

Tender Documentation for Invitation to Tender for the supply of Tester of laser rangefinders

1. Contracting Authority:

PRAMACOM-HT, spol. s r.o.
Radčina 497/22, Praha 6, PSČ 161 00
IČ: 26514753
Represented by company official Mr. Filip Chlup, tel.+420 581 242 811

2. Subject of Contract:

A tester of laser rangefinders (LRF) employed for military applications enabling measuring of basic features/properties of laser beam in laboratories including simulation of rangefinder range, measuring of temporal energetic quantity of laser pulse as well as a capability to align axis of laser rangefinder with viewing optical systems. The system comprises software for data evaluation and management. The system may include multiple modules.

There must be met the following technical parameters:

Parameter	Required Value
Set of pulse light sources used to simulate reflected radiation for LRF	1.06 μ m; 1.54 μ m
Simulated range	500 – 30 000m
Simulated range accuracy	5m
Pulse energy	1 – 7mJ
Pulse energy accuracy	10%
Pulse width range	4 – 30ns
Pulse width measurement accuracy	\pm 2ns
Aligning accuracy of the LRF transmitter relative to optical axis of visual sight	0,1mrad
Warranty period	2 years

3. Maximal Contract Value:

3.100.000 CZK excl. VAT

4. Place of Performance of Contract:

PRAMACOM-HT, spol. s r.o.
tř. 17. listopadu 50A
779 00 Olomouc
Czech Republic

5. Delivery Term:

Until 15 June 2012

6. Proof of Qualifications:

Existence of one's own website with a description of Subject of Contract.
Please state a reference to the website (a link to the website must be a part of quotation).

7. Requirements of Contracting Authority:

Quotation must comprise at least a description of each component of the contract, a total price and a completed documents "An Overview of Essential Technical Parameters of System Offered within the Contract" and "An Overview of Bonus Functions of System Offered within the Contract" signed by an authorized company official.

8. Methodology of Quotation Elaboration:

Quotation must be written either in English or in Czech language. The offer must be sent or submitted in written form in a sealed envelope to a seat of contracting authority referred to in paragraph 1. The envelope must be clearly indicated with an inscription "DO NOT OPEN – Tender for Laser Rangefinder Tester".

Contracting authority enables submitting of a variant quotation whereas it is necessary to clearly separate the individual variants.

9. Evaluation of Candidates:

Quotations that will not meet required parameters stated in "An Overview of Essential Technical Parameters of System Offered within the Contract" will be excluded.

Quotations that will not guarantee meeting delivery time according to paragraph 5 will be excluded.

10. Evaluation Methodology:

Each quotation will be given points based on four viewpoints:

- a) price
- b) training course
- c) bonus function

ad a) lowest-priced quotation meeting required technical parameters will be given 100 points. Each following quotation will be given $\{100 * [(\text{lowest-priced quotation price}) / (\text{quotation price})]\}$ points.
Proposed prices in various currencies will be converted to CZK based on rate applicable for the Czech National Bank on 27 February 2012.

ad b) Each quotation including 1 day training course (8 hours or longer) will be given 10 preferential points.

ad c) Each quotation may obtain multiple bonus points if meeting functionalities specified in the document "An Overview of System Bonus Functionalities Offered within the Delivery".
The winning quotation is the one that will be given the highest number of points.

11. Deadline and Place for Quotations Submitting:

Quotations can be submitted continuously in period from tender invitations on 25 January 2012 to 26 February 2012. Place for quotation submitting is stated in paragraph 1.

