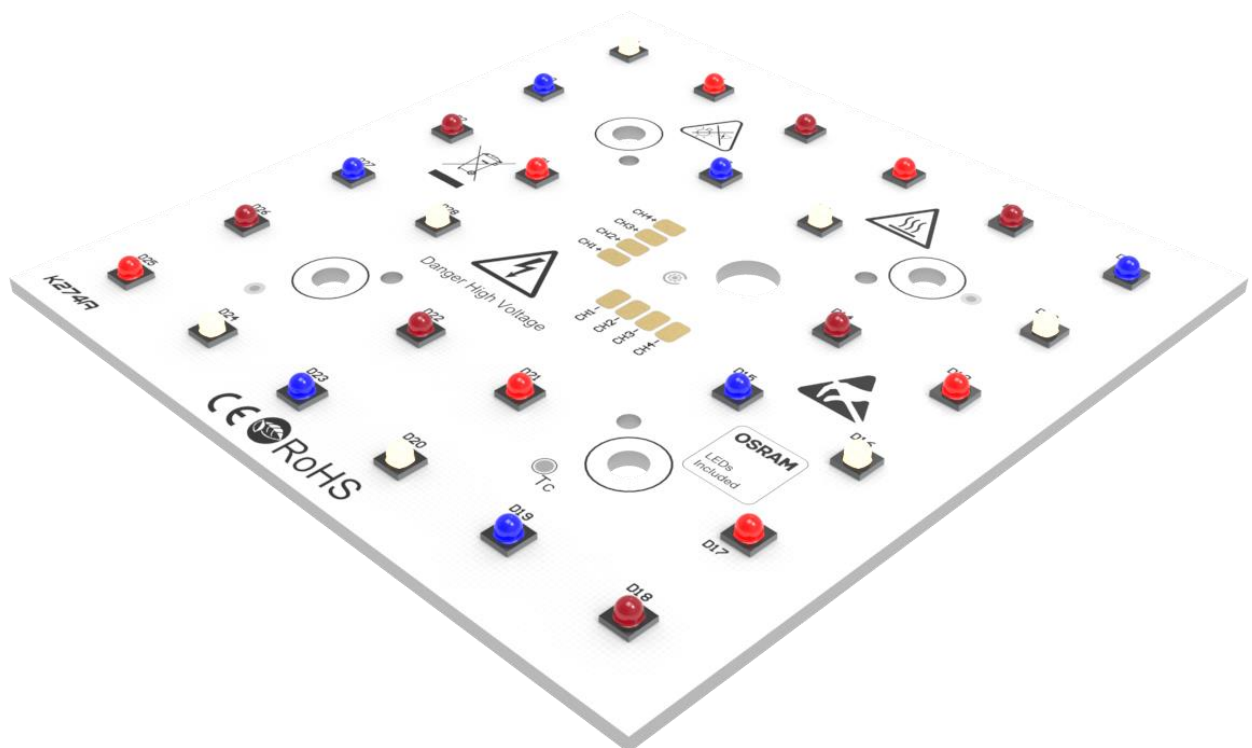


CEZOS

GrowEmity 28 - K274



The GrowEmity LED light source allows to accelerate plant growth and increase harvest. It is even possible to regulate plant growth and blooming time. Unlike an artificial light sources, LED light sources have specially matched spectrum for specific plants. Additionally, LEDs generate more light and less heat than sodium lamp, allow for lighting from side of plants. LED light sources are used in artificial plantation without daylight.

Possibility to choose up to four colors from the following (one set of 7 LEDs).

Colour	λ [nm] / CCT [K]	Input Current [mA]	Forward Voltage [V]	Power [W]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]
RED	625	350	14,7	5,1	576	13,16	2,56
		500	15,5	7,7	815	18,62	2,41
		700	16,4	11,4	1128	25,76	2,25
		800	16,7	13,4	1273	29,07	2,17
		1000	17,7	17,7	1563	35,70	2,02
HYPER RED SQUARE*	657	350	14,0	4,9	3360	18,34	3,74
		500	14,4	7,2	4805	26,23	3,66
		700	15,1	10,5	6720	36,68	3,49
		800	15,4	12,3	7728	42,18	3,44
		1000	15,8	15,8	9542	52,09	3,31
HYPER RED SSL	657	350	15,1	5,3	2975	16,14	3,06
		500	15,8	7,9	4195	22,75	2,89
		700	16,8	11,8	5682	30,82	2,62
		800	17,4	13,9	6486	35,17	2,53
		1000	18,0	18,0	7809	42,35	2,35
FAR RED	727	350	13,0	4,5	1855	1,12	0,25
		500	13,7	6,8	2616	1,58	0,23
		700	14,5	10,1	3543	2,14	0,21
		800	14,8	11,8	4044	2,44	0,21
		1000	15,5	15,5	4869	2,94	0,19
DEEP BLUE SQUARE*	450	350	19,7	6,9	5096	19,11	2,78
		500	20,0	10,0	7252	27,20	2,73
		700	20,3	14,2	9800	36,75	2,59
		800	20,5	16,4	10780	40,43	2,47
		1000	20,8	20,9	13230	49,61	2,38
DEEP BLUE SSL	455	350	20,0	7,0	4445	16,45	2,36
		500	20,3	10,2	6179	22,87	2,25
		700	20,8	14,6	7645	28,29	1,94
		800	20,9	16,7	8446	31,26	1,87
		1000	21,4	21,4	10668	39,48	1,84
BLUE	470	350	20,0	7,0	196	11,34	1,62
		500	20,5	10,3	259	14,98	1,46
		700	21,3	14,9	335	19,39	1,30
		800	21,4	17,1	369	21,33	1,25
		1000	22,1	22,1	436	25,20	1,14
TRUE GREEN	528	350	23,5	8,2	847	7,84	0,95
		500	24,1	12,0	1104	10,22	0,85
		700	24,8	17,4	1407	13,02	0,75
		800	24,9	19,9	1540	14,26	0,72
		1000	25,7	25,7	1807	16,73	0,65
AMBER	617	350	14,7	5,1	624	13,79	2,68
		500	15,5	7,7	878	19,39	2,51
		700	16,4	11,5	1198	26,46	2,31
		800	16,7	13,4	1346	29,73	2,22
		1000	17,7	17,7	1642	36,26	2,05
YELLOW	590	350	15,4	5,4	574	6,09	1,13
		500	16,2	8,1	785	8,33	1,03
		700	17,1	12,0	1003	10,64	0,89
		800	17,2	13,7	1075	11,41	0,83
		1000	18,2	18,2	1221	12,95	0,71
WHITE	5000	350	19,3	6,7	1035	13,72	2,04
		500	20,0	10,0	1418	18,34	1,84
		700	20,7	14,5	1864	23,80	1,65
		800	20,9	16,7	2050	26,18	1,57
		1000	23,2	23,2	2375	30,34	1,35

