

# Pulse Instruments

## CUSTOMER QUESTIONNAIRE

### VISIBLE DEVICE TEST SYSTEM CONFIGURATION

To configure an appropriate test system for your application there are key areas requiring definition. We will use the answers provided to the following questions as a guide to providing a test system configured to meet your present and future testing applications. All answers provided to the following questions will be held in strict confidence by Pulse Instruments.

**CUSTOMER:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

#### I) DEVICE UNDER TEST

a) **Device Technology (CCD, CMOS, CID, etc)** \_\_\_\_\_

b) **Image Sensor—Physical Properties**

i) Size of the Array/Arrays (e.g. 512 x 512, 4K x 4K etc.): \_\_\_\_\_

ii) Device package type; LCC \_\_\_\_\_ PGA \_\_\_\_\_ DIL \_\_\_\_\_  
Other: \_\_\_\_\_

iii) Number of pins (e.g. 68, 84 etc.); LCC \_\_\_\_\_ PGA: \_\_\_\_\_  
DIL \_\_\_\_\_ Other: \_\_\_\_\_

c) **Image Sensor—Electrical Properties:**

i) Input Characteristics, Clock Inputs

(1) Max. Input Capacitance: \_\_\_\_\_

(2) Number of Inputs w/max. Capacitance: \_\_\_\_\_

(3) Max. Frequency of Inputs w/max. Capacitance: \_\_\_\_\_

(4) Input Capacitance of other Clock Inputs: \_\_\_\_\_

ii) Number of device signal outputs per package (e.g. 1, 2, etc.): \_\_\_\_\_

iii) Output DC offset voltage; \_\_\_\_\_ Volts

iv) Signal Output Characteristics

(1)  $R_{LOAD}$  &  $C_{LOAD}$  Required: \_\_\_\_\_

v) Illumination Wavelengths of Interest:

(1) Overall Range: \_\_\_\_\_ nm

(2) Specific Wavelengths: \_\_\_\_\_ nm

vi) Clocking Frequency (Frequency of Reset Clock): \_\_\_\_\_

#### II) DEVICE TEST ENVIRONMENTAL CONDITIONS

a) **Optical Stimulus Source**

i) Collimated Beam

(1) Maximum Beam size (diameter): \_\_\_\_\_ mm

(2) Beam Uniformity/diameter: (%/mm): \_\_\_\_\_

- (3) In-Band Irradiances max. (mW/cm<sup>2</sup>): \_\_\_\_\_  
 (4) Minimum Illumination or (Atten. Ratio): \_\_\_\_\_

**III) BASIC SYSTEM HARDWARE REQUIREMENTS**

**a) System Bias Supplies**

- i) Number of DC bias supplies per device \_\_\_\_\_  
 ii) Maximum voltage range: +/- \_\_\_\_\_ V  
 iii) Maximum current required per bias: \_\_\_\_\_ mA  
 iv) Do all bias supplies need the above capability? Yes \_\_\_\_\_ No \_\_\_\_\_

**b) System Clock Drivers**

- i) Number of clock inputs per device \_\_\_\_\_  
 ii) Maximum voltage levels +/- \_\_\_\_\_ V  
 iii) Maximum clock amplitude (swing) \_\_\_\_\_ V  
 iv) Clocking frequency required \_\_\_\_\_  
 v) Minimum(fastest) rise/fall times required \_\_\_\_\_

**c) Data Acquisition**

- i) Number of outputs: \_\_\_\_\_  
 ii) Analog or digital outputs? \_\_\_\_\_  
 iii) Pixel Data Rate (in Hertz): \_\_\_\_\_  
 iv) A/D channels, type required:  
     (1) Number of bits: \_\_\_\_\_ Data Rate: \_\_\_\_\_  
 v) Gain Required (x100, x1000 etc.): \_\_\_\_\_

Thank you for answering the above questions. The above answers will be of significant help in configuring a system to meet your requirements.

Person to contact, if additional questions or clarification is required:

Name: \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Product Webpage: \_\_\_\_\_  
 Telephone: \_\_\_\_\_  
 Fax: \_\_\_\_\_