

SOP 234/02	Installation Environment Specification	
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History:    Created by:        JM                    Date: 13. August 2008 Replaces: SOP231/01                    Date: 23. April 2008 Reviewed by:        AG                    Date: 14. August 2008 Approved by QC:    JB                    Date: 14. August 2008		


Purpose of this document: To ensure that all key aspects of the installation adhere to the manufacturer's recommendations, codes, safety and design parameters.

Responsibility: Customer or CAMAG Certified Product Specialist or Service Engineer.

## Introduction

This document describes the environment necessary for the TLC Visualizer, consisting of an illumination module with integrated digital camera and controlled by software, which has to be available at installation to ensure reliable operation of the instrument.


Before starting the installation of the TLC Visualizer read carefully the operating manual.

 *Do not operate the TLC Visualizer in rooms with danger of explosions.*

## Installation environment

The performance of all parts is impaired by dust, corrosive vapors, shocks and vibrations. The place for installation should meet the following requirements:

Depth	535 mm
Width	480 mm
Height	675 mm

 *Add adequate space for PC, printer and other peripheral equipment (if applicable) next to the Illumination unit.*

Weight	Approx. 23 kg
Operating temperature	The temperature should be within a range of 15 to 35 degrees centigrade and free from significant variations
Humidity	Humidity and temperature conditions must not cause condensation
Atmospheric conditions	Adequate ventilation free from acidic, alkaline or other gas that may corrode metal or painted surfaces must be secured.

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**Other requirements:**

- Do not place the equipment in a location where the temperature undergoes significant changes (e.g. under an air conditioning duct or by a window). Significant changes in temperature will affect the performance of the instruments.
- Do not place the equipment in direct sunlight. Direct sunlight may create significant temperature changes which will affect the performance of the system. Direct sunlight may discolor the instruments paint surfaces.
- Do not expose the equipment to any strong vibration or shock.
- Avoid placing the instrument near equipment that radiates heat. Do not place the instrument near gas burners, electric heaters or ovens.
- Do not place the instrument near equipment that generates intense magnetic fields such as electric welding equipment, high frequency furnaces, pole transformers, etc.
- Protect the instrument from excessive dust.
- Connect the instrument to power lines that are free from sudden changes or voltage fluctuations.
- If you must use power motor driven equipment (such as a stirrer or vibrator) in the same line as your instrument, ensure that a noise reduction unit is in the same power line.

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## Conditions for the installation

Confirm that the following requirements exist before installing the instrument:

Power supply and ground terminal	
Line voltage:	According to the indications on the rating plate of the instrument 100~240Vac. Fluctuation should be within the voltage range specified.
Frequency:	50 or 60 Hz
Power capacity:	TLC Visualizer: 50 W max. Digital camera: 8 W max. powered via FireWire®



*Add adequate space for PC, printer and other peripheral equipment (if applicable) next to the Illumination unit.*

Ground terminal:	A grounded outlet should be within 2 meters of the instrument.
Communication ports	1x IEEE-1394a FireWire® for digital camera

For the PC specifications required for TLC Visualizer, consult SOP 242 “winCATS Environment Specification”:

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**History:**

Version 2: *(13 August 2008)*

- SOP Header: "Reviewed by" added
- Line Voltage Input range 100~240Vac
- RS232 communication port removed

Version 1: *(23 April 2008)*

- new