

# TERA Dry Eye Imager®

## Quick Start Capture Guide

### 1. SYSTEM SETUP

#### Device Setup

- Power on the TERA device
- Log in to launch the Home screen
- Select an existing patient or create a new record. Verify calibration before each capture session

#### Patient Positioning

- Seat patient comfortably; adjust chinrest to align the lateral canthus to the marked indicator (red)
- Ensure firm forehead and chin contact
- Instruct patient to look at the central green fixation target for all tests unless otherwise indicated in the capture procedures below

#### Basic Controls

- **Rotatable touchscreen:** Adjust the screen angle/position for better visibility and ergonomics during alignment or lid eversion. Drag the image on the screen to adjust device alignment and achieve optimal centration
- **Joystick (Physical):** Use for gross alignment, fine positioning, and starting/stopping capture (press to capture)
- **On-screen focusing bar:** Hold and press arrows or slide up and down to adjust focus and achieve optimal sharpness. Can be used instead of the joystick to adjust the distance of the device to the patient



### On-screen Capture Button:

Tap to capture images. Used in place of the physical joystick button.



**Acquisition Modes:** Switch between automatic mode (“A” icon) and manual mode (“hand” icon).



Automatic Mode



Manual Mode

### Right and Left Eye Icons:

Tap the OD (R) or OS (L) icons to easily switch between imaging the right and left eyes.



### Acquisition Type:

Photo and video mode

**Note: Video mode is only available for LIPID & FLUO acquisitions.**



Photo Mode



Video Mode

### Acquisition Gallery Preview:

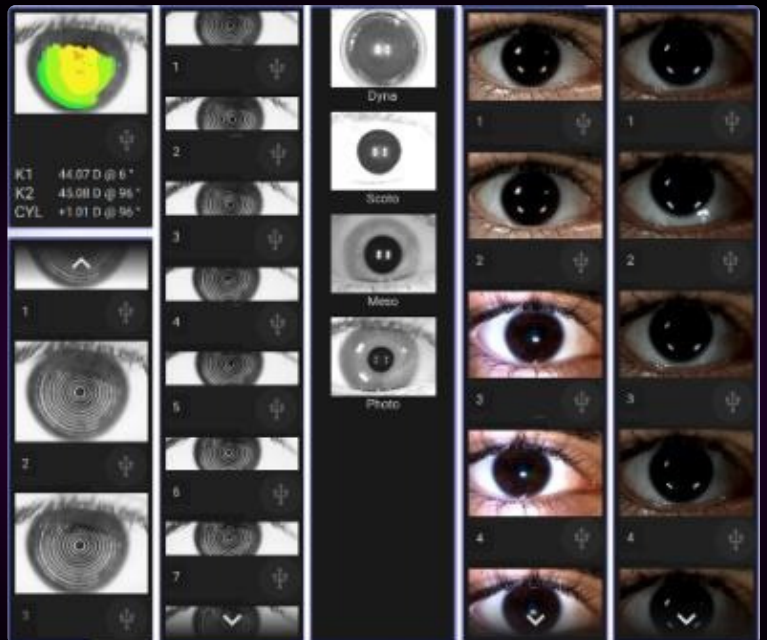
Click any image in the side preview gallery to open and review newly captured acquisitions, and delete them if needed.

### Acquisition Adjustment

Panel: Tap to open the slider and adjust image brightness and diaphragm aperture for TMH, REDNESS, BLEPH, LIPID, MEIB, and FLUO modes.



Acquisition Adjustment



Examples of the acquisition gallery for several capture modes.



Use the slider to adjust the brightness of the image on the screen. If AUTO is enabled, the device will automatically set the brightness.



Closing the diaphragm increases depth of field, shown from left to right.

