

**Treatment Time Calculation Table - Traditional 2D Method**

Calculated by European Traditional Method

Power Density I (W/cm<sup>2</sup>) = P(mW)/1000 /A(cm<sup>2</sup>)  
 Energy Density Da (J/cm<sup>3</sup>)=P(mW)/1000 x t(sec.)/A(cm<sup>2</sup>)/d  
 Treatment Time (second) Tc d < 1 cm Da (J/cm<sup>3</sup>)=P(mW)/1000 x t(sec.)/A(cm<sup>2</sup>)/(1+d)  
 d > 1 cm Tc=D x A/P x 1000 x d  
 d > 1 cm Tc=D x A/P x 1000 x (1+d)

**Handheld Laser *Aculus-AM-100C***

Laser	Wavelength (nm)	CW Power (mW)	End Power (mW)	Treatment Area (cm <sup>2</sup> )	Power Density (mW/cm <sup>2</sup> )	Unit Energy Density (J/sec.-cm <sup>2</sup> )	Target Dose (J/cm <sup>2</sup> )	Calculation Time			Tc (Min.)
								(Sec.)	(Min.)	(Sec.)	
AM-100C + Cap-A	660nm	150	135	0.13	1,038	1.0385	3	3			
							4	4			
							6	6			
							8	8			
							9	9			
AM-100C + Cap-C or Cap-D	660nm	150	120	0.5	240	0.2400	3	13			
							4	17			
							6	25			
							8	33			
							9	38			
AM-100C + Cap-E	660nm	150	105	0.13	808	0.8077	3	4			
							4	5			
							6	7			
							8	10			
							9	11			
AM-100C + Cap-S	660nm	150	90	3.14	29	0.0287	3	105	1	45	2
							4	140	2	20	3
							6	209	3	29	4
							8	279	4	39	4.5
							9	314	5	14	5

**Handheld Laser *Aculus-AM-100C***

Laser	Wavelength (nm)	CW Power (mW)	End Power (mW)	Treatment Area (cm <sup>2</sup> )	Power Density (mW/cm <sup>2</sup> )	Unit Energy Density (J/sec.-cm <sup>2</sup> )	Target Dose (J/cm <sup>2</sup> )	Calculation Time			Tc (Min.)
								(Sec.)	(Min.)	(Sec.)	
AM-100C + Cap-A	808nm	460	414	0.13	3,184.6	3.1846	3	3			
							4	4			
							6	6			
							8	8			
							9	9			
AM-100C + Cap-C or Cap-D	808nm	460	368	0.5	736.0	0.7360	3	4			
							4	5			
							6	8			
							8	11			
							9	12			
AM-100C + Cap-E	808nm	460	322	0.13	2,476.9	2.4769	3	4			
							4	5			
							6	7			
							8	10			
							9	11			
AM-100C + Cap-S	808nm	460	276	3.14	87.9	0.0879	3	34			
							4	46			
							6	68			
							8	91			
							9	102			

Treatment Time Calculation Table - [Traditional 2D Method](#)

Laser Shower <i>Aculas-AM-102</i>											
Laser	Wavelength	CW Power	End Power	Treatment Area	Power Density	Unit Energy Density	Target Dose	Calculation Time			Tc
	(nm)	(mW)	(mW)	(cm <sup>2</sup> )	(mW/cm <sup>2</sup> )	(J/sec.-cm <sup>2</sup> )	(J/cm <sup>2</sup> )	(Sec.)	(Min.)	(Sec.)	(Min.)
AM-102 Shower	405nm 780nm 980nm	500	500	32	15.6	0.0156	3	192	3	12	3
							4	256	4	16	4
							6	384	6	24	7
							8	512	8	32	9
							9	576	9	36	10
AM-102 Shower	660nm	750	750	32	23.4	0.0234	3	128	2	8	2
							4	171	2	51	3
							6	256	4	16	4
							8	341	5	41	6
							9	384	6	24	7
AM-102 Shower	808nm	1000	1000	32	31.3	0.0313	3	96	1	36	2
							4	128	2	8	2
							6	192	3	12	3
							8	256	4	16	4
							9	288	4	48	5

Treatment Time Calculation Table - Traditional 2D Method

Battery-powered Laser <i>Klas-A</i>											
Laser	Wavelength	CW Power	End Power	Treatment Area	Power Density	Unit Energy Density	Target Dose	Calculation Time			Tc
	(nm)	(mW)	(mW)	(cm <sup>2</sup> )	(mW/cm <sup>2</sup> )	(J/sec.-cm <sup>2</sup> )	(J/cm <sup>2</sup> )	(Sec.)	(Min.)	(Sec.)	(Min.)
Klas-A50	660nm	50	45	0.13	346.2	0.3462	3	9			
							4	12			
							6	17			
							8	23			
							9	26			
Klas-A61	660nm	100	90	0.13	692.3	0.6923	3	4			
							4	6			
							6	9			
							8	12			
							9	13			
Klas-A79	780nm	100	90	0.13	692.3	0.6923	3	4			
							4	6			
							6	9			
							8	12			
							9	13			
Klas-A81	808nm	110	99	0.13	761.5	0.7615	3	4			
							4	5			
							6	8			
							8	11			
							9	12			

