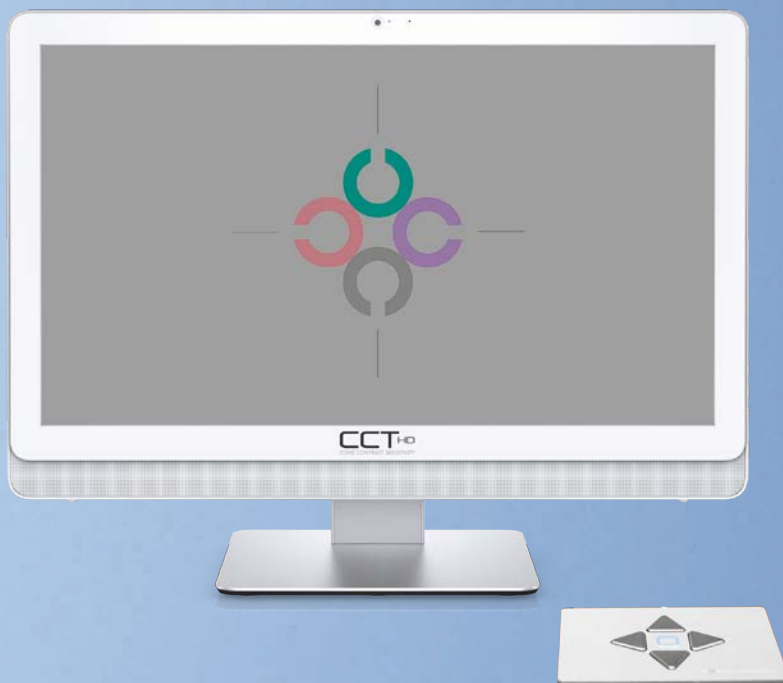


# KONAN<sup>®</sup> MEDICAL

See what you've been missing<sup>™</sup>



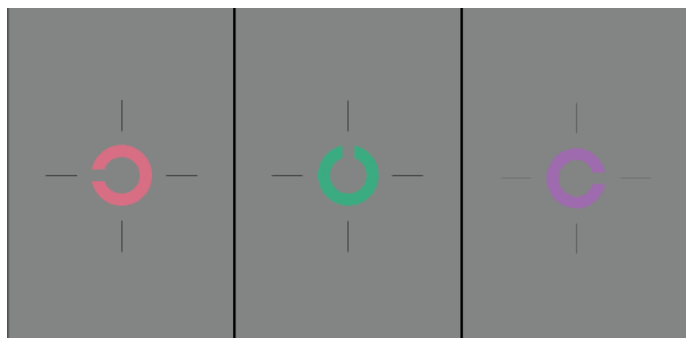
ColorD<sup>®</sup>  
COLOR VISION DIAGNOSTICS

Color Vision Diagnostics

ColorDx CCT HD is a new, high-precision, computer administered color vision diagnostic device developed under a Cooperative Research and Development Agreement (CRADA) between the US Air Force OBVA Laboratory and Konan Medical USA.

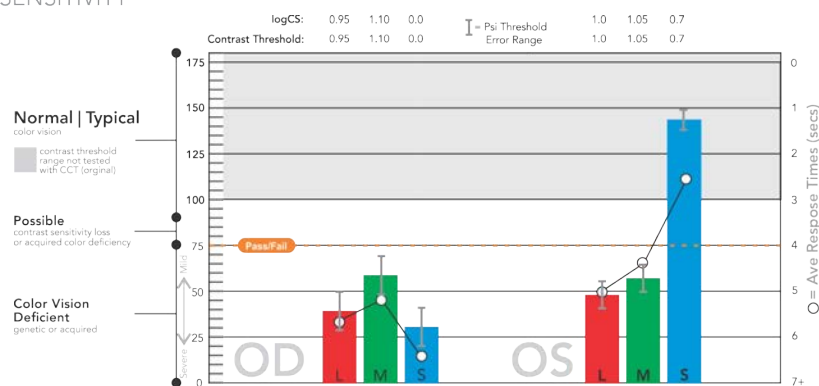
ColorDx CCT HD is based on the cone contrast isolation strategy, with many significant advantages over the original CCT test.

- A robust, adaptive thresholding method developed by Nicolaas Prins<sup>1</sup> improves precision and reliability over previous non-standardized thresholding methods
- Simplified test strategy using the Landolt C eliminates contextual bias from varied complexity of the Sloan character series
- Randomized Monocular and Binocular testing
- Fast screening option
- "HD" High Definition testing extends low contrast threshold range with high granularity of determined contrast threshold
- Proprietary color calibration method enhances the precision of measured thresholds
- Konan 4 button control pad reduces variability in response times by eliminating the need to 'hunt and peck' on a QWERTY keyboard
- Response methodology is neutral to language, culture, literacy and physical ability

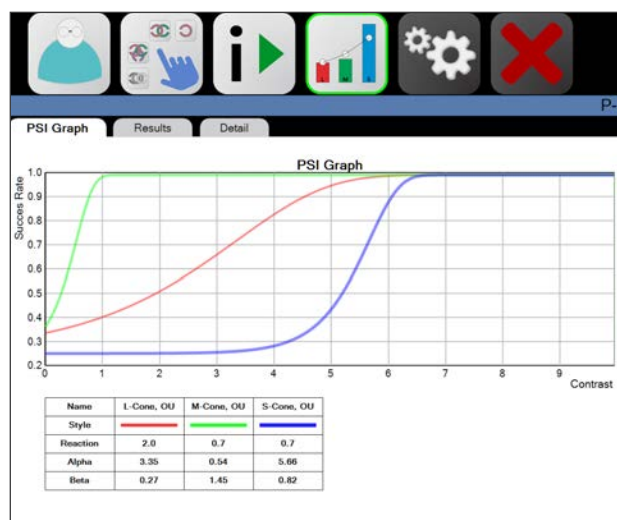


A rotated Landolt C is used to assess L (Red), M (Green) and S (Blue) cone cell function. The 4 response options are simply UP, DOWN, LEFT OR RIGHT.

