

Requirements of CCD or sCMOS camera.

SN	Parameters	Specifications
1.	Camera type	CCD or sCMOS. (Back illuminated)
2.	Applications	Solar images/spectroscopy/Adaptive optics/Multitrack mode.
3.	Frame rate/seconds	≥ 500 : even if this can be achieved in ROI and/or Pixel binning mode satisfying the condition of parameter (4) is acceptable
4.	Minimum No. of pixels	512 X 512 if pixel sizes are in the order of 6 micro-meter. OR 128 X 128 if the pixel sizes are in the order of 25 micro-meter.
5.	Data range /Digital output	Minimum of 12 bits but 16 bits is acceptable
6.	Quantum efficiency	$>60\%$ at 500 nm.
7.	Effective well depth	≥ 30000
8.	Region of Interest (ROI)	Refer to parameters (3) and (4)
9.	Pixel Binning (on FPGA)	Refer to parameters (3) and (4)
10.	Readout and dark noise	low readout noise(~ 1.6 e-/pixel/s) and low dark noise(~ 1 e - /pixel/s)
11.	Sensor cooling	Cooling is required to keep the dark noise low (cf. Parameter 10)
12.	Trigger Modes	Internal, External, External Start, External Exposure, Software.
13.	Camera window	AR coated UV grade fused silica window.
14.	Shutter	Should not have any mechanical shutter.
15.	Lens mount	C type.
16.	Data transfer type	USB-3 /Ethernet/Camera link/Grabber card type
17.	Camera accessories	Necessary accessories to be supplied along with camera.
18.	Data acquisition software and SDK (should be supplied by vendor in CD format)	Standard software to operate the camera and SDK should be compatible with C/C++ and/or Python.
19.	OS compatibility	Windows 10, 64bit and/or Linux platform.
20.	Drivers	Third party drivers need to be supplied whenever the user requires.
21.	Power supply	230V, 50 Hz. (Preferably three pins)

22.	Warranty, Dealership and OEM certificates	Minimum one year. Vendor should provide the OEM certificate and authorized dealership certificate from the OEM only. These certificates to be uploaded on the bids. Any charges toward the transportation of men and materials (to/from the site) during the warranty period should be the responsibility of the vendor.
23.	Datasheets	Vendor should provide the specifications and mechanical drawings.
24.	Technical support	Free online technical support for camera life time
25.	Consignee address	Delivery at IIA, Bangalore.