Radiant Power for Hyper Red, Far Red, Deep Blue. Luminous flux for rest of colour. CCT only for White colour.

CALCULATED PARAMETERS AT $T_J = 25^{\circ}\text{C}$

Name	GrowEmity 28 – K274
Size	81x81 mm
Power Supply Type	Constant Current (CC)
Number Of Channels	4
Power Supply Current	Max. 1000 mA
Far Red LED	OSRAM - GF CSSPM1.24
Red LED	OSRAM - GH CSSPM1.24
Deep Blue LED	OSRAM - GD CSSPM1.14
White LED	OSRAM - GW CSHPM1.PM
Ambient Temperature	0 - 40°C
Material Type / Thickness	MCPCB / 1,5 mm

GROWEMITY 28 RFBW - K274

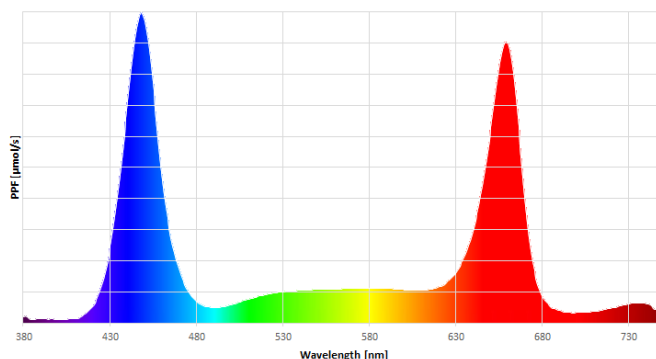
	Input Current [mA]	Forward Voltage [V]	Power [W]	Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RFBW - K274	350	15,1	5,3	23,5	RED	657	2975	16,14	3,06	47,43	2,02	Q0-081081-RFBW-C1000-K274
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	15,8	7,9	34,8	RED	657	4195	22,75	2,89	65,54	1,88	Q0-081081-RFBW-C1000-K274
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	16,8	11,8	50,9	RED	657	5682	30,82	2,62	85,05	1,67	Q0-081081-RFBW-C1000-K274
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	17,4	13,9	59,1	RED	657	6486	35,17	2,53	95,05	1,61	Q0-081081-RFBW-C1000-K274
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^{\circ}\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.

Different type of plants have different requirements for the best growth, so to maximized effect, GrowEmity light sources have many sets of LEDs configuration. Most commands LED types are: red, far red, hyper red, blue, deep blue and white with different colour temperature. Some examples are below.

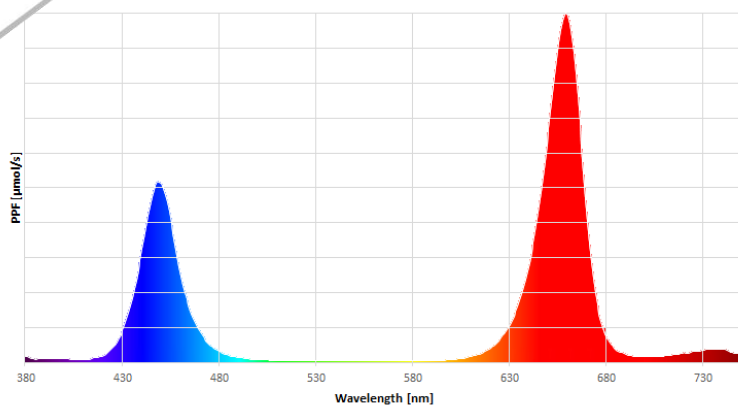
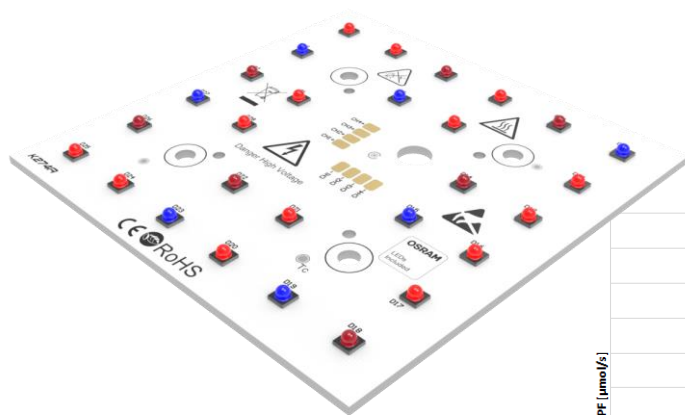


GROWEMITY 28 RRFB - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm]	Radiant Power [mW]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RRFB - K274	350	15,1	5,3	22,1	RED	657	2975	16,14	3,06	49,84	2,26	Q0-081081-RRFB-C1000-K274
		15,1	5,3		RED	657	2975	16,14	3,06			
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
	500	15,8	7,9	32,7	RED	657	4195	22,75	2,89	69,95	2,14	Q0-081081-RRFB-C1000-K274
		15,8	7,9		RED	657	4195	22,75	2,89			
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
	700	16,8	11,8	48,2	RED	657	5682	30,82	2,62	92,07	1,91	Q0-081081-RRFB-C1000-K274
		16,8	11,8		RED	657	5682	30,82	2,62			
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
	800	17,4	13,9	56,3	RED	657	6486	35,17	2,53	104,05	1,85	Q0-081081-RRFB-C1000-K274
		17,4	13,9		RED	657	6486	35,17	2,53			
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			

Parameters were calculated for temperatures $T_j = 25^\circ\text{C}$

Values of these parameters were calculated for default bin and with tolerances of 15%.



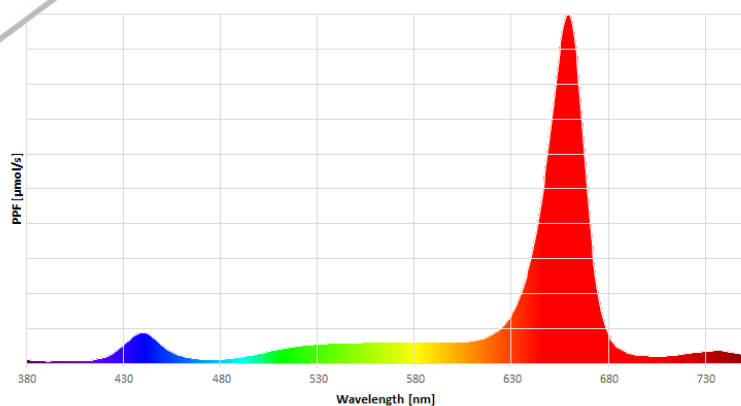
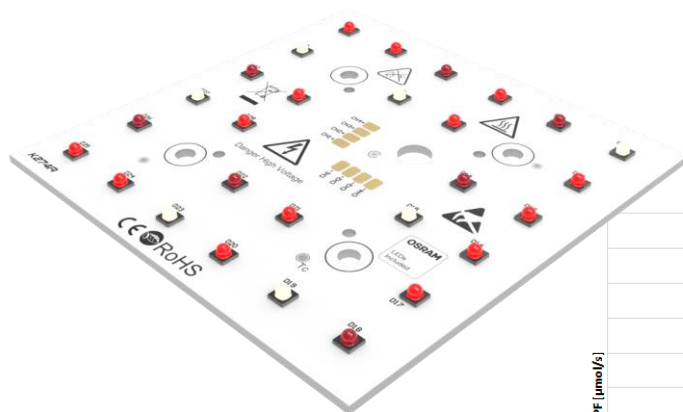
GROWEMITY 28 RRFW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RRFW - K274	350	15,1	5,3	21,8	RED	657	2975	16,14	3,06	47,11	2,16	Q0-081081-RRFW-C1000-K274
		15,1	5,3		RED	657	2975	16,14	3,06			
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	15,8	7,9	32,6	RED	657	4195	22,75	2,89	65,42	2,01	Q0-081081-RRFW-C1000-K274
		15,8	7,9		RED	657	4195	22,75	2,89			
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	16,8	11,8	48,1	RED	657	5682	30,82	2,62	87,57	1,82	Q0-081081-RRFW-C1000-K274
		16,8	11,8		RED	657	5682	30,82	2,62			
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	17,4	13,9	56,3	RED	657	6486	35,17	2,53	98,97	1,76	Q0-081081-RRFW-C1000-K274
		17,4	13,9		RED	657	6486	35,17	2,53			
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.



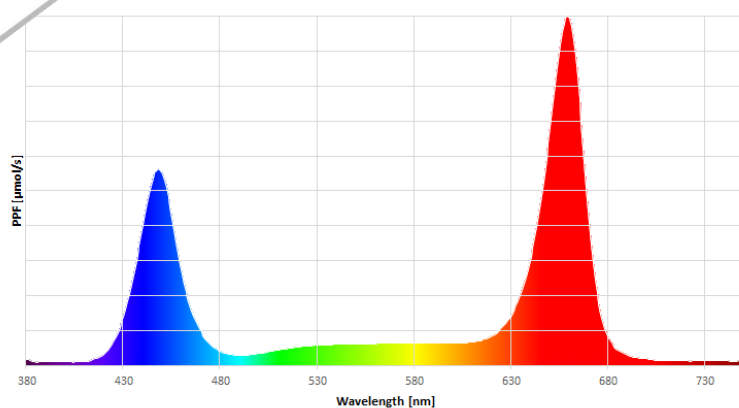
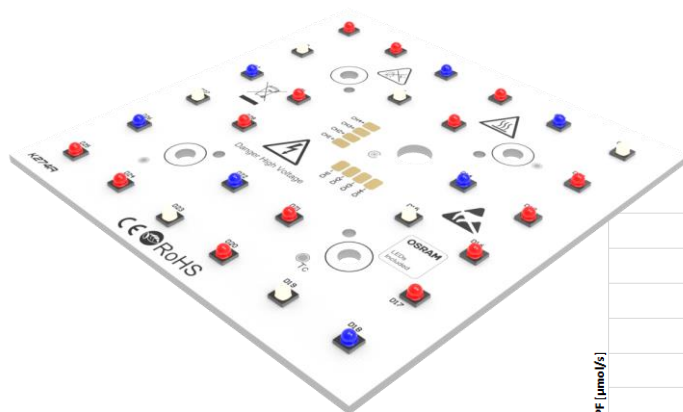
GROWEMITY 28 RRBW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RRBW - K274	350	15,1	5,3	24,3	RED	657	2975	16,14	3,06	62,44	2,57	Q0-081081-RRBW-C1000-K274
		15,1	5,3		RED	657	2975	16,14	3,06			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	15,8	7,9	35,9	RED	657	4195	22,75	2,89	86,71	2,42	Q0-081081-RRBW-C1000-K274
		15,8	7,9		RED	657	4195	22,75	2,89			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	16,8	11,8	52,5	RED	657	5682	30,82	2,62	113,73	2,17	Q0-081081-RRBW-C1000-K274
		16,8	11,8		RED	657	5682	30,82	2,62			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	17,4	13,9	61,2	RED	657	6486	35,17	2,53	127,78	2,09	Q0-081081-RRBW-C1000-K274
		17,4	13,9		RED	657	6486	35,17	2,53			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.

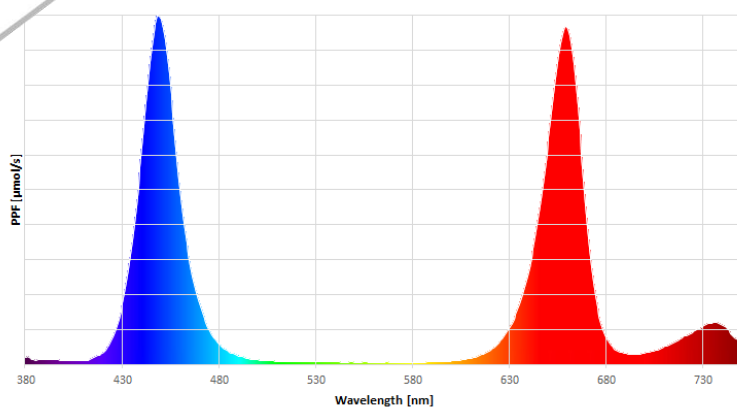
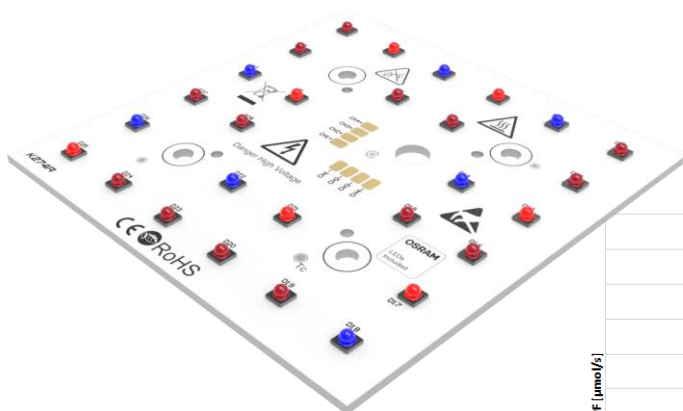


GROWEMITY 28 RFFB - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm]	Radiant Power [mW]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RFFB - K274	350	15,1	5,3	21,315	RED	657	2975	16,14	3,06	34,83	1,63	Q0-081081-RFFB-C1000-K274
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
	500	15,8	7,9	31,7	RED	657	4195	22,75	2,89	48,77	1,54	Q0-081081-RFFB-C1000-K274
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
	700	16,8	11,8	46,6	RED	657	5682	30,82	2,62	63,39	1,36	Q0-081081-RFFB-C1000-K274
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
	800	17,4	13,9	54,3	RED	657	6486	35,17	2,53	71,31	1,31	Q0-081081-RFFB-C1000-K274
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Values of these parameters were calculated for default bin and with tolerances of 15%.



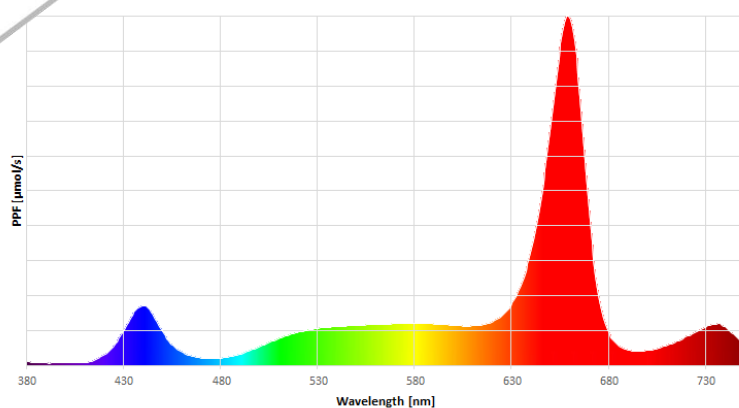
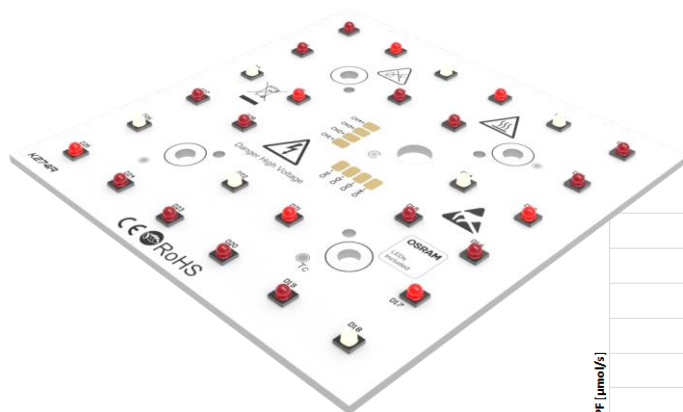
GROWEMITY 28 RFFW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RFFW - K274	350	15,1	5,3	21,1	RED	657	2975	16,14	3,06	32,10	1,52	Q0-081081-RFFW-C1000-K274
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	15,8	7,9	31,5	RED	657	4195	22,75	2,89	44,25	1,40	Q0-081081-RFFW-C1000-K274
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	16,8	11,8	46,5	RED	657	5682	30,82	2,62	58,90	1,27	Q0-081081-RFFW-C1000-K274
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	17,4	13,9	54,2	RED	657	6486	35,17	2,53	66,24	1,22	Q0-081081-RFFW-C1000-K274
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.



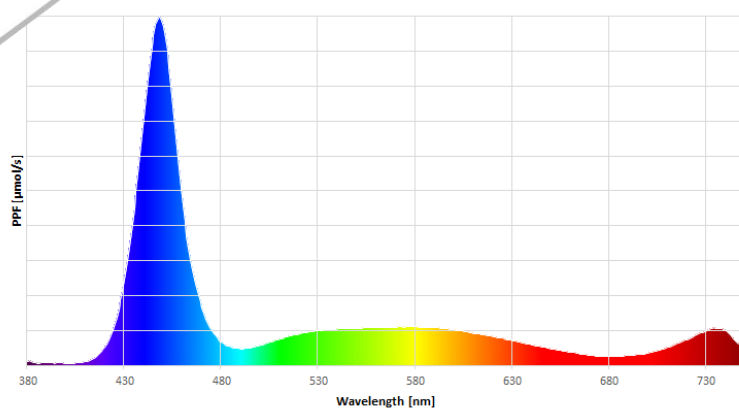
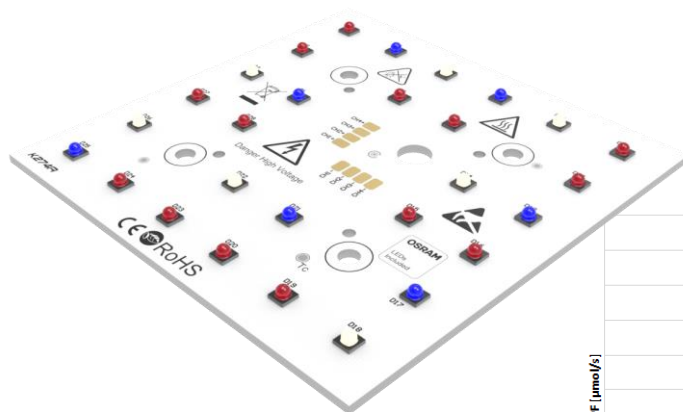
GROWEMITY 28 FFBW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 FFBW - K274	350	13,0	4,5	22,8	FAR RED	727	1855	1,12	0,25	32,41	1,42	Q0-081081-FFBW-C1000-K274
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	13,7	6,8	33,8	FAR RED	727	2616	1,58	0,23	44,36	1,31	Q0-081081-FFBW-C1000-K274
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	14,5	10,1	49,3	FAR RED	727	3543	2,14	0,21	56,37	1,14	Q0-081081-FFBW-C1000-K274
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	14,8	11,8	57,1	FAR RED	727	4044	2,44	0,21	62,32	1,09	Q0-081081-FFBW-C1000-K274
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.

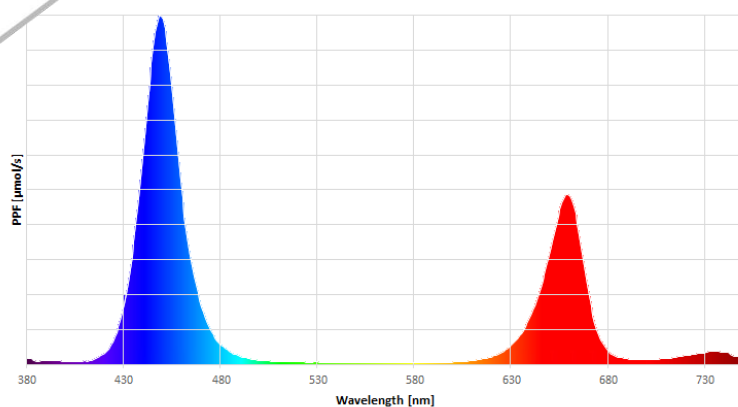
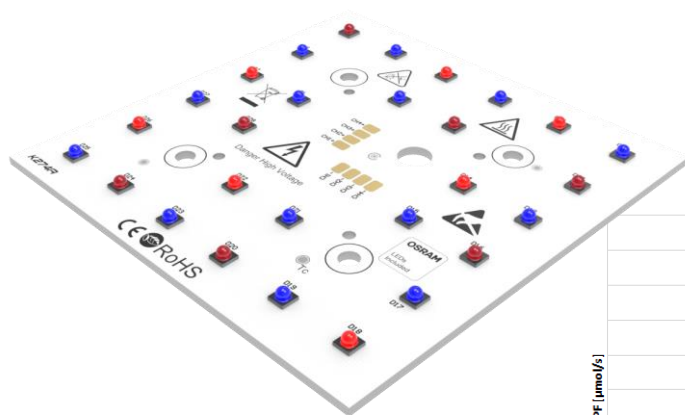


GROWEMITY 28 RFBB - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm]	Radiant Power [mW]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RFBB - K274	350	15,1	5,3	23,8	RED	657	2975	16,14	3,06	50,16	2,11	QO-081081-RFBB-C1000-K274
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
	500	15,8	7,9	35,0	RED	657	4195	22,75	2,89	70,06	2,00	QO-081081-RFBB-C1000-K274
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
	700	16,8	11,8	51,0	RED	657	5682	30,82	2,62	89,55	1,76	QO-081081-RFBB-C1000-K274
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
	800	17,4	13,9	59,2	RED	657	6486	35,17	2,53	100,13	1,69	QO-081081-RFBB-C1000-K274
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Values of these parameters were calculated for default bin and with tolerances of 15%.