<sup>1</sup> The psi-marginal adaptive method: How to give nuisance parameters the attention they deserve (no more, no less), Nicolaas Prins, Journal of Vision (2013) 13(7):3, 1-17



Detailed monocular results including USAF pass/fail criteria and response timings



PSI thresholding algorithm



Konan 4 button response pad

Monocular and binocular test strategies & scoring

OD OS OU

Robust Psi Marginal Adaptive threshold + error estimation

Adaptive, fast testing or full threshold

Very low contrast range to 0.2%

High granularity contrast steps

Photopic cone isolation

~85 cd/m<sup>2</sup>

Language & literacy neutral, no character bias, Landolt

Easy testing with purpose-built response device

**CCT<sup>HD</sup>**  
CONE CONTRAST SENSITIVITY

World's Most Advanced Color Vision Diagnostic

Smart, deep, dual calibration

Response time 2<sup>o</sup> performance measure

Secure 256 Bit encrypted patient data

Clear auditory feedback

USAF OBVA CRADA

ISO 13485

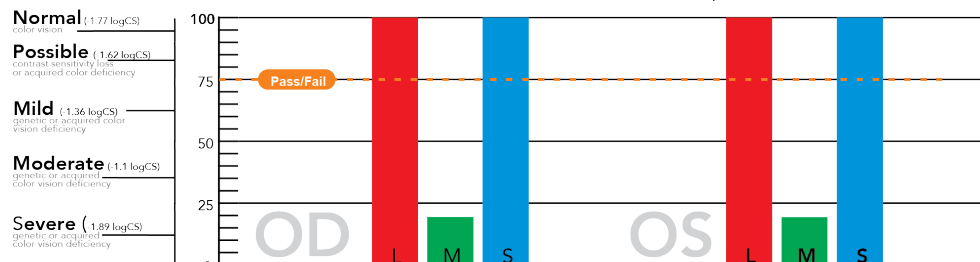
Cut-off criteria may be user / agency set

Patient trends analysis over time

Robust, beautiful reporting

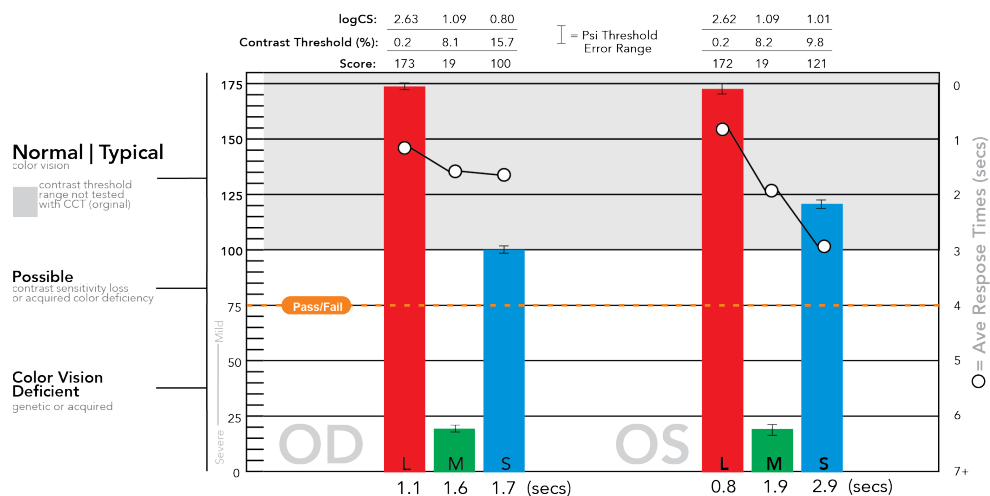
## Original USAF CCT

tested with 5 contrast steps



## CCT HD

expanded contrast range and high granularity



	Competitive Comparison	
	ColorDx CCT HD	CCT (Original)
Calibrated Color Display	Yes	?
Low Contrast Thresholds < 0.2%	Yes	No
High Definition/ Granularity Thresholds	Yes	No
Monocular and Binocular Testing	Yes	No
Fast Screening Threshold Option	Yes	Yes
Target Optotypes	Landolt C	?
User Interface	4 Button Response Pad	On-screen Selected with Mouse/Keyboard
Threshold Method	PSI Marginal Adaptive <sup>1</sup>	Non-Standard
Lowest Contrast Level	< 0.2%	1.6%
Response Time Reporting	Yes	Yes
Reporting	0-180 Scale, LogCS, Contrast Threshold	0 - 100
Hardware Only Replacement/ Refresh Options	Yes	?
Regulatory	FDA Class I	?



## MERCOFRAMES OPTICAL CORP.

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