



High Speed VGA Format All-Pixel Read Out
Remote Head Camera For Machine Vision

CS8541DY-01



Key Features

DOUBLE SPEED SCAN enables this cameras to read out image data at 60FPS (120 FPS 2:1 interlace) or twice as fast as conventional EIA cameras

ALL PIXEL READOUT enables the camera to read out all image data in 1/60 sec, even under RTS

ULTRA SMALL CAMERA HEAD measures only 20 x 20 x 25mm

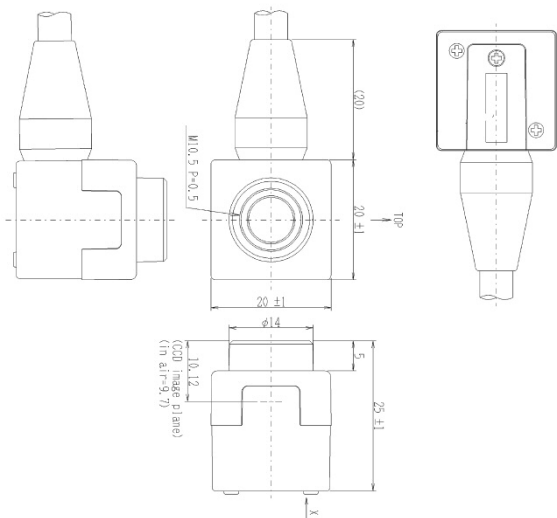
SQUARE PIXEL PATTERN CCD makes it easier and faster to perform computation correctly for image processing use

RESTART/RESET function, when set on, allows the camera to capture images at any timing given by R.R. pulse input (VD input)

External Sync, Partial Scan and Random Trigger Shutter

SPECIFICATIONS

Image Sensor	All pixel readout CCD
Total Pixels	692 (H) x 504 (V)
Active Pixels	659 (H) x 494 (V)
Video Output Pixels	Non-Interlace: 648 (H) x 494 (V) Interlace: 648 (H) x 485 (V)
Scanning Area	4.88mm (H) x 3.66mm (V) (same as 1/3 Type CCD)
Unit Cell Size	7.4 μm x 7.4 μm
Scanning Lines	525 Lines
Scanning System	Special Format (non-conforming to EIA)
Scanning Frequency	Horizontal: 31.468kHz Vertical: 59.94Hz (119.88Hz under 2:1 interlace)
Interlace	1/60s non-interlace 1/120s 2:1 interlace
Sync System	Internal/External Auto Switch Over
Aspect Ratio	4:3
Video Output	VS 1.0V(p-p)/75 Ohm, DC Coupled, 1 Line DC/AC coupled (switching via internal SW)
Resolution	485 TV Lines (H), 485 lines (350 TV Lines) (V)
S/N Ratio	Standard: 52dB
Illumination	Standard 400 lx (F5.6), Minimum: 4 lx (F1.4)
Gain	FIX, MANU
Gamma Correction	Gamma=1 (Fixed)
White-clip Level	Approx. 857mV(p-p) (Excluding SYNC)
Power Source	DC12V ± 10%
Power Consumption	3.0W
Sensitivity Setting	FIX, AGC, MGC
AGC	Stabilized by AGC within 2 dB for +6 dB or -12 dB of the output signal variation
MGC	Sensitivity can be set manually
Gamma Correction	0.45/1.0 selectable
White Chip	Clip level should be set for 1.0V at factory
Electronic Shutter	ON/OFF Selectable, 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec and flickerless (1/100 or 1/120)
Partial Shutter	Read out of 1/2 or 1/4 center of screen
Restart	Provides ON/OFF switch inside of the camera
Power Source	DC12V±10%
Power Consumption	220mA
Electronic Shutter	8 Step (OFF, 1/200, 1/500, 1/1000, 1/2000, 1/4000 1/8000, 1/20000 sec
Ambient Condition	0° to +40° C, Humidity less than 90%
Lens Mount	Special Mount (M10.5 P0.5 Female)
Dimensions	Camera Head: 20(W) x 20(H) x 25(D) CCU: 110(W) x 28(H) x 80(D) mm
Camera Cable	1m
Weight	Camera Head: 19g, CCU: 190g

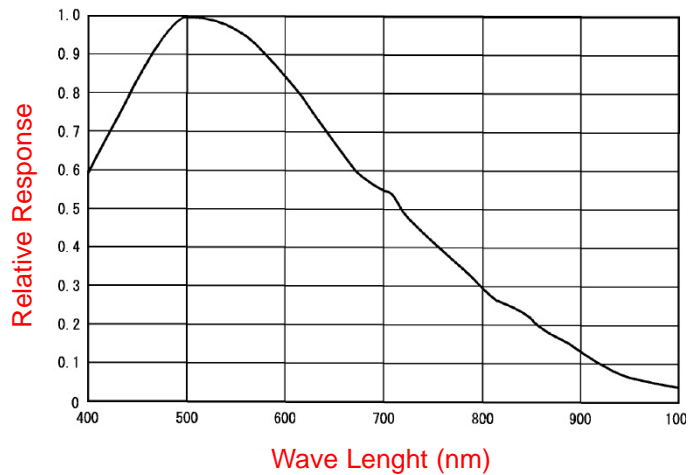


Typical Applications

Video image capture applications for the CS8541DY-01 include high speed machine vision, factory automation, inspection, quality control, positioning and many others.

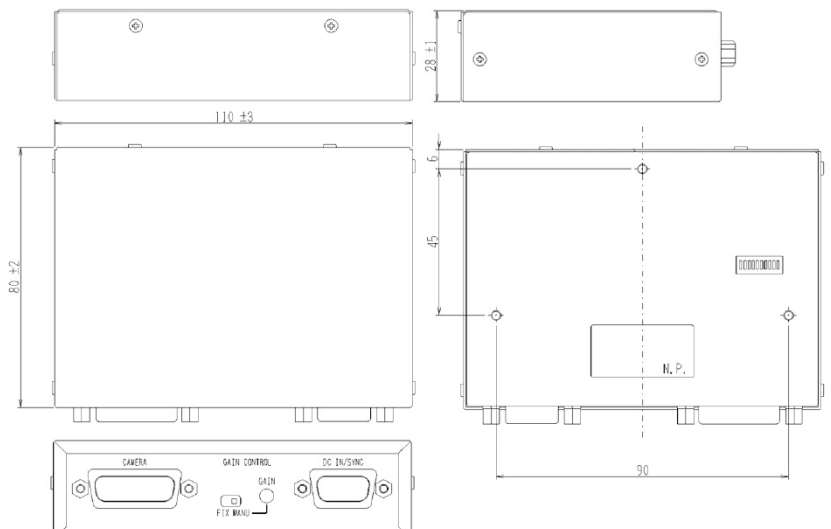
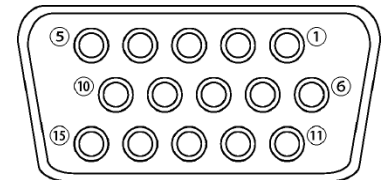
Typical Spectral Response

(lens characteristics and light source is not reflected in table)



DC IN/SYNC D02-M15PG-N-F0 (Japan Aviation Elec.)

Pin Number	Signal Name
1	DC12V GND
2	DC12V
3	VIDEO GND
4	VIDEO OUT
5	GND
6	HD GND
7	HD IN
8	VD IN
9	VD GND
10	GND
11	N.C.
12	TRIG IN
13	TRIG GND
14	WEN OUT
15	GND



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