Battery-powered Laser <i>Klas-D</i>											
Laser	Wavelength	CW Power	End Power	Treatment Area	Power Density	Unit Energy Density	Target Dose	Calculation Time			Tc
	(nm)	(mW)	(mW)	(cm <sup>2</sup> )	(mW/cm <sup>2</sup> )	(J/sec.-cm <sup>2</sup> )	(J/cm <sup>2</sup> )	(Sec.)	(Min.)	(Sec.)	(Min.)
Klas-D50	660nm	50	40	0.5	80.0	0.0800	3	38			
							4	50			
							6	75			
							8	100			
							9	113			
Klas-D61	660nm	100	80	0.5	160.0	0.1600	3	19			
							4	25			
							6	38			
							8	50			
							9	56			
Klas-D81	808nm	110	88	0.5	176.0	0.1760	3	17			
							4	23			
							6	34			
							8	45			
							9	51			

Treatment Time Calculation Table - Traditional 2D Method

Battery-powered Laser <i>Klas-E</i>											
Laser	Wavelength	CW Power	End Power	Treatment Area	Power Density	Unit Energy Density	Target Dose	Calculation Time			Tc
	(nm)	(mW)	(mW)	(cm <sup>2</sup> )	(mW/cm <sup>2</sup> )	(J/sec.-cm <sup>2</sup> )	(J/cm <sup>2</sup> )	(Sec.)	(Min.)	(Sec.)	(Min.)
Klas-E50	660nm	50	35	0.13	269	0.2692	3	11			
							4	15			
							6	22			
							8	30			
							9	33			
Klas-E61	660nm	100	70	0.13	538	0.5385	3	6			
							4	7			
							6	11			
							8	15			
							9	17			
Klas-E81	808nm	110	77	0.13	592	0.5923	3	5			
							4	7			
							6	10			
							8	14			
							9	15			

Battery-powered Laser <i>Klas-S</i>											
Laser	Wavelength	CW Power	End Power	Treatment Area	Power Density	Unit Energy Density	Target Dose	Calculation Time			Tc
	(nm)	(mW)	(mW)	(cm <sup>2</sup> )	(mW/cm <sup>2</sup> )	(J/sec.-cm <sup>2</sup> )	(J/cm <sup>2</sup> )	(Sec.)	(Min.)	(Sec.)	(Min.)
Klas-S50	660nm	50	30	3.14	9.6	0.0096	3	314	5	14	5
							4	419	6	59	7
							6	628	10	28	11
							8	837	13	57	14
							9	942	15	42	16
Klas-S61	660nm	100	60	3.14	19.1	0.0191	3	157	2	37	3
							4	209	3	29	4
							6	314	5	14	5
							8	419	6	59	7
							9	471	7	51	8
Klas-S81	808nm	110	66	3.14	21.0	0.0210	3	143	2	23	2.5
							4	190	3	10	3
							6	285	4	45	5
							8	381	6	21	6.5
							9	428	7	8	7

Treatment Time Calculation Table - Traditional 2D Method

Battery-powered Laser <i>Klas-P62</i>											
Laser	Wavelength	CW Power	End Power	Treatment Area	Power Density	Unit Energy Density	Target Dose	Calculation Time			Tc
	(nm)	(mW)	(mW)	(cm <sup>2</sup> )	(mW/cm <sup>2</sup> )	(J/sec.-cm <sup>2</sup> )	(J/cm <sup>2</sup> )	(Sec.)	(Min.)	(Sec.)	(Min.)
Klas-P62 + Cap-A	808nm	250	225	0.13	1,731	1.7308	3	2			
							4	2			
							6	3			
							8	5			
							9	5			
Klas-P62 + Cap-C or Cap-D	808nm	250	200	0.5	400	0.4000	3	8			
							4	10			
							6	15			
							8	20			
							9	23			
Klas-P62 + Cap-E	808nm	250	180	0.13	1,385	1.3846	3	2			
							4	3			
							6	4			
							8	6			
							9	7			
Klas-P62 + Cap-S	808nm	250	150	3.14	48	0.0478	3	63			
							4	84			
							6	126			
							8	167			
							9	188			

