

DATA FORMAT

TOPO

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1. Definition of TAG and fields in CSV file

Tag Name	Explanation of the tag	Field following a tag							Unit
		Number of appearance	Number of fields	Name of fields	Type of fields	Character type	The maximum number of the characters	Detail	
[VER]	Software Version	-	n	Version number 1	String	ASCII	16	String	
					
				Version number 2	String	ASCII	16	String	
[FILES_N]	Number of the attached file	-	2	Number of the files	Num	ASCII	3	Unsigned integer(0~999)	
				presence or absence of encryption	String	ASCII		"Blank" : encrypted "no encryption" : not encrypted	
[FILE]	File information	Max 16	2	File name of the attached file	String	UTF8	255	String (Screen capture image is SCREENSHOT.JPG)	
				Function classification code	String	ASCII	4	String	
[INF_R]	Measurement information of right eye	-	1	Cone position	Num	ASCII	5	Unsigned decimal(0.00~99.99)	mm
[OFST_R]	Offset of right eye	-	3	X of Offset	Num	ASCII	6	Signed decimal(-9.99~+99.99)X: It is + when shift to the right on the screen displays.:	mm
				Y of Offset	Num	ASCII	6	Signed decimal(-9.99~+99.99) Y:It is + when shifting up.	mm
				Z of Offset	Num	ASCII	6	Signed decimal(-9.99~+99.99) Z:It is + when approaching.	mm
[TK1_R]	Weak meridian of right eye	-	3	Meridian(mm)	Num	ASCII	5	Unsigned decimal(0.00~99.99)	mm
				Meridian(D)	Num	ASCII	6	Signed decimal(-9.99~+99.99)	
				Angle	Num	ASCII	2	Unsigned integer(0~179), Less than 0.2D is a blank. the astigmatism frequency	mm
[TK2_R]	Strong meridian of right eye	-	3	Meridian(mm)	Num	ASCII	5	Unsigned decimal(0.00~99.99)	mm
				Meridian(D)	Num	ASCII	6	Signed decimal(-9.99~+99.99)	
				Angle	Num	ASCII	2	Unsigned integer(0~179), It is blank when astigmatism is less than 0.2D.	mm
[AV_R]	Average of strong and weak principal meridians	-	2	Meridian(mm)	Num	ASCII	5	Unsigned decimal(0.00~99.99)	mm
				Meridian(D)	Num	ASCII	6	Signed decimal(-9.99~+99.99)	

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[CYL_R]	Cylindrical power of right eye	-	2	Cylindrical power	Num	ASCII	6	Signed decimal(0.00~—99.99)	Diopter
				Angle	Num	ASCII	2	Unsigned integer(0~179), It is blank when astigmatism is less than 0.2D.	mm
[2MM_R]	Average refractive power in 2mm of right eye	-	2	Meridian(mm)	Num	ASCII	5	Unsigned decimal(0.00~99.99)	
				Meridian(D)	Num	ASCII	6	Signed decimal(-9.99~+99.99)	
[STS_L]	Cornea index of right eye	-	9	SAI	Num	ASCII	4	Unsigned decimal(0.00~9.99)	
				SRI	Num	ASCII	4	Unsigned decimal(0.00~9.99)	
				ACP	Num	ASCII	6	Signed decimal(-9.99~+99.99)	
				CEI	Num	ASCII	5	Signed decimal(-9.99~9.99)	
				SDP	Num	ASCII	6	Signed decimal(-9.99~+99.99)	
				IAI	Num	ASCII	4	Unsigned decimal(0.00~9.99)	
				AA	Num	ASCII	6	Unsigned decimal(0.00~100.00)	%
				EDP	Num	ASCII	6	Signed decimal(-9.99~+99.99)	
				EDD	Num	ASCII	5	Unsigned decimal(0.00~99.99)	mm
[FOURIER_R]	Fourier Index of right eye	2	7	Measurement point	Num	ASCII	6	Unsigned decimal(0.00~99.99)	mm
				Spherical	Num	ASCII	6	Unsigned decimal(0.0~+999.99)	Diopter
				Reg. Astig	Num	ASCII	6	Unsigned decimal(0.0~+999.99)	Diopter
				Reg. Astig (Axis)	Num	ASCII	6	Unsigned decimal(0.0~+999.99)	
				Asymmetry	Num	ASCII	6	Unsigned decimal(0.0~+999.99)	Diopter
				Asymmetry (axis)	Num	ASCII	6	Unsigned decimal(0.0~+999.99)	
				Highr order	Num	ASCII	6	Unsigned decimal(0.0~+999.99)	Diopter
[KKS_L]	Klyce Corneal Statistics of right eye	-	4	KCI	Num	ASCII	6	Unsigned decimal(0.0~100.0)	%
				DSI	Num	ASCII	6	Signed decimal(-9.99~+99.99)	
				OSI	Num	ASCII	6	Signed decimal(-9.99~+99.99)	
				CSI	Num	ASCII	6	Signed decimal(-9.99~+99.99)	
[INF_L]	Measurement information of left eye	-	1	Cone position	Num	ASCII	5	Unsigned decimal(0.00~99.99)	mm
[OFST_L]	Offset of left eye	-	3	X of Offset	Num	ASCII	6	Signed decimal(-9.99~+99.99)X:It is + when shift to the right on the screen displays.:	mm
				Y of Offset	Num	ASCII	6	Signed decimal(-9.99~+99.99) Y:It is + when shifting up.	mm
				Z of Offset	Num	ASCII	6	Signed decimal(-9.99~+99.99) Z:It is + when Approaching is +.	mm
[K1_L]	Weak meridian of left eye	-	3	Meridian(mm)	Num	ASCII	5	Unsigned decimal(0.00~99.99)	mm
				Meridian(D)	Num	ASCII	6	Signed decimal(-9.99~+99.99)	
				Angle	Num	ASCII	2	Unsigned integer(0~179), It is blank when astigmatism is less than 0.2D.	mm
[K2_L]	Strong meridian of left eye	-	3	Meridian(mm)	Num	ASCII	5	Unsigned decimal(0.00~99.99)	mm
				Meridian(D)	Num	ASCII	6	Signed decimal(-9.99~+99.99)	
				Angle	Num	ASCII	2	Unsigned integer(0~179), It is blank when astigmatism is less than 0.2D.	mm

