

RETeval™ Device Specifications

Light Source	Red LED (621nm)	Green LED (530nm)	Blue LED (470nm)	White (RGB)
Flash luminance energies (cd•s/m ²)	0.0001 - 15	0.001 - 17	0.0001 - 5	0.002 - 30
Background luminance (cd/m ²)	0.03 - 3000	0.2 - 3500	0.03 - 1200	0.4 - 6000
To convert to Trolands multiply luminance by the pupil area in mm ² .				
Input Type	Custom 3 pin connector with positive, negative and right leg drive signals			
Noise	< 0.1μV at the flicker frequency for flicker protocols			
CMRR	> 100 dB at 50-60 Hz			
Frequency Range	DC-coupled			
Flicker Frequency	Approximately 28.3 Hz			
Data Resolution	Approximately 71 nV / bit			
Input Range	± 0.6 V			
Sampling Rate	Approximately 2 kHz			
Timing Accuracy† (electronic eye)	< ± 0.1 ms			
Timing Precision† (human eye, 1σ)	Typically < ± 1 ms			
Pupil measurements	1.3mm - 9.0mm, < 0.1mm resolution, 28.3 Hz			
Safety	Battery-powered. Complies with optical, electrical and biocompatibility safety standards			
Power Source	Li-ion battery allows testing of approximately 70 patients before recharging, depending on the protocol used			
Recharging Time	4 hours - charger included (110-240 V~, 50-60 Hz, 0.5A)			
Size	2.8"W x 3.8"D x 9"H (7cm x 10cm x 23cm)			
Weight	8.5oz (240g)			
Docking Station	Convenient storage location, charging stand, and USB connectivity to your computer and network			
Protocols	Based on software options, choose from retinal luminance(Td) and luminance(cd/m ²) versions of ISCEV standard, flicker, s-cone, photopic negative response, on-off, and diabetic retinopathy assessment protocols.			

†For Troland-based flicker protocols having a retinal luminance energy ≥ 4 Td•s

