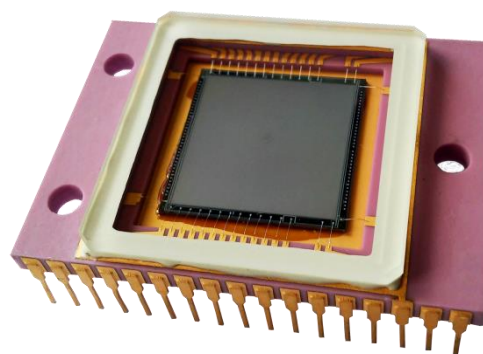


ARRAY CCD 33M

Array CCD is intended for application in optical systems of visible range of 1 inch format, in particular for TV systems of remote sensing and machine vision for precise definition of coordinates.

The device is developed in two types: CCD 33M-2 and CCD 33M-3.



The devices consist of array CCD with interline transfer based on silicon and have hermetic tight metal-ceramic package with input glass window.

Photosensitive area of devices includes array of photosensitive elements (photodiodes) and vertical registers with charge couple (CCD) for charge transfer from photodiodes to horizontal registers.

Photosensitive area has 1024×1024 photosensitive elements, 1024 vertical CCD registers and two horizontal registers. Horizontal registers transfer charge from center to edges.

Progressive scanning allows to form in any frame video signal from all photosensitive elements - $2 \times 512(H) \times 1024(V)$.

The main device parameters are presented in Table 1.
Table 1. CCD main parameters.

Parameter	CCD 33M-2, CCD 33M-3
Number of pixels	1024×1024
Pixel size, μm	15.8×15.8
Photosensitive area size, mm	16.18×16.18
Dynamic range, dB	≥ 70
Saturation voltage, V	≥ 1.0
Responsivity, $\text{V}/\mu\text{m J}/\text{cm}^2$	≥ 13
Sensitivity relative mean square nonuniformity, %	≤ 4
Dark signal mean square nonuniformity,	≤ 3