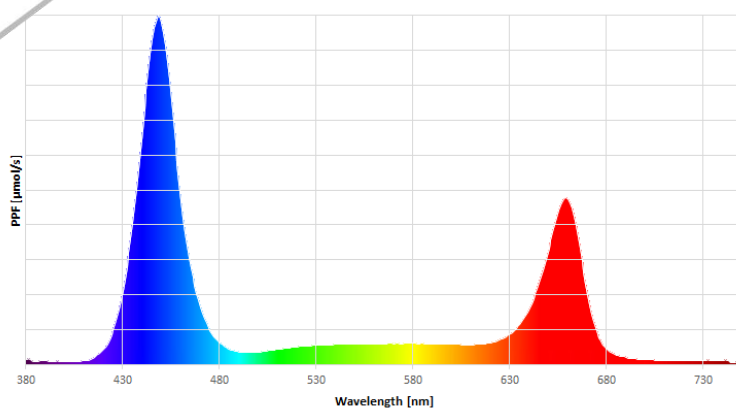
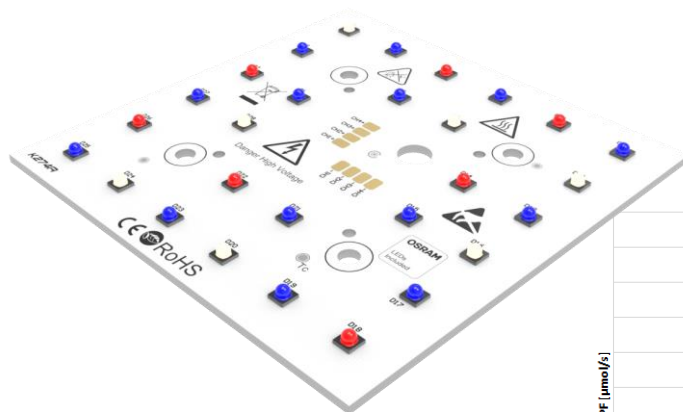
GROWEMITY 28 RBBW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RBBW - K245	350	15,1	5,3	26,0	RED	657	2975	16,14	3,06	62,76	2,42	Q0-081081-RBBW-C1000-K274
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	15,8	7,9	38,2	RED	657	4195	22,75	2,89	86,82	2,28	Q0-081081-RBBW-C1000-K274
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	16,8	11,8	55,3	RED	657	5682	30,82	2,62	111,21	2,01	Q0-081081-RBBW-C1000-K274
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	17,4	13,9	64,1	RED	657	6486	35,17	2,53	123,86	1,93	Q0-081081-RBBW-C1000-K274
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.



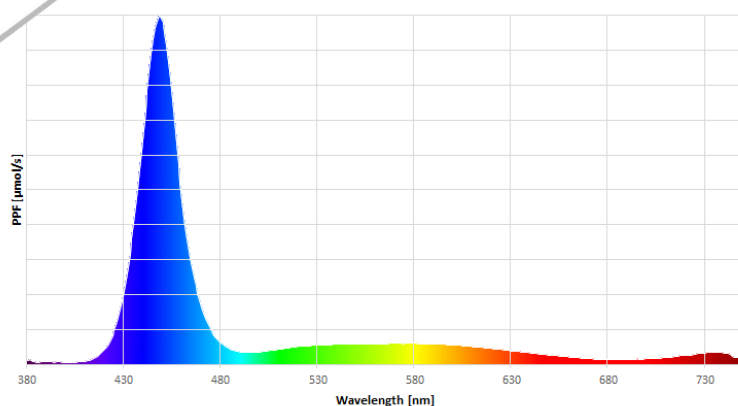
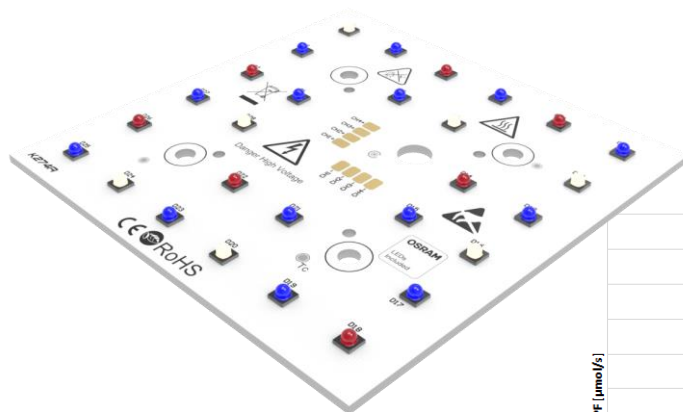
GROWEMITY 28 FBBW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 FBBW - K274	350	4,5	4,5	25,2	FAR RED	727	1855	1,12	0,25	47,74	1,89	Q0-081081-FBBW-C1000-K274
		7,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		7,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		6,7	6,7		WHITE	5000	1035	13,72	2,04			
	500	6,8	6,8	37,1	FAR RED	727	2616	1,58	0,23	65,65	1,77	Q0-081081-FBBW-C1000-K274
		10,2	10,2		DEEP BLUE	455	6179	22,87	2,25			
		10,2	10,2		DEEP BLUE	455	6179	22,87	2,25			
		10,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	10,1	10,1	53,7	FAR RED	727	3543	2,14	0,21	82,53	1,54	Q0-081081-FBBW-C1000-K274
		14,6	14,6		DEEP BLUE	455	7645	28,29	1,94			
		14,6	14,6		DEEP BLUE	455	7645	28,29	1,94			
		14,5	14,5		WHITE	5000	1864	23,80	1,65			
	800	11,8	11,8	62,0	FAR RED	727	4044	2,44	0,21	91,13	1,47	Q0-081081-FBBW-C1000-K274
		16,7	16,7		DEEP BLUE	455	8446	31,26	1,87			
		16,7	16,7		DEEP BLUE	455	8446	31,26	1,87			
		16,7	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.



