



■ CMOS Image Sensors for Digital Cameras/Digital Camcorders

Optical format	Number of record pixels	Color filter	Model No.	Shutter system	Video performance	Resolution	Pixel size H × V (μm)	Sensitivity (mV/Lux-sec) TYP.	Package	
						Image pixels (H × V)				
1 type	12 820 k	R, G, B primary color mosaic filters	RJ5DY1BA0LT	Rolling	10bit 4K2K 60 fps 12bit 4K2K 36 fps	4 144 × 3 096	3.10 × 3.10	1 420	N-LCC120	
		B/W	RJ5DY2BA0LT					2 340		
2/3 type	2 210 k	R, G, B primary color mosaic filters	RJ52N1BA0LT	Rolling	1 080P 120 fps	1 984 × 1 116	5.00 × 5.00	3 520		
		B/W	RJ52N2BA0LT					5 200		
	8 850 k	R, G, B primary color mosaic filters	RJ52V1BA0LT	Rolling	4K2K 60 fps	3 968 × 2 232	2.50 × 2.50	1 780		
		B/W	RJ52V2BA1LT					2 600		
		B/W	RJ52V2BB0LT					3 090		
4/3 type	33 270 k	R, G, B primary color mosaic filters	RJ5EG1BA1LT	Rolling	8K4K 30 fps	7 688 × 4 328	2.45 × 2.45	1 840		N-LGA380
1 type	8 940 k	R, G, B primary color mosaic filters	RJ5D91DA0LT	Global	4K2K 60 fps	4 112 × 2 176	3.45 × 3.45	3 000		N-LGA226A
		B/W	RJ5D92DA0LT					4 380		
2/3 type	5 060 k	R, G, B primary color mosaic filters	RJ52S1DA0LT	Global	1 080P 120 fps	2 464 × 2 056	3.45 × 3.45	3 000	N-LGA226	
		B/W	RJ52S2DA0LT					4 380		
1/1.8 type	3 180 k	R, G, B primary color mosaic filters	RJ51P1DA0LT	Global	1 080P 120 fps	2 064 × 1 544	3.45 × 3.45	3 000		
		B/W	RJ51P2DA0LT					4 380		

Notice

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High-sensitivity Image Sensors for Security Usage

■ Progressive CCDs

Optical format	Total pixels	Model No.	Video performance	Color filter	Resolution	Pixel size H × V (μm)	Sensitivity*1 (mV) TYP.	Smear ratio (dB) TYP.	Package			
					Image pixels (H × V)							
1/3 type	350 k	RJ33B3AA0DT	VGA 120 fps (1 ch output)	Primary color	660 × 494	7.4 × 7.4	3 000	-125	P-DIP024-0400			
		RJ33B4AA0DT		B/W			4 500					
		RJ33B3AD0DT	VGA 200 fps (2 ch output)	Primary color			3 000					
		RJ33B4AD0DT		B/W			4 500					
	520 k	RJ3331AA0PB	NTSC 650 TV lines	Complementary color	976 × 494	5.0 × 7.4	1 500	-120	P-DIP016-0450			
	610 k	RJ3341AA0PB	PAL 650 TV lines	Complementary color	976 × 582	5.0 × 6.3						
1 350 k	1 350 k	RJ33J3CA0DT	1.3M 30 fps 720p 30 fps (1 ch output)	Primary color	1 320 × 976	3.75 × 3.75	950	-120	P-DIP024-0400			
		RJ33J4CA0DT		B/W			1 430					
1/1.8 type	2 100 k	RJ31N3AA0DT	2M 25 fps (1 ch output)	Primary color	1 644 × 1 236	4.4 × 4.4	1 100	-120	P-DIP028-0566			
		RJ31N4AA0DT		B/W			1 650					
	2 130 k	RJ31N3AD0DT	2M 50 fps (2 ch output)	Primary color			1 100					
		RJ31N4AD0DT		B/W			1 650					
	2 960 k	RJ31P3AD0DT	2.8M 30 fps (2 ch output)	Primary color			1 940 × 1 460			3.69 × 3.69	750	-115
		RJ31P4AD0DT		B/W							1 150	

*1 The average G signal output voltage (the average output voltage in the case of the complementary color filter) when a 1,000-lux light source with a 90% reflector is imaged by a lens of F4 at 1/30 sec (1/25 sec in the case of RJ3341AA0PB) frame accumulation.

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■ Progressive CCDs (cont'd)

Optical format	Total pixels	Model No.	Video performance	Color filter	Resolution	Pixel size H × V (μm)	Sensitivity*1 (mV) TYP.	Smear ratio (dB) TYP.	Package
					Image pixels (H × V)				
2/3 type	5 240 k	RJ32S3AA0DT	5M 9 fps (1 ch output)	Primary color	2 456 × 2 058	3.45 × 3.45	530	-110	P-DIP028-0566
		RJ32S4AA0DT		B/W			800		
		RJ32S3AD0DT	5M 15 fps (2 ch output)	Primary color			530		
		RJ32S4AD0DT		B/W			800		
1/1 type	6 090 k	RJ3DT3AF0DT	6M 30 fps (4 ch output)	Primary color	2 758 × 2 208	4.54 × 4.54	1 150	-125	P-DIP064-1000
		RJ3DT4AF0DT		B/W			1 750		
	8 290 k	RJ3DV3AF0DT	8M 25 fps (4 ch output)	Primary color	3 320 × 2 496	3.88 × 3.88	750	-120	
		RJ3DV4AF0DT		B/W			1 100		
4/3 type	8 340 k	RJ3EV3EF0DT	8M 25 fps (4 ch output)	Primary color	3 848 × 2 168	5.14 × 5.14	1 500	-125	P-DIP064-1000B
		RJ3EV4EF0DT		B/W			2 250		

*1 The average G signal output voltage when a 1,000-lux light source with a 90% reflector is imaged by a lens of F4 at 1/30 sec frame accumulation.

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■ 1/3-type CCDs

Total pixels	Standard		Model No.	Resolution		Pixel size H × V (μm)	Sensitivity*1 (mV) TYP.	Smear ratio (dB) TYP.	Package
				Horizontal TV lines	Image pixels (H × V)				
410 k	Color	NTSC	RJ2355DA0PB	480	768 × 494	6.4 × 7.5	2 700	-135	P-DIP016-0450
470 k		PAL	RJ2365DA0PB		752 × 582	6.53 × 6.39			
520 k		NTSC	RJ2331BA0PB	650	976 × 494	5.0 × 7.4	2 400	-125	
610 k		PAL	RJ2341BA0PB		976 × 582	5.0 × 6.3			

*1 The average output voltage measured when imaging a 90% reflector illuminated by a 1,000-lux light source through an optical system set at an f number of F4.0.

■ 1/4-type CCDs

Total pixels	Standard		Model No.	Resolution		Pixel size H × V (μm)	Sensitivity*1 TYP. (mV)	Smear ratio TYP. (dB)	Package
				Horizontal TV lines	Image pixels (H × V)				
410 k	Color	NTSC	RJ2455DA0PB	480	768 × 494	4.9 × 5.6	1 350	-120	P-DIP014-0400A
470 k		PAL	RJ2465DA0PB		752 × 582	5.0 × 4.77			
520 k		NTSC	RJ2431AA0PB	650	976 × 494	3.75 × 5.56	1 400		
610 k		PAL	RJ2441AA0PB		976 × 582	3.75 × 4.74			

*1 The average output voltage measured when imaging a 90% reflector illuminated by a 1,000-lux light source through an optical system set at an f number of F4.0.

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