

## Technical Specifications of Motorized Monochromator

### 1.0 Bidder Eligibility Criteria-I

Sl. No	Bidder Eligibility Criteria-I	Complied / Not Complied	Reference Page No.	Remarks, If any
1	The bidder/OEM should have supplied at least 2 similar items 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 user need to be submitted as the proof of supply. IIT Madras reserves its right to verify the claims submitted by the bidder and the feedback from the previous customers will be part of technical evaluation.			

### 2.0 Technical Specifications II

S.No	SPECIFICATIONS	Complied / Not Complied	Reference Page No.
<b>1</b>	<b><u>Monochromator</u></b>		
	<ul style="list-style-type: none"> <li>• Monochromator should have the focal length of 250 mm.</li> <li>• Monochromator should be motorized and programmable.</li> <li>• It should contain at least one input port and one output port.</li> <li>• Each port should contain bilaterally adjustable slit</li> <li>• It should contain grating holder(s) and grating(s) to be able scan over the spectral range from 300 nm to 1800 nm with a resolution of at least 1 nm.</li> <li>• Filter wheels should be provided to control the intensity of light.</li> </ul>		
<b>2</b>	<b><u>Input Light Source Specifications</u></b>		
	<ul style="list-style-type: none"> <li>• The set up should contain a 300 W short arc xenon, ozone free bulb, a replacement 300 W short arc, ozone free bulb.</li> <li>• Collimated beam lamp housing</li> </ul>		
<b>3</b>	<b><u>Power Supply Specifications</u></b>		
	<ul style="list-style-type: none"> <li>• Constant current adjustable power supply</li> <li>• Highly stable DC output</li> <li>• Input Voltage: 115VAC / 240VAC</li> <li>• Input Current: 2A/1A</li> <li>• Input Frequency: 60Hz/50Hz</li> </ul>		
<b>4</b>	<b><u>Coupling Optics Specifications</u></b>		
	<ul style="list-style-type: none"> <li>• Coupling optics between light source and filter wheels with a flipping mirror arrangement to drive light beam to either straight or 90 degree rotation. The latter is required to couple the light to the fiber.</li> <li>• Coupling optics between filter wheels and monochromator.</li> <li>• Adjustable optical coupler to couple to optical fiber</li> </ul>		
<b>5</b>	<b><u>Optical Fiber Specifications</u></b>		

	<ul style="list-style-type: none"> <li>• Fiber with SMA connectors</li> </ul>		
	<ul style="list-style-type: none"> <li>• Length: at least 1m long</li> </ul>		
	<ul style="list-style-type: none"> <li>• To be able to transmit light of spectral range at least from 350 nm to 1800 nm.</li> </ul>		
	<ul style="list-style-type: none"> <li>• NA: 0.39; 1 mm core diameter</li> </ul>		
	<ul style="list-style-type: none"> <li>• Around 6-10” working distance</li> </ul>		
<b>6</b>	<b><u>Relevant Accessories</u></b>		
	<ul style="list-style-type: none"> <li>• Relevant accessories such as Indian Standard cables, Manuals, Documents, Driver software (optional) to operate the monochromator through computer.</li> </ul>		
<b>7</b>	<b><u>Additional Requirement</u></b>		
	<ul style="list-style-type: none"> <li>• Light output at the output port should be at least 50 <math>\mu</math>W</li> </ul>		
	<ul style="list-style-type: none"> <li>• Target size at least 1 cm <math>\times</math> 1 cm</li> </ul>		
<b>General Terms and Conditions</b>			
1	1. Compliance sheet for the technical specification and OEM Brochure have to be attached along with the Technical bid. Vendor has to fill the compliance sheet and mention page number or reference number in OEM brochure. Unfilled/partially filled sheets may lead to disqualification.		
2	2. The bidder should be either an Original Equipment Manufacturer (OEM) of Motorized Monochromator or should be an authorized representative (provide documentary proof) of an OEM.		

(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)