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[AV_L]	Average of strong and weak principal meridians	-	2	Meridian(mm)	Num	ASCII	5	Unsigned decimal(0.00~99.99)	mm
				Meridian(D)	Num	ASCII	6	Signed decimal(-9.99~+99.99)	
[CYL_L]	Cylindrical power of left eye	-	2	Cylindrical power	Num	ASCII	6	Signed decimal(0.00~-99.99)	Diopter
				Angle	Num	ASCII	2	Unsigned integer(0~179), It is blank when astigmatism is less than 0.2D.	mm
[2MM_L]	Average refractive power in 2mm of left eye	-	2	Meridian(mm)	Num	ASCII	5	Unsigned decimal(0.00~99.99)	
				Meridian(D)	Num	ASCII	6	Signed decimal(-9.99~+99.99)	
[STS_L]	Cornea index of left eye	-	9	SAI	Num	ASCII	4	Unsigned decimal(0.00~9.99)	
				SRI	Num	ASCII	4	Unsigned decimal(0.00~9.99)	
				ACP	Num	ASCII	5	Unsigned decimal(0.00~99.99)	Diopter
				CEI	Num	ASCII	5	Signed decimal(-9.99~9.99)	
				SDP	Num	ASCII	6	Signed decimal(-9.99~+99.99)	mm
				IAI	Num	ASCII	4	Unsigned decimal(0.00~9.99)	
				AA	Num	ASCII	6	Unsigned decimal(0.00~100.00)	%
				EDP	Num	ASCII	5	Unsigned decimal(0.00~99.99)	Diopter
				EDD	Num	ASCII	5	Unsigned decimal(0.00~99.99)	mm
[FOURIER_L]	Fourier Index of left eye	2	7	Measurement point	Num	ASCII	6	Unsigned decimal(0.00~99.99)	mm
				Spherical	Num	ASCII	6	Unsigned decimal(0.0~+999.99)	Diopter
				Reg. Astig	Num	ASCII	6	Unsigned decimal(0.0~+999.99)	Diopter
				Reg. Astig (Axis)	Num	ASCII	6	Unsigned decimal(0.0~+999.99)	
				Asymmetry	Num	ASCII	6	Unsigned decimal(0.0~+999.99)	Diopter
				Asymmetry (axis)	Num	ASCII	6	Unsigned decimal(0.0~+999.99)	
				Highr order	Num	ASCII	6	Unsigned decimal(0.0~+999.99)	Diopter
[KKS_L]	Klyce Corneal Statistics of left eye	-	4	KCI	Num	ASCII	5	Unsigned decimal(0.0~100.0)	%
				DSI	Num	ASCII	6	Signed decimal(-9.99~+99.99)	
				OSI	Num	ASCII	6	Signed decimal(-9.99~+99.99)	
				CSI	Num	ASCII	6	Signed decimal(-9.99~+99.99)	
[PD]	Value of PD	-	1	Value of PD	Num	ASCII	5	Unsigned decimal(0.0~100.0)	mm

