

Table of Constants

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Description

The 'A-constant' originated from the SRK formula for calculating lens implant (IOL) powers. The A-constant is an empirical value and is specific to the design of each IOL.

- The SRK formula has improved IOL power calculations. The third-generation formulas are the most well-known and include the Hoffer Q, Holladay 1, and SRK/T.
- Third-generation formulas can be optimized with a lens constant. This is known as the **A-constant** in the SRK/T formula, the surgeon factor in the Holladay 1 formula, and the pseudophakic ACD constant in the Hoffer Q formula.
- The A-constant allows an adjustment to be made to the predicted refractive outcome if a systematic error is found.

Purpose & Use

This document was made to help calculate SAV-IOL intraocular lens implant powers and to show the varying differentiations between other formulas like Haigis and Barrett. This document can be used to advise lens powers of Lucidis, Lucidis T, Eden, Eden T, and Harmonis.

Reference: Sivaraman, Section Editor Kavitha R., et al. "The Lens Constant." *CRSToday*, Apr. 2021, <https://crstoday.com/articles/april-2021/the-lens-constant/>

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SAV-IOL Intraocular Lenses	SRK/T A	SRK II A	Hoffer Q	Holladay	Haigis			Ultrasound	Barrett LF
	Measured	Extrapolated							
		pACD	SF	A0	A1	A2			
Lucidis 108M Lucidis 108MT	118.00	118.15	4.88	1.10	0.647	0.400	0.100	117.50	1.36
Lucidis 124M Lucidis 124MT	118.50	118.78	5.20	1.42	0.978	0.400	0.100	118.00	1.62
Eden 108M Eden 108MT	117.80	117.90	4.75	0.97	0.515	0.400	0.100	117.30	1.26
Eden 124M Eden 124MT	118.50	118.78	5.20	1.42	0.978	0.400	0.100	118.00	1.62
Harmonis (10.8)	117.80	117.90	4.75	0.97	0.515	0.400	0.100	117.30	1.26
Harmonis (12.4)	118.30	118.53	5.07	1.29	0.846	0.400	0.100	117.80	1.52

Comments

Nominal A-Constant	118.0 (all lenses)
Extrapolated Constants	From ULIB Database (except Ultrasound and Barrett LF) <i>Conversion of IOL constants into one another</i> http://ocusoft.de/scripts2/ciolc.php
Ultrasound	Ultrasound constants are statistically shifted of -0.5 from the SRK/T value
Barrett LF Constant	Barrett constants are extrapolated from the Lenstar biometer
Hill-RBF A-Constant	Hill RBF A-Constant is dynamically updated in the Lenstar per the users' inputs
Olsen Formula	Olsen parameters are inside the Lenstar
Recommendation	SAV-IOL recommends that surgeons personalize their constant based on their surgical technique, equipment, experience and post-operative results.

Change Log

16 Mar 2022	Add explanatory cover page
01 Jun 2021	Creation of controlled document number PKG 01146 V01
12 Sep 2019	Add the toric version of Lucidis and Eden lenses, remove the InFo lens, add the Barrett constant for Harmonis (12.4), add comments for Hill RBF and Olsen
28 Sep 2018	Add of the Harmonis lens
13 Jul 2018	Add of the Barret LF constant