

Nanoscope Instruments

Technical Overview

Simple to use

- ✓ Portable and USB controlled
- ✓ Easy to use integrated GUI with audio cues for low vision users
- ✓ Variable shapes and illumination intensities for functional vision testing
- ✓ Touch screen/pressure sensor for direct input from subject
- ✓ Automated data collection

Uniqueness

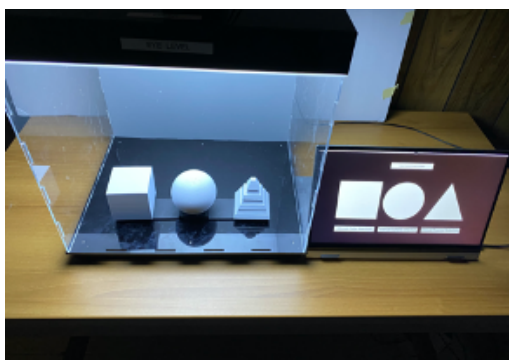
- ✓ Simulated real world functional vision testing
- ✓ Directly compare 3D shape recognition with 2D shape identification
- ✓ Moving patterns
- ✓ Optics Multiple illumination intensities to track recovery progression
- ✓ Quantify vision recovery or degradation

Value

- ✓ Affordable
- ✓ Customer support
- ✓ Track Long term recovery
- ✓ Extended warranty and service contract

LMVPT

Low Vision Multi-Parameter Test



Nanoscope's Low-Vision Multi-Parameter Test (LVMPT) with touch screen interface to display objects of different sizes of varying shapes and moving patterns at multiple luminance level. LVMPT device consists of a touch-screen panel for obtaining direct feedback (including positioning accuracy) from the subjects. In addition, a 3D object identification test using three-position pressure sensors is included as part of the LVMPT.

Principle

LVMPT is based on a vision quantification system designed with the intent to evaluate functional vision. The system is designed with the intent to track a user's vision using smart display devices used in daily activities and 3D objects that are lit by emulating room lighting. A user with 20/200 vision or better should be able to perform all the tests within the LVMPT system without difficulty.

The system randomizes the requested object that the user must pick up or select. Further, the position of the objects on screen and within the box are randomized to remove bias. The experimental outcome in the screen test is expected to correlate with the 3D object identification test. The LVMPT system also evaluate ability of subjects to determine optical flow (moving bars in different directions).

L V M P T

2D Shape Recognition

Optical Flow

3D Shape Recognition



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Application

- Functional Vision Quantification
- Optical flow testing
- Shape recognition
- Light intensity threshold

Nanoscope Instruments

Nanoscope Instruments focuses on translation of emerging biomedical technologies to provide researchers ease of access to diagnostics and therapeutics instruments.

Our Devices

We offer standalone instruments with customizable features and intuitive software interface to enable researchers with unique ability to simultaneously manipulate, stimulate, and monitor changes in visual/cortical system.

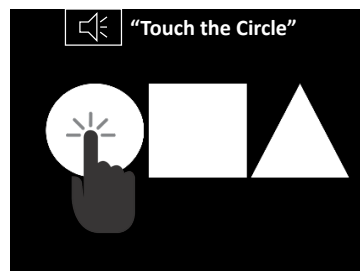
For more information on our products or services please visit

www.nanoscopeinstruments.com

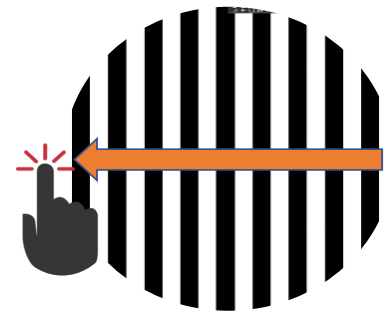
LVMPT Specification

2D Shapes (Digital)	Circle, Square, Triangle
2D Shape Color	White, Red, Green, Blue
2D Luminance	5,10,15 lux
3D Luminance	100, 400, 700,1000,1300 lux
3D Objects	Cube, Pyramid, Sphere
Screen Size	Diagonal 13.3"
Operating System	Windows 10 Home
Screen Resolution	1920 x1080 pixels
Voice Assistant	US English (Male)

Application Examples



2D shape recognition test at different luminance level



Optical flow test

CAPABILITIES

- Personalized Technical Support
- Maintenance
- Hardware Support
- Customizable Software
- Installation and Setup
- Application Support
- Customizable Hardware



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