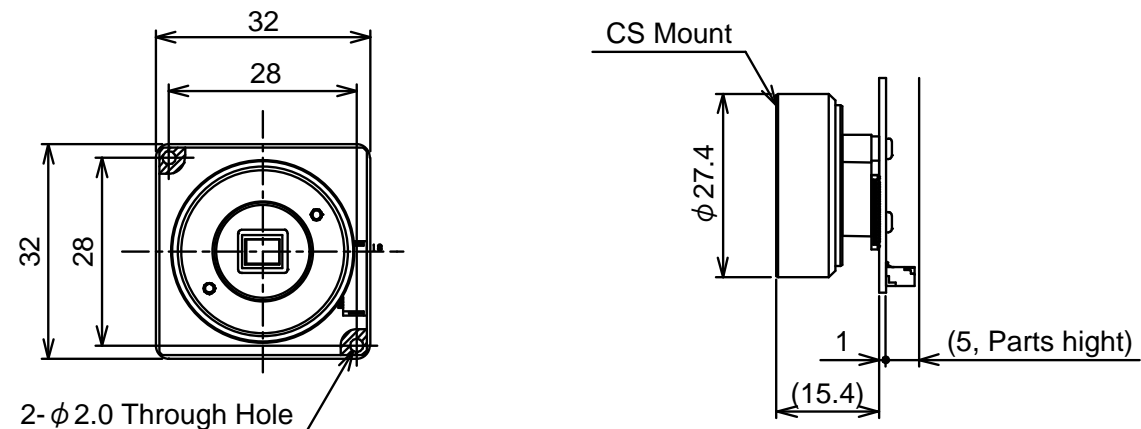(5) VIDEO output
(7) DIP switch cover

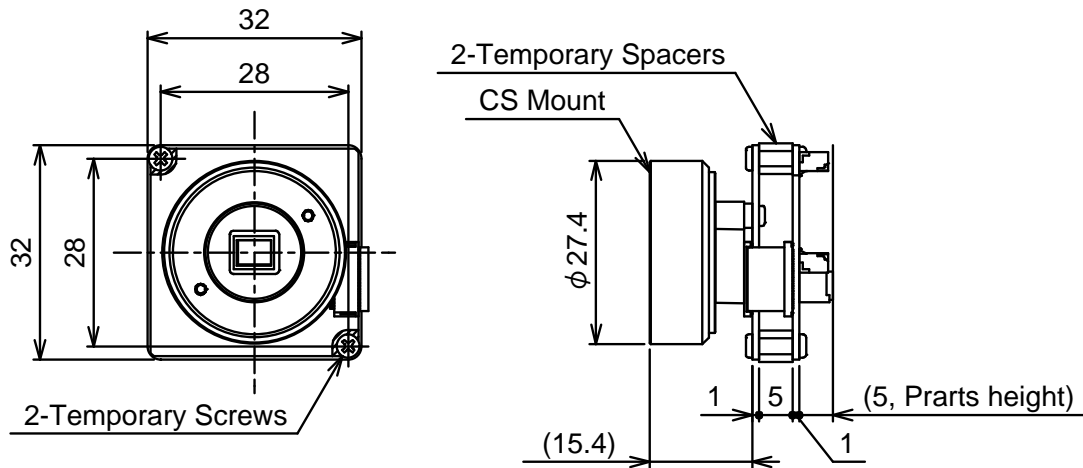## VII. Dimensions

A. STC-N63S / P63S

2-φ2.0 Through hole

B. STC-N63SL / P63SL

2-φ2.0 Through Hole

Lens (f=4mm)

C. STC-N63SCS / P63SCS

2-φ2.0 Through Hole

CS Mount

D. STC-N63SBCS / P63SBCS

32
28
32
28
2-Temporary Screws
2-Temporary Spacers
CS Mount
$\phi 27.4$
1 | 5
(5, Prarts height)
1
(15.4)

E. STC-N63SCCS / P63SCCS

32
28
32
28
2-Temporary Screw
2-Temporary Spacer
CS Mount
$\phi 27.4$
1 | 5
(5, Parts height)
1
(15.4)

F. STC-N63SCL / P63SCL

32
28
32
28
2-Temporary Screws
2-Temporary Spacers
Lens (f = 4mm)
$\phi 14$
1 | 5
(5, Parts height)
1
(23)

G. STC-N63SBJ / P63SBJ

U1 (CS Mount Screw)

18

4-M2 Depth 2

(0.5) 12 10.5

36.5

36

36

6.5

VIDEO LENS

DC12V LEVEL

MADE IN JAPAN

1/4" 20UNC (Screw for Tripod)

M5 (P=0.8) Depth 6.5

15.5 14

H. STC-N63SBT / P63SBT

U1 (CS Mount Screw)

18

4-M2 Depth 2

(0.5)   12   10.5

36.5

36

36

6.5

VIDEO   LENS

DC12V   LEVEL

GND

MADE IN JAPAN

1/4" 20UNC (Screw for Tripod)

M5 (P=0.8) Depth 6.5

15.5   14

![SENTECH]

I. STC-N63SCJ / P63SCJ

U1 (CS Mount Screw)

18

4-M2 Depth 2

(0.5) 12 10.5

36.5

36

36

6.5

1/4" 20UNC (Screw for Tripod)

M5 (P=0.8) Depth 6.5

15.5 14

J. STC-N63SCT / P63SCT

U1 (CS Mount Screw)

18

4-M2 Depth 2

(0.5) 12 10.5

36.5

36

36

6.5

FUSE
SERIAL I/O   Y/C
VD
DC|EV AUTO   VIDEO
GND
MADE IN JAPAN

1/4" 20UNC (Screw for Tripod)

M5 (P=0.8) Depth 6.5

15.5 14

K. STC-N63SCC / P63SCC

U1 (CS Mount Screw)

18

4-M2 Depth 2

(0.5)   12   10.5

36.5

36

36

6.5

PUSH
CONTROL
VIDEO
DC IN
MADE IN JAPAN

1/4" 20UNC (Screw for Tripod)

M5 (P=0.8) Depth 6.5

15.5   14