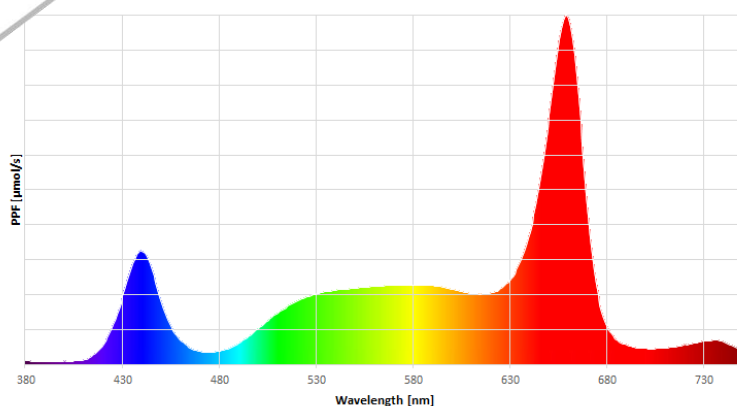
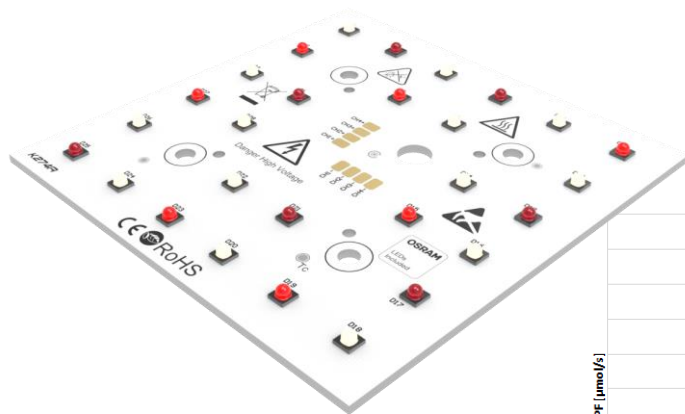
GROWEMITY 28 RFWW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RFWW - K274	350	15,1	5,3	23,3	RED	657	2975	16,14	3,06	44,70	1,92	Q0-081081-RFWW-C1000-K274
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	15,8	7,9	34,7	RED	657	4195	22,75	2,89	61,01	1,76	Q0-081081-RFWW-C1000-K274
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	16,8	11,8	50,8	RED	657	5682	30,82	2,62	80,56	1,59	Q0-081081-RFWW-C1000-K274
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	17,4	13,9	59,1	RED	657	6486	35,17	2,53	89,98	1,52	Q0-081081-RFWW-C1000-K274
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.



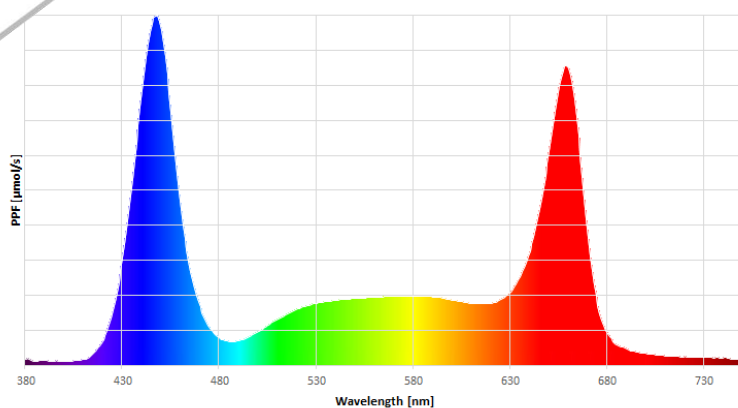
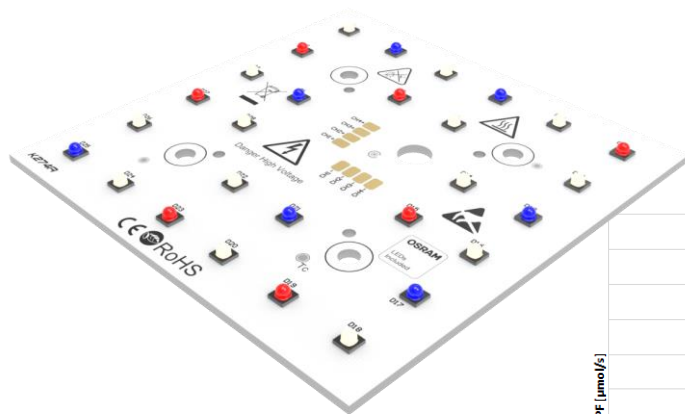
GROWEMITY 28 RBWW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RBWW - K274	350	15,1	5,3	25,7	RED	657	2975	16,14	3,06	60,03	2,33	Q0-081081-RBWW-C1000-K274
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	15,8	7,9	38,0	RED	657	4195	22,75	2,89	82,30	2,17	Q0-081081-RBWW-C1000-K274
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	16,8	11,8	55,2	RED	657	5682	30,82	2,62	106,71	1,93	Q0-081081-RBWW-C1000-K274
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	17,4	13,9	64,0	RED	657	6486	35,17	2,53	118,79	1,86	Q0-081081-RBWW-C1000-K274
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.



