

LINEAR CCD UP TO 12000

A number of linear CCD with 4K, 6K, and 12K pixels for perspective (long-range) surveillance systems of space base, enable to realize the best parameters of space resolution at small size object detection. The product may also serve as a basic part at (?) system of high resolution creation in wide range of wave lengths 0,3 – 0,9 μm . CCD may also be effectively applied in facsimile systems of high resolution and long-range surveillance systems. Such CCD application in systems provides higher resolution at small size object detection including at spectrozone shooting.

The products under development include CCD of three types – with 4K, 6K, and 12K pixels.

CCDs have crystals (chips) of big size ($\sim 10\text{cm}$) and high parameters. This requires the development of modern high effective CCD transfer registers, providing charge transfer for distance $\sim 5\text{ cm}$ with transfer inefficiency not worse than 0,999998.

SPECIFICATIONS

	CCD- 4K	CCD-6K	CCD-12K
Number of pixels	4096	6000	12000
Pixel size, μm	6.5x6.5	6.5x6.5	6.5x6.5
Pixel pitch, μm	6.5	6.5	6.5
Number of output registers	2	4	4
Number of output units	2	4	4
Data output rate along the register, MHz	5	5	5
Electronic shutter, antiblooming	+	+	+
Saturation voltage, V	≥ 2	≥ 2	≥ 2
Spectral sensitivity, $\text{V}\cdot\text{cm}^2/\mu\text{J}$	≥ 2.5	≥ 2.5	≥ 2.5
Dynamic range	≥ 4000	≥ 3000	≥ 3000

Modulation transfer factor at space frequency $f_N/2$ across horizontal, %	≥ 50	≥ 50	≥ 50
Dark signal mean square nonuniformity, %	≤ 2	≤ 2	≤ 2
Relative luminous nonuniformity, %	$\leq \pm 10$	$\leq \pm 10$	$\leq \pm 10$
Spectral response, nm	400-900	400-900	400-900

SPECTRAL RESPONSE

