



**INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION**

PR NO. 1000039719

RFX No.6100001811

**Technical specifications for 300-Watt Xenon Arc Light Source (1 Unit) with
multiple accessories**

Sr.No.	Description	Value / Range	Technical Compliance (YES/ NO)	Additional Information (if any)
1	300-Watt Xenon Arc Light Source should have lamp housing, power supply, xenon lamp and necessary cables and connectors etc.			
2	Should be highly stabilized 300-Watt Xe arc lamp source			
3	Power supply should be independent one and integrated power supply is not acceptable.			
4	Power supply should have constant power, current control modes.			
5	Should be able to use with 200-500 Watt Xe and Hg/Hg (Xe) lamps			
6	Temperature sensor and cooling system should work together for safety temperature maintenance of lamp housing.			
7	Safety interlock should be given from overload/over temperature / electrical shock, etc.			
8	Light source should work in Indian power standards.			
9	Future upgradation with monochromator, filter wheel etc should be possible.			
10	System should be proven for photochemical reaction studies.			
11	It should be able to run for more than 10 hours continuously without lamp switching off.			
12	Lamp housing should have a back reflector to collect more light			
13	Illumination area	>33 mm		
14	Condenser	Better than or equivalent to F/1		
15	Communication interface	USB or RS-232		
16	CE Certification	Required		

17	Line regulation	$\leq 0.02\%$		
18	Light Ripple	$< 2\%$ rms		
19	ISO certification	Required		
20	Produced Light Intensity	>3 Sun		
Accessories				
1	Air Mass filter-AM 1.5G	1 Qty		
2	Filter Holder	1 Qty		
3	Beam Turning Mirror Holder compatible with Light Source	1 Qty		
4	Full reflecting Mirror	1 Qty		
5	Plano-Convex lens	with >33 mm diameter, 150 mm EFL and 190 to 2500 nm range		
6	Plano-Convex lens	with >33 mm diameter and 200 mm 190 to 2500 nm range		
7	XYZ Focusing Lens Assembly to mount Lenses and focus the light to sample.			
8	Filter to transmit between 350-730 nm range			
9	400nm cut-on Filter (should remove UV light completely)	1 Qty		
10	715nm cut-on Filter (should remove UV and Visible light)	1 Qty		
11	Optical power meter to measure light intensity			
	a) Handheld Laser Power meter			
	b) Accuracy	$\pm 0.25\%$ (Full Scale) ± 20 p A		
	c) Sampling rate	≤ 15 Hz		
	d) Display Type	High legibility TFT 320 x 240 pixel graphics LCD		
	e) Display Refresh Rate	≤ 15 Hz		
	f) Communication Interfaces	USB		
	g) CE certificate	Required		

	h) Resolution	18 bits plus sign		
12	Thermopile sensor	1 Qty		
	a) Compatible with power meter			
	b) Detector type	Thermopile		
	c) Spectral range	≤ 0.19 to $11 \mu\text{m}$		
	d) Power range	$\leq 20 \text{ mW} - 10 \text{ W}$		
	e) Detector Active Area	$\leq 2.01 \text{ cm}^2$		
	f) Sensor Size	$\leq \text{Ø}16 \text{ mm}$		
	g) Maximum measurable power	$\leq 10 \text{ W}$		
	h) Cable Length	$\leq 1.5 \text{ m}$		
13	Post and Holder for sensor mounting.			
14	Warranty	1 Year		