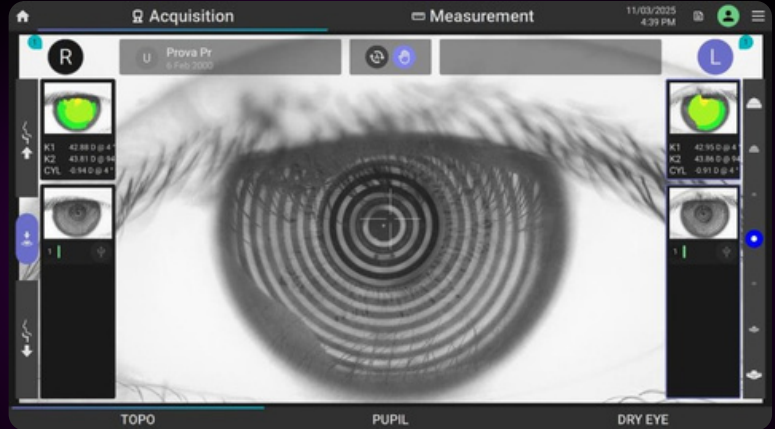
## 2. CAPTURE PROCEDURES

### TOPO – Corneal Topography

Purpose: Map corneal curvature and surface shape

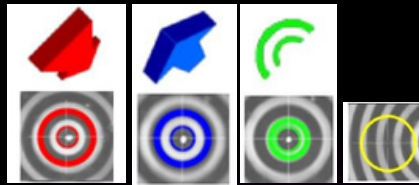
#### How to Capture:

- Auto mode (default): Tap the center of the pupil. The device automatically aligns, focuses, and captures once optimal conditions are met.
- Manual mode: Use the joystick or touchscreen alignment tools to center the pupil. Adjust focus until green indicators appear. Press the joystick or on-screen capture button to acquire the image.
- Repeat capture if Placido rings appear distorted or blurred.



#### Alignment Indicators

- Red arrows: Move the instrument closer to the patient
- Blue arrows: Move the instrument farther from the patient
- Green indicators: Alignment and focus are correct — press the joystick to capture in manual mode
- Out of tolerance: Alignment is off — adjust distance and centering until green indicators appear

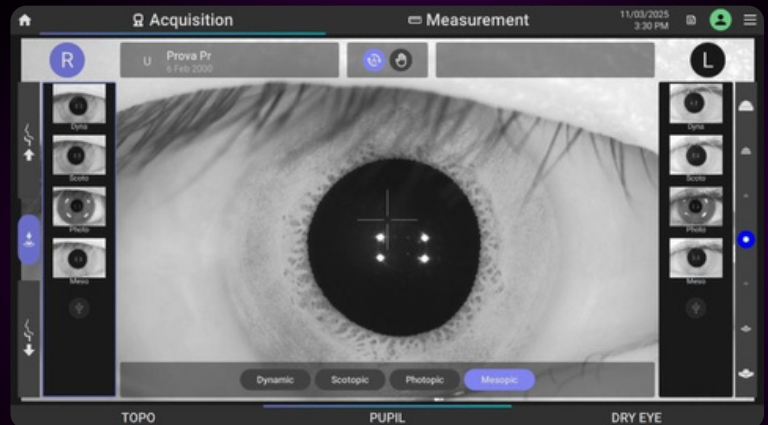


### PUPIL – Pupillometry

Purpose: Measure pupil size and reactivity to different lighting

#### How to Capture:

- Select a measurement mode: Dynamic, Photopic, Mesopic, or Scotopic.
- Auto: Tap the pupil — the device auto-aligns and focuses.
- Manual: Align the four Purkinje reflections over the pupil center. Press the joystick to start and again to stop the recording (or wait for automatic completion).



## DRY EYE = Dry Eye Assessments

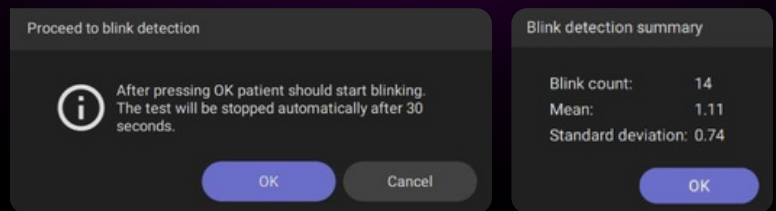
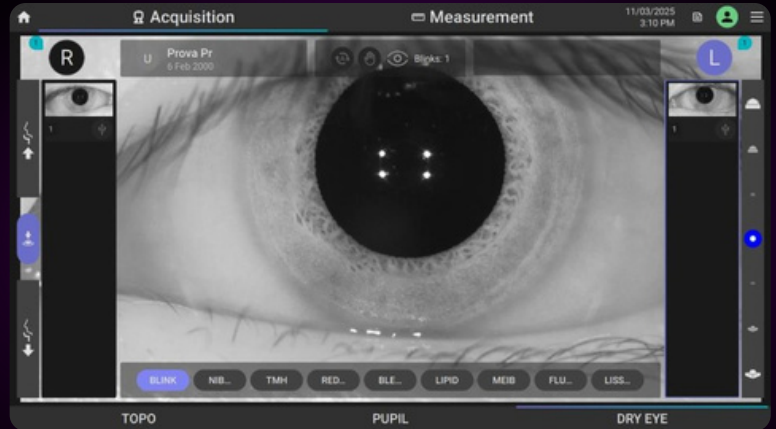
### Blink Analysis

Purpose: Quantify blink frequency and regularity

#### How to Capture:

Manual mode only.

- Align the 4 reflections over the pupil center. Press the joystick and tap OK to begin. Allow the capture to finish automatically (maximum 30 sec) or press joystick to stop.
- Output: Blink count, Interblink Interval (IBI) mean, SD, blinks/min.

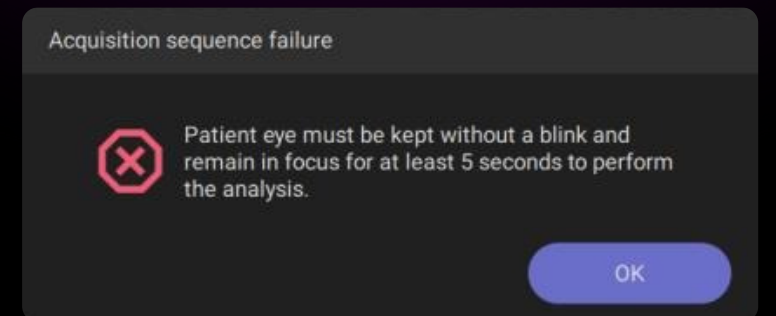


### NIBUT – Non-Invasive Break-Up Time

Purpose: Evaluate tear film stability using Placido ring distortion

#### How to Capture:

- Auto: Tap the pupil – the device auto-aligns and focuses. Instruct patient to blink once (tear film reset) and then hold open for as long as possible. System auto-detects blink and starts analysis.
- Manual: Align crosshair over the pupil center. Press the joystick and adjust focus until green indicators appear. Press again to start capture.
- NIBUT measurement ends at 30 sec or automatically upon patient's second blink.



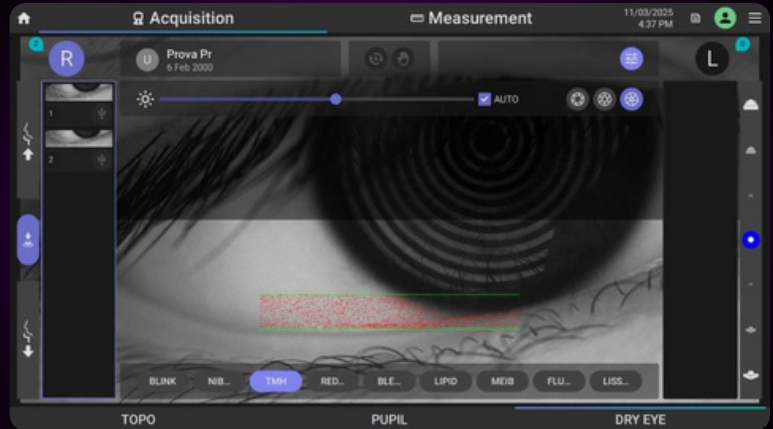
Note: Scan is invalidated and automatically restarted if patient blinks again too soon (<5 sec).

## TMH – Tear Meniscus Height

Purpose: Measure tear volume at the inferior lid margin

### How to Capture:

Align the lower lid between the 2 green reference lines. Adjust focus so that the inferior tear meniscus is centered in the red area of greatest intensity (adjust diaphragm aperture if needed). Press the joystick to capture. There is a slight lag as the system selects the sharpest frame with focus optimization. TMH can be quantified in the Measurement tab using the "Analysis" tool.



## Redness Analysis

Purpose: Assess bulbar and limbal conjunctival hyperemia

### How to Capture:

Center & focus the on-screen image until vessels are clearly defined.

**\*Tip: Touch and drag the on-screen image to easily center the camera.**

Tap the joystick (on-screen or physical) to capture and save image to gallery. Capture additional images in different directions of gaze if indicated.



The 4 lights icon represents the default illumination setting for redness imaging, allowing diffuse, even illumination.



The 2 lights icon allows the option to switch to a central illumination setting, if preferred.

