

TECHNICAL BID PROFORMATender No. **GTB10/AROK/2023/01/DICSYSTEM**

Item Name: High speed camera for DIC system with Signal conditioner

1.0	Bidder Eligibility Criteria	Complied/Not Complied	Reference Page No.
1	The bidder/OEM should have supplied at least 5 similar high speed cameras to IITs, NITs, IISERS, CSIR Labs or other Govt. R&D organizations in the last 2 years, PO copies or installation certificates along with contact details of end users need to be submitted as proof of supply. IIT Madras reserves its right to verify the claims.		

2.0 Technical Compliance:

Minimum technical specifications required for one unit of High speed camera with signal conditioner
Specifications: -

Sl.No.	Description	Value / Range	Complied/Not Complied	Ref Page No.
1	Sensor type	CMOS. MONO		
2	Sensor resolution	1.2 MP or higher		
3	Frames per Second	<p>Standard mode:</p> <p>10,000 fps or more @ 1.2MP</p> <p>55,000 fps or more @ 640X240 (Equivalent)</p> <p>1,00,000 fps or more @ 640X120 (Or its equivalent)</p> <p>Binned mode: (Hardware to support increased frame rate with the higher sensitivity)</p> <p>70,000 fps or more @ 640X240</p> <p>1,20,000 fps or more @ 640X120</p>		
4	Maximum Frame rate at Minimum Resolution	4,00,000 fps or more		
5	Memory	72 GB or higher		
6	Record Time for 10,000fps @ 1.2MP 70,000fps @ 640X240 1,20,000fps @ 640X120	<p>3.5 Sec or more</p> <p>4.0 Sec or more</p> <p>5.0 sec or more</p>		
7	ISO (Monochrome)	<p>Standard Mono: ISO 80000</p> <p>Binned : ISO 125000</p>		

8	Exposure time	1 μ s		
9	Frame straddle	Option enabled with time of 750 ns or lower		
10	Pixel Size	18 μ m or lower and binning mode		
11	Bit Depth	12-bit or higher		
12	Operating Temperature	-10 to 50 °C		
13	Acceptable Interface	Ethernet/HDMI		
14	Power Supply	Necessary power cable and communication cable.		
15	Software	Software for camera control, download, Setup & analysis.		
16	Demo	Onsite demo of the quoted or equivalent model on their own expense during technical evaluation.		
17	Readout noise	Standard: 10e- or better Binned: 24e- or better		
18	Weight	4 Kgs or less		
19	Include Ethernet cable, Adapter, Power cable required for the camera operation			

High power LED: 2 nos

	Continuous light white LED lights			
	Emitter	24 High Power Leds		
	Power Consumption	240W		
	Supply Voltage	24 Vdc		
	Bundled Power Supply	Standard Desktop PS 24 V 240 W		
	Luminous Flux	white, 24.000 Lumen		
	Power Connector	XLR 4 Pin		
	Heat Dissipation	Heat sink with controlled fan		
	Environmental temp.	-26° - 39° C (Operation)		
	Environmental temp.	-26° - 79° C (storage)		
	Overheat Protection	Thermo switch 79°C		
	Environmental Protection	as IP 20		
	Mounting Options	Bottom 1/4" standard thread		
	Standard Lenses	12° FWHM		

	Long lifetime	Minimum 50,000 hours		
	With Power supply and 5m XLR cable			
MULTILED Controller: 1 no				
	Control and power supply unit for up to 8 for MultiLed			
	LM with Trigger and enable input and 1.2 W			
	Lamp head connector	8 * RJ-45		
	Power connector	ODU Push-Pull		
	For LED Model	All Colors		
	IP class	IP 20		
	Control (Alternative RS 485)	Large color LCD and control knob.		
	Minimum Pulse length	By LED (~200 nanoseconds)		
	Light modes	Continuous, Pulsed		
	Light Intensity Adjustable	0%..100%		
Pickle/trigger switch with cable:1 no				

Sl.No.	Other Requirements	Complied/Not Complied	Ref Page No.
1	On-site installations and testing at IIT Madras, Chennai is must.		
2	Warranty should be 12 months from the date of installation.		
3	As a part of technical evaluation demonstration of quoted or equivalent model should be done at IITM, Dept. of Applied Mechanics,date will be informed later.		

(Note: It is mandatory for the bidders to provide the compliance statement in tabular column format along with catalogue page number (comply/not comply) for the above points with document proof as required. Failing which bidders will be technically disqualified)