An Overview of Essential Technical Parameters of System Offered within the Contract

Parameter	Required Value	Values of Submitted Quotations
Set of pulse light sources used to simulate reflected radiation for LRF	1.06 μ m; 1.54 μ m	
Simulated range	500 – 30 000m	
Simulated range accuracy	5m	
Pulse energy	1 – 7mJ	
Pulse energy accuracy	10%	
Pulse width range	4 – 30nsec	
Pulse width measurement accuracy	\pm 2nsec	
Aligning accuracy of the LRF transmitter relative to optical axis of visual sight	0,1mrad	
Warranty period	2 years	

Hereby I confirm the truth of above mentioned parameters:

Quotation of company:

Date:

Name and surname:

Signature:

An Overview of Bonus Functions of System Offered within the Contract

Bonus Function	Required Value	Values of Submitted Quotations	Bonus Points
Other set of pulse light sources used to simulate reflected radiation for LRF	choice from 0.91 μ m, 0.99 μ m, 1.55 μ m, 1.57 μ m		3 points per each source
Extension of simulated range – maximal value	$\geq 50\ 000$ m		2 points
Extension of simulated range – minimal value 1	≤ 200 m		2 points
Extension of simulated range – minimal value 2	≤ 20 m		2 points
Extension of simulated range accuracy	≤ 3 m		2 points
Extension of pulse energy – minimal value	$\leq 0,01$ mJ		4 points
Extension of pulse energy – maximal value	≥ 200 mJ		2 points
Extension of pulse width measurement accuracy	$\leq \pm 1$ nsec		2 points
Extension of pulse width range – maximal value	≥ 50 nsec		2 points
Testing of LRF with coaxial optics (transmitter/receiver share the same optical objective)	transmitter and receiver overlapping a circle of diameter at range 0 to 100mm		8 points
Measurement of pulse peak power (by calculation)	min. range 50 W to 10 MW		4 points
Measurement of pulse peak power (by direct measurement)	min. range 50 W to 10 MW		9 points
Measurement of pulse repetition frequency (PRF) made by external oscilloscope	minimal range 0 to 15 kHz		3 points
Measurement of pulse repetition frequency (PRF) made by computerized system	minimal range 0 to 15 kHz		6 points
Measurement of laser beam divergence	minimal range 0,2 to 3 mrad		2 points
Measurement of relative receiver sensitivity	YES		2 points
Measurement of absolute receiver sensitivity	YES		10 points

Extension of aligning accuracy of the LRF transmitter relative to optical axis of visual sight	$\leq 0,07$ mrad		2 points
Measurement of missing pulses	YES		2 points
Aligning of the laser receiver with the laser emitter	YES		4 points
Producing and recording 2D image of intensity distribution in laser spot	YES		4 points
Producing and recording 2D image of intensity distribution in laser spot during divergence measurement for monopulse and multipulse LRF (SWIR camera)	YES		10 points
Calculation of predicted LRF range using a simulation software	YES		1 point
Simulation of multiply reflections	simulation ≥ 3 targets at diff. distances		6 points
Visualization of temporal profiles of incoming pulses	YES		3 points
Measurement of power for laser pointers/illuminators in visible range (VIS) min. range 540 – 700 nm	min. range 3 mW - 3 W		5 points
Measurement of power for laser pointers/illuminators in near-infrared range (IR) min. range 850 - 1000 nm	min. range 3 mW - 3 W		5 points
Measurement of power for laser pointers in near-infrared range (IR) min. range 850 - 1000 nm-extension	0,1mW – 3 mW		3 points
Testing IR and VIS laser pointers/illumin. – divergence 1	min. range 0,1 - 2 mrad		2 points
Testing IR and VIS laser pointers/illumin. – divergence 2	min. range 2 - 200 mrad		3 points
Producing and recording 2D image of intensity distribution in laser spot of IR and VIS laser pointers/illuminators	YES		4 points
Simulation of targets with variable angular size the LRF is shooting to	min. 5 targets of different angular size		4 points

Testing laser designators 1,06 μm – pulse energy, pulse width, coding, pulse repetition frequency, and beam divergence angle	YES		8 points
Measurement of extinction ratio	YES		12 points

Hereby I confirm the truth of above mentioned parameters:

Quotation of company:

Date:

Name and surname:

Signature: