Full-Field Pupillometry

ColorDome Upgrade Module

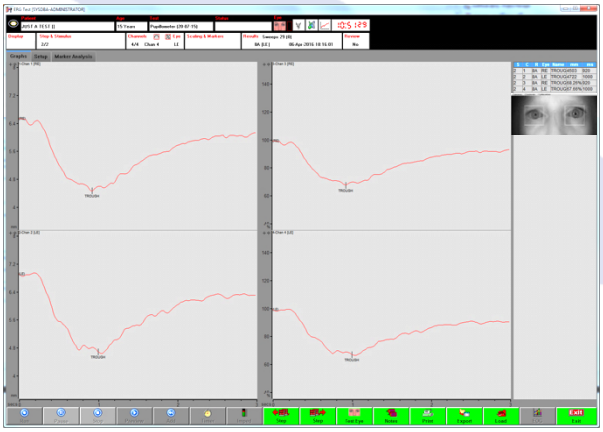
diagnosys
leading the wave

The Full-field Pupillometry module works with the ColorDome™ camera to monitor pupil size of both eyes and display video of the patient's eyes in the Espion™ software during and after a flash.

ColorDome shown mounted on table stand

Features

- Uses the original ColorDome camera
- Uses infrared LED illumination
- Simple set-up: no need for a headband
- Pupil response synchronized with trigger to the ColorDome flash
- Records from any ColorDome color flash stimulus
- Records area or diameter of pupils
- Both eyes stimulated and recorded simultaneously
- Image displayed in Espion software



Software showing the pupil response to a flash in absolute diameter and relative to a baseline

Full-field Pupillometry module includes:

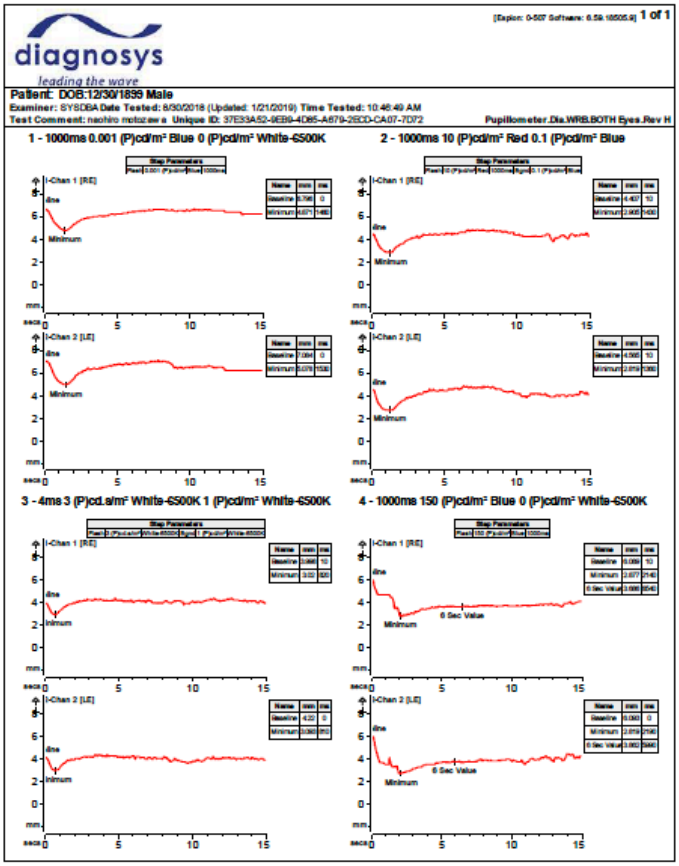
LiveTrack AP
BNC connector to phono connector
Trigger cable (to connect to trigger out on Espion)
Calibration card
USB cable
Espion Pupillometer protocols

Application examples:

The pupillary light reflex (PLR) has been shown to be a valuable clinical test in assessing the health of the rod, cone and melanopsin pathways[1,2]. One of the standard protocols offered with the Diagnosys pupillometer measures the PLR for each of these pathways.

Summary:

1. Rod pathway: 0.001 cd/m^2 blue on 0 cd/m^2 background, for 1 second (after 10 min dark adapt)
2. Red cone pathway: 20 cd/m^2 red on 0.1 cd/m^2 blue background, for 1 second
3. All cone pathways: 3 cds/m2 white 4 ms flash on 1.0 cd/m^2 white background
4. Melanopsin pathway: 150 cd/m^2 blue on 0 cd/m^2 background, for 1 second



Pupillometry module ordering information

Model # D355

Available as an upgrade option to any ColorDome, on the following systems:

- Diagnosys *E*^{3} desktop or *Profile* cart systems (with Espion software Ver 6.61+)

1. Hood, DC, et al; "Toward a Clinical Protocol for Assessing Rod, Cone, and Melanopsin Contributions to the Human Pupil Response;" Investigative Ophthalmology & Visual Science, August 2011, Vol. 52, No. 9
2. Stone, EM, et al: "Full-Field Pupillary Light Responses, Luminance Thresholds, and Light Discomfort Thresholds in CEP290 Leber Congenital Amaurosis Patients;" Invest Ophthalmol Vis Sci. 2015;56:7130–7136. DOI:10.1167/iovs.15-17467
3. Collison, FT, et al; "Two-color pupillometry in KCNV2 retinopathy;" Doc Ophthalmol (2019) 139:11–20

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