Battery-powered Laser <i>Klas-P64</i>											
Laser	Wavelength	CW Power	End Power	Treatment Area	Power Density	Unit Energy Density	Target Dose	Calculation Time			Tc
	(nm)	(mW)	(mW)	(cm <sup>2</sup> )	(mW/cm <sup>2</sup> )	(J/sec.-cm <sup>2</sup> )	(J/cm <sup>2</sup> )	(Sec.)	(Min.)	(Sec.)	(Min.)
Klas-P64 + Cap-A	808nm	460	414	0.13	3,185	3.185	3	1			
							4	1			
							6	2			
							8	3			
							9	3			
Klas-P64 + Cap-C or Cap-D	808nm	460	368	0.5	736	0.736	3	4			
							4	5			
							6	8			
							8	11			
							9	12			
Klas-P64 + Cap-E	808nm	460	320	0.13	2,462	2.462	3	1			
							4	2			
							6	2			
							8	3			
							9	4			
Klas-P64 + Cap-S	808nm	460	276	3.14	88	0.088	3	34			
							4	46			
							6	68			
							8	91			
							9	102			

Treatment Time Calculation Table - Traditional 2D Method

Laser Irradiation <i>Megalas-AM-800</i>											
Laser	Wavelength (nm)	CW Power (mW)	End Power (mW)	Treatment Area (cm <sup>2</sup> )	Power Density (mW/cm <sup>2</sup> )	Unit Energy Density (J/sec.-cm <sup>2</sup> )	Target Dose (J/cm <sup>2</sup> )	Calculation Time			Tc (Min.)
								(Sec.)	(Min.)	(Sec.)	
1 Irradiator	660nm	2000	2000	314	6.4	0.0064	3	471	7	51	8
							4	628	10	28	11
							6	942	15	42	16
							8	1,256	20	56	21
							9	1,413	23	33	24
	780nm	1900	1900	314	6.1	0.0061	3	496	8	16	8
							4	661	11	1	11
							6	992	16	32	17
							8	1,322	22	2	22
							9	1,487	24	47	25
	808nm	3800	3800	314	12.1	0.0121	3	248	4	8	4
							4	331	5	31	6
							6	496	8	16	8
							8	661	11	1	11
							9	744	12	24	13
2 Irradiators (to same area)	660nm	4000	4000	314	12.7	0.0127	3	236	3	56	4
							4	314	5	14	5
							6	471	7	51	8
							8	628	10	28	11
							9	707	11	47	12
	780nm	3800	3800	314	12.1	0.0121	3	124	2	4	2
							4	165	2	45	3
							6	248	4	8	4
							8	331	5	31	6
							9	372	6	12	6
	808nm	7600	7600	314	24.2	0.0242	3	124	2	4	2
							4	165	2	45	3
							6	248	4	8	4
							8	331	5	31	6
							9	372	6	12	6
3 Irradiators (to same area)	660nm	6000	6000	314	19.1	0.0191	3	157	2	37	3
							4	209	3	29	4
							6	314	5	14	5
							8	419	6	59	7
							9	471	7	51	8
	780nm	5700	5700	314	18.2	0.0182	3	165	2	45	3
							4	220	3	40	4
							6	331	5	31	6
							8	441	7	21	8
							9	496	8	16	8
	808nm	11400	11400	314	36.3	0.0363	3	83	1	23	2
							4	110	1	50	2
							6	165	2	45	3
							8	220	3	40	4
							9	248	4	8	4

Treatment Time Calculation Table - Traditional 2D Method

Laser Irradiation <i>emLas-900</i>											
Laser	Wavelength	CW Power	End Power	Treatment Area	Power Density	Unit Energy Density	Target Dose	Calculation Time			Tc
	(nm)							(mW)	(mW)	(cm <sup>2</sup> )	
900A	660nm	1000	1000	314	3.2	0.0032	3	942	15	42	16
							4	1,256	20	56	21
							6	1,884	31	24	32
900B	660nm	2000	2000	314	6.4	0.0064	3	471	7	51	8
							4	628	10	28	11
							6	942	15	42	16
							8	1,256	20	56	21
							9	1,413	23	33	24
900C 900D	780nm 808nm	1900	1900	314	6.1	0.0061	3	496	8	16	8
							4	661	11	1	11
							6	992	16	32	17
							8	1,322	22	2	22
							9	1,487	24	47	25

Laser Shower <i>emLas-650</i>											
Laser	Wavelength	CW Power	End Power	Treatment Area	Power Density	Unit Energy Density	Target Dose	Calculation Time			Tc
	(nm)							(mW)	(mW)	(cm <sup>2</sup> )	
650A	660nm	250	250	32	7.8	0.0078	3	384	6	24	7
							4	512	8	32	9
							6	768	12	48	13
							8	1,024	17	4	17
							9	1,152	19	12	19
650B	660nm	500	500	32	15.6	0.0156	3	192	3	12	3
							4	256	4	16	4
							6	384	6	24	7
							8	512	8	32	9
							9	576	9	36	10
650C	780nm	500	500	32	15.6	0.0156	3	192	3	12	3
							4	256	4	16	4
							6	384	6	24	7
							8	512	8	32	9
							9	576	9	36	10
650D	808nm	700	700	32	21.9	0.0219	3	137	2	17	3
							4	183	3	3	3
							6	274	4	34	5
							8	366	6	6	6
							9	411	6	51	7