

Request for Quotation

REF: AE/DD/2012/04

Date: July 4, 2012

To
M/s :

Sub : Quotation for supply of: LED light source for PIV, Schlieren/Shadowgraphy, BOS applications and related accessories as per the following specifications

Sir / Madam:

With reference to the subject mentioned above, you are invited to submit the quotation in a sealed cover in order to reach us before July 14, 2012 August 06, 2012 (extended date) in the proforma quotation enclosed herewith in the form of hard copy / soft copy for your use.

Technical details/Specifications required for the LED light source for PIV, Schlieren/Shadowgraphy, BOS applications and related accessories

Output wavelength: Green light

Mode of operation: Both continuous and pulsed modes (single and dual pulse modes)

Pulse repetition rate: > 1000 Hz

Operating temperature & humidity: 5°C to 40°C & 10% to 85% RH. The LED should be resistant to hot and humid conditions.

All the following parameters should be controllable.

- light intensity in continuous mode
- pulse trigger mode
- active trigger pulse edge
- single or dual pulse mode (PIV)
- light pulse width
- light pulse power
- pulse delay
- pulse repetition rate

Pulse Width: Should be adjustable from 200 ns to 300 μ s

Delay between first and second pulses in dual pulse mode for PIV: Should be adjustable from 0 to 100 ms in steps of 1 μ s or less.

Triggering: The LED light should have the option of both internal and external triggering in both continuous and pulsed modes.

A TTL output from LED light source is desirable to synchronize it with any other devices like camera

The following accessories/attachments are also required to use the LED source for various applications

1. Projection Lens: The following projection lens are required to get a homogeneous beam spot for Schlieren/Shadowgraphy applications
 - I. Homogenous light spot of 36 cm diameter from a distance of 1 m
 - II. Homogenous light spot of 72 cm diameter from a distance of 1 m
2. Light Sheet optics: Light sheet optics and related accessories are required to get uniform light sheet for PIV applications as per the following specifications
 - I. Sheet optics for light sheet of approximate 10cm width and ≤ 1 mm thickness
 - II. Sheet optics for light sheet of approximate 20cm width and ≤ 1 mm thickness
 - III. Dual light sheet if possible with long fiber length
3. Pulse generator/phase shifter/Time delayer/Sequencer along with control software to delay the light source and the camera by a certain time to the trigger input. The input and outputs signals should be TTL (additional LVDS output if possible). The pulse width, the time interval between pulses, the number of pulses should be adjustable using onboard control panel/control software.
4. Include all related cables (at least 5 m in length if possible), power supplies, control software
5. Water proof casing (include as optional if any)

Warranty:

All the electronic components, lens and light sheet optics should carry at least 3yr warranty.

The soft copy of the model quotation can also be downloaded from our website placed at the following link: (Form No. 608)

http://web.iitk.ac.in/dord/rndforms/project_purchases.php

Best regards,
Sincerely,

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