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※Remarks:Function classification code

Function classification code	classification A(Eye)		classification B(Kind of Map)		classification C (Astigmatism display)		classification D (Unit of display)	
	R	Single Map(Right)	C	Capture image(Before TMS analyzes it)	N	None	N	None
	L	Single Map(Left)	R	Verify Mires (Before TMS analyzes it)	O	Orthogonal	M	mm
	D	Single Map(Both eyes)	A	Absolute Map	I	Instantaneous	D	Diopter
	X	Others(Excluding the image.)	N	Normalized Map	Z	Zonal	U	μ m
			I	Capture image(After TMS analyzes it)	X	Others	X	Others
			M	Ring recognition image(After TMS analyzes it)	classification C (CSV file)			
			0	Fourier analyses(Sphere)	D	Diopter[D]: (Axial Power)		
			2	Fourier analyses(Astigmatismus regularis)	R	Radius[mm]		
			1	Fourier analyses(Asymmetry)	H	Height[mm]		
			H	Fourier analyses (Higher-order, illegal astigmatism)	P	Power[D]: Refractive Power		
			F	Fluorescein pattern	C	Iroc[D]: Instantaneous		
			S	Screen Capture				
			X	Others				
			B	CORNIA.ACT classification C and D are "X"				

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2.Sample(The portion following a common header)

2-1.Both eye measurement

Sample	Explanation
[FM_IF],TOPO,1-01-05	Format type ; TOPO version ; 1-01-05
[VER],2.00	Software Version 2.00
[FILES_N],5,no encryption	Five attached files, no encryption
[FILE],000001ri.pcx,RCNN 000001ri.pcx	Capture image of right eye
[FILE],000001rm.pcx,RNNM 000001rm.pcx	Single map of right eye(Normalized)
[FILE],000001li.pcx,LCNN 000001li.pcx	Capture image of left eye
[FILE],000001lm.pcx,LNNM 000001lm.pcx	Single map of Left eye(Normalized)
[FILE],SCREENSHOT.JPG,LSXX	Capture image of Left eye
[INF_R],20.0	Measurement corn positions of right eyes20.0mm
[OFST_R],+0.05,-0.02,0.00	Each of amount when right eyes are measured
[TK1_R],7.71,43.77,159	Weak meridian of right eye 7.71mm(43.77D)159°
[TK2_R],7.70,43.83,69	Strong meridian of right eye 7.70mm(43.83D)69°
[AV_R],7.71,43.77	Right eye cornea Power(average) 7.71mm(43.77D)
[CYL_R],-0.06,159	Astigmatism frequency of right eye -0.06D
[INF_L],17.0	Corn position 17.0mm
[OFST_L],+0.05,-0.02,0.00	Each of amount when left eyes are measured
[STS_R],,,,,,,	Cornea index of right eye
[KKS_R],,,,	Klyce Corneal Statistics of right eye
[TK1_L],8.03,42.03,111	Weak meridian of left eye 8.03mm(42.03D)111°
[TK2_L],7.79,43.32,21	Strong meridian of left eye 7.79mm(43.32D)21°
[AV_L],7.91,42.67,	Average of strong and weak principal meridians 7.91mm(42.67D)

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[CYL_L],-0.06,111	Cylindrical power of left eye -0.06D 111°
[STS_L],,,,,,,	Cornea index of left eye
[KKS_L],,,	Klyce Corneal Statistics of left eye
[PD],55.0	Value of PD 55.0mm

2-2.Single eye measurement(Right eye)

Sample	Explanation
[FM_IF],TOPO,1-01-01	Format type ; TOPO version ; 1-01-01
[VER],2.00	Software Version 2.00
[FILES_N],3 no encryption	Three attached files, , no encryption
[FILE],000001ri.pcx,RCNN 000001ri.pcx	Capture image of right eye
[FILE],000001rm.pcx,RANM 000001rm.pcx	Single map of right eye(Absolute)
[FILE],SCREENSHOT.JPG,RSXX	Capture image of Right eye
[INF_R],20.0	Measurement cone positions of right eyes 20.0mm
[OFST_R],+0.05,-0.02,0.00	Offset when right eyes are measured
[TK1_R],7.71,43.77,159	Weak meridian of right eye 7.71mm(43.77D)159°
[TK2_R],7.70,43.83,69	Strong meridian of right eye 7.70mm(43.83D)69°
[AV_R],7.71,43.77	Average of strong and weak principal meridians 7.71mm(43.77D)
[CYL_R],-0.06,159	Cylindrical power of right eye-0.06D
[INF_L],	Measurement cone positions of left eyes
[PD],55.0	Value of PD 55.0mm