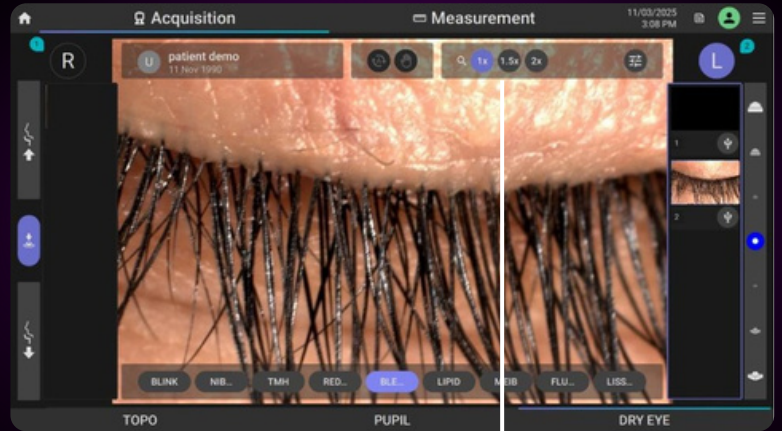
## Blepharitis

Purpose: Document lid margin inflammation and debris

### How to Capture:

Manual mode only.

- Direct the patient to look upward or downward to center the camera on the lower or upper lid margin and lashes, respectively
- Adjust lighting and diaphragm aperture if needed
- Change the magnification as preferred using the on-screen zoom options: 1x, 1.5x, 2x
- Capture the image when the lid margin is sharply focused



Zoom options

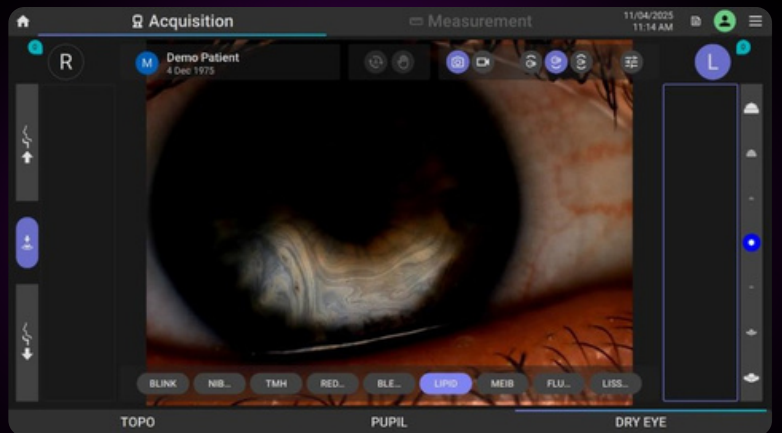
## Lipid Layer

Purpose: Assess lipid layer quality and interference patterns

### How to Capture:

Manual mode only.

- Select photo or video mode
- Open the **Acquisition Adjustment Panel** as needed to adjust image brightness using the slider tool. Use the lightbulb icons (small, medium, large) to adjust the intensity of light shown to the patient
- You can also select the direction of the light projected using the upper, lower, or both arc icons to change the illumination pattern
- Focus on the superficial lipid layer of the tear film. **Tip: this is an oil-on-water appearance** — aim to focus on the colored fringes/patterns, not the cornea. Instruct the patient to blink, then hold their eyes open
- Capture photos or videos. The maximum video length that can be saved can be adjusted in device settings, up to 30 seconds



These icons indicate the direction of the light source, illuminating the upper hemisphere, lower hemisphere, or full 360°

## Meibography (MEIB)

Purpose: Visualize meibomian gland structure using infrared imaging

### How to Capture:

Manual mode only.

- Dim the room lights and evert the upper or lower eyelid
- Center the green capture rectangle over the area of glands
- Sharpen the focus using the on-screen focus bar or joystick (adjust the diaphragm aperture if needed)
- Press the joystick to capture. There may be a slight lag as the system automatically saves the sharpest frame with focus optimization



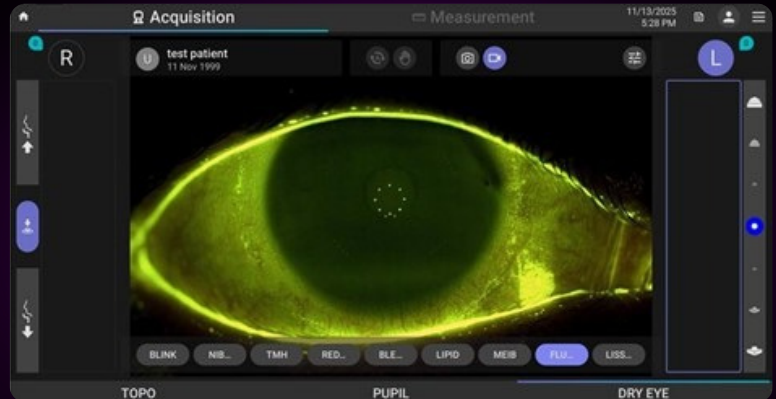
## Fluorescein

Purpose: Assess the ocular surface by highlighting corneal and conjunctival staining after instillation of fluorescein dye

### How to Capture:

Manual mode only.

