Description

The evaluation of the contrast sensitivity function presents much more sensitivity than the standard visual acuity measurements in alterations of ocular media transparency and diseases of the retina and optic nerve.

Tests include gratings with computer controlled spatial frequencies and contrast. They can be static or dynamic (with temporal modulation).

Thanks to its highly innovative technology based on LED backlight, the MonPackONE stimulator can realize contrast sensitivity exams under a wide range of luminance, from low mesopic (0.08 cd/m²) up to photopic levels (80 cd/m²).

Compatible stimulators: MonCV3 MonPack One

Example of result showing:

- **red**: the contrast sensitivity curve as a function of spatial frequency
- **white**: normal limits.

Specifications

- **Examination distance**: from 30 to 500 cm (standard = 200 cm)
- **Type of stimulation**: sinusoidal gratings
- **Stimulation field**: 10 degrees horizontal (for a test distance of 200 cm)
- **Spatial frequencies** (cycles per degree):
  - 25.6 cpd – 12.8 cpd – 6.4 cpd – 3.2 cpd – 1.6 cpd – 0.8 cpd (for a test distance of 200 cm)
- **Temporal modulation frequency**: 10 Hz (for dynamic procedures)
- **Average luminance**: standard = 80 cd/m² (with MonPackONE stimulator, programmable from 0.08 cd/m² up to 80 cd/m²)
- **Glare sources**: programmable on both sides of the contrast grating
Clinical applications

- Contrast sensitivity before and after YAG laser capsulotomy

- Contrast sensitivity before and after LASIK in a subject with high myopia (eye without optical correction)

References

- NEBBIOSO M., GREGORIO F., PRENCIPE L., PECORELLA I. Psychophysical and electrophysiological testing in ocular hypertension. Optometry and vision science. 2011, 88, 8, 928-939.