

PHOTODETECTOR FPU-1024M

Unified photodetectors (FPU) FPU-1024M are based on CCDs resistant to space environment ionization radiation with 1024×1024 pixels to provide output signal reading out.

FPU consists of CCD unit, CCD signal control and process unit, CCD units power supply, and package with electrical sockets to connect primary power sources and to transfer control signals from board equipment and digital video signal.

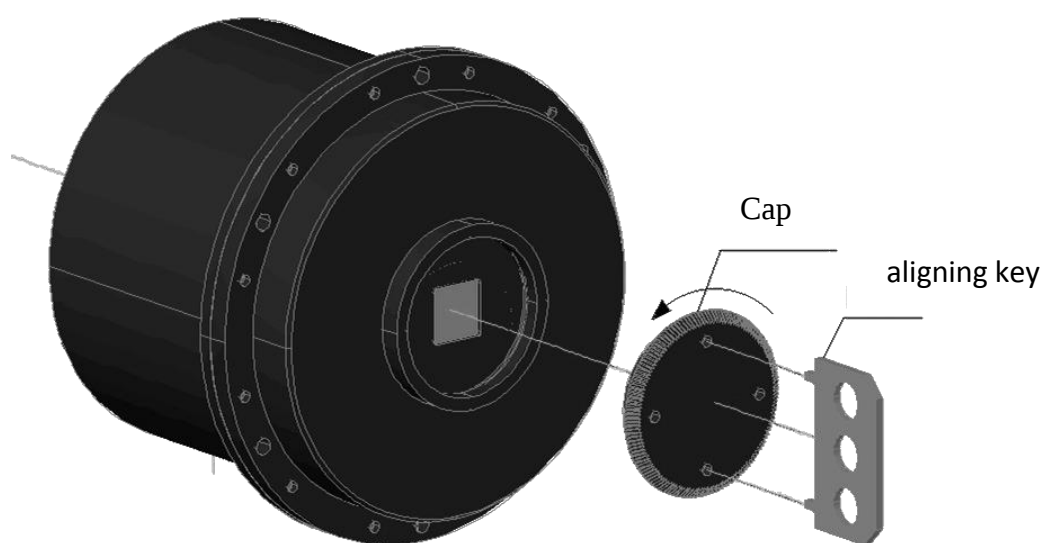
FPU is produced for visible and near IR ranges, provides higher accuracy and interference protection of optoelectronic devices for astroorientation and angular instruments of spacecrafts, advanced detection range in enhanced radiation and ultra-wideband electromagnetic exposure conditions of electronic countermeasures equipment. FPU is intended for arrangement in spacecrafts of different applications.

CCDs have sections of accumulation and storage.

SPECIFICATIONS

Number of pixels	1024×1024
Pixel size, μm	11×11
Output speed along each register, MHz	20
Resolution, TVL	700
Output signal, digital, bit	≥ 12
Supply voltage, V	27±10%
Spectral response, nm	450÷1000
CCD saturation voltage, V	≥ 1.0
Responsivity to A type source, V/lx·s	10÷15
Modulation transfer factor along the horizontal at 500 TVL, %	≥ 50
Dark signal RMS nonuniformity across the field, %	≤ 4
Threshold exposure (at exposure time up to 1s), lx·s	$\leq 2 \times 10^{-5}$
Mean dark signal, mV/s	≤ 4
Consumption current(when thermoelectric battery switched on), A	≤ 1.0

DIMENSIONAL OUTLINE



SPECTRAL RESPONSE