- The device automatically enables cobalt-blue illumination with a yellow barrier filter
- Select Photo or Video capture mode (video up to 15 seconds).
- Center and focus the image using the LED reflections. Adjust brightness and diaphragm aperture as needed
- Capture and save to the gallery



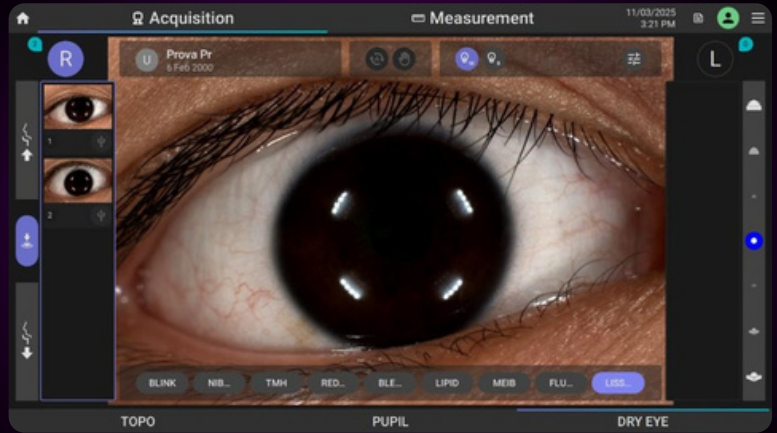
# Lissamine Green

Purpose: Highlight areas of ocular surface damage using lissamine green dye

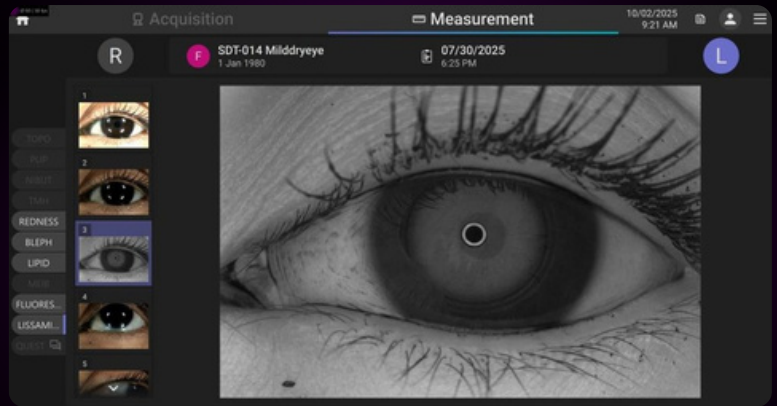
## How to Capture:

Manual mode only.

- Select W (white) or R (red) illumination using the lightbulb icons at the top of the screen
- **Note: Use red illumination to improve contrast and emphasize subtle areas of staining**
- Focus the image and instruct the patient not to blink. Capture the photo



W (white) illumination mode.



R (red) illumination mode.

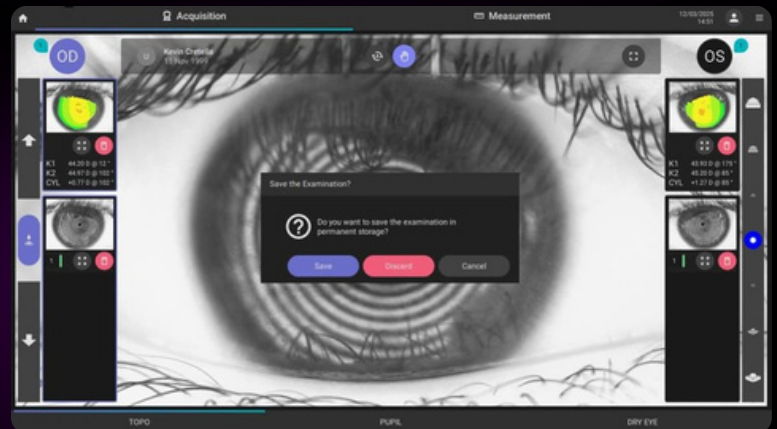
## 3. SAVING DATA

Tap **Home** icon after completion of image acquisitions



### Choose from the following:

- Save – Store acquisition & exit
- Discard – Exit without saving
- Cancel – Return to acquisition



**IMPORTANT:** Read the full User Manual for comprehensive safety information and warnings before operating this device