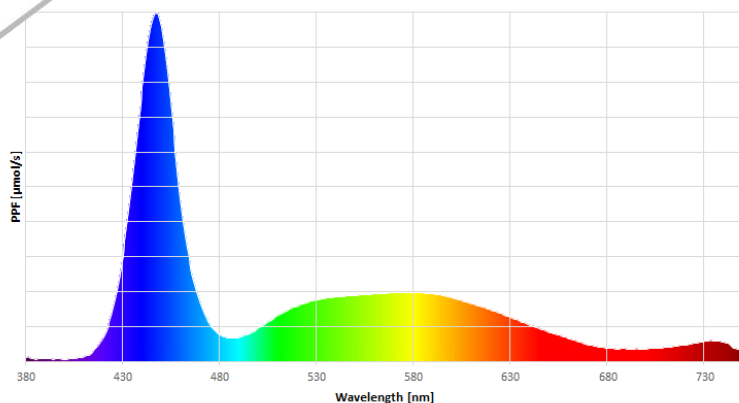
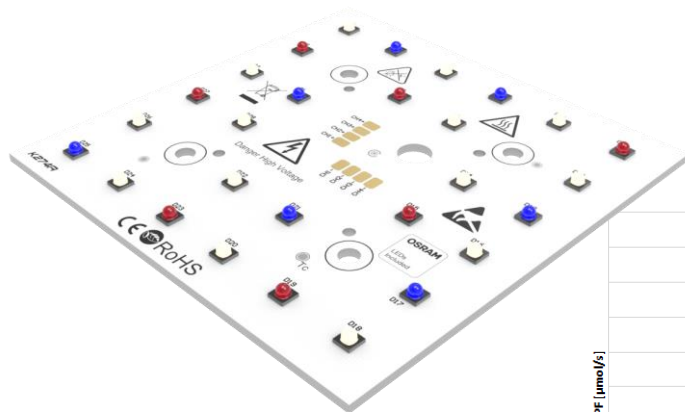
GROWEMITY 28 FBWW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 FBWW - K274	350	13,0	4,5	25,0	FAR RED	727	1855	1,12	0,25	45,01	1,80	Q0-081081-FBWW-C1000-K274
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	13,7	6,8	36,9	FAR RED	727	2616	1,58	0,23	61,12	1,66	Q0-081081-FBWW-C1000-K274
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	14,5	10,1	53,6	FAR RED	727	3543	2,14	0,21	78,03	1,46	Q0-081081-FBWW-C1000-K274
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	14,8	11,8	61,9	FAR RED	727	4044	2,44	0,21	86,06	1,39	Q0-081081-FBWW-C1000-K274
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.

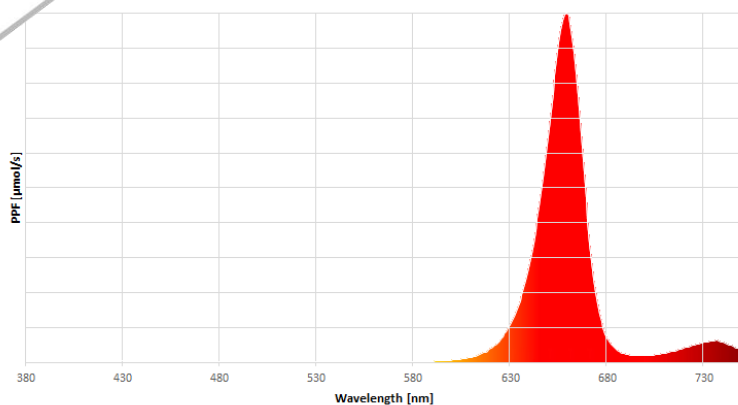
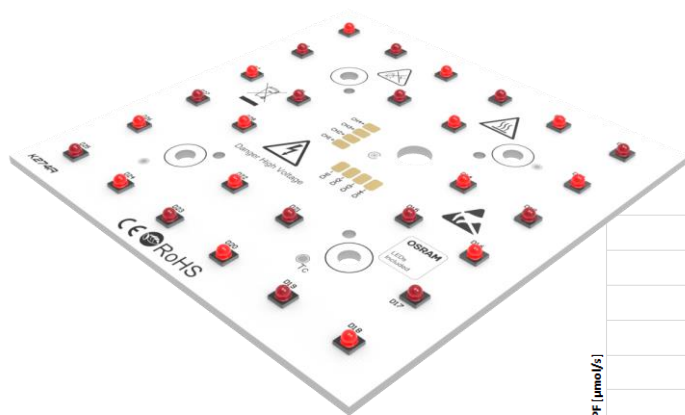


GROWEMITY 28 RRFF - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm]	Radiant Power [mW]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RRFF - K274	350	15,1	5,3	19,6	RED	657	2975	16,14	3,06	34,51	1,76	Q0-081081-RRFF-C1000-K274
		15,1	5,3		RED	657	2975	16,14	3,06			
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
	500	15,8	7,9	29,4	RED	657	4195	22,75	2,89	48,66	1,66	Q0-081081-RRFF-C1000-K274
		15,8	7,9		RED	657	4195	22,75	2,89			
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
	700	16,8	11,8	43,8	RED	657	5682	30,82	2,62	65,91	1,50	Q0-081081-RRFF-C1000-K274
		16,8	11,8		RED	657	5682	30,82	2,62			
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
	800	17,4	13,9	51,4	RED	657	6486	35,17	2,53	75,23	1,46	Q0-081081-RRFF-C1000-K274
		17,4	13,9		RED	657	6486	35,17	2,53			
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		14,8	11,8		FAR RED	727	4044	2,44	0,21			

Parameters were calculated for temperatures $T_j = 25^\circ\text{C}$

Values of these parameters were calculated for default bin and with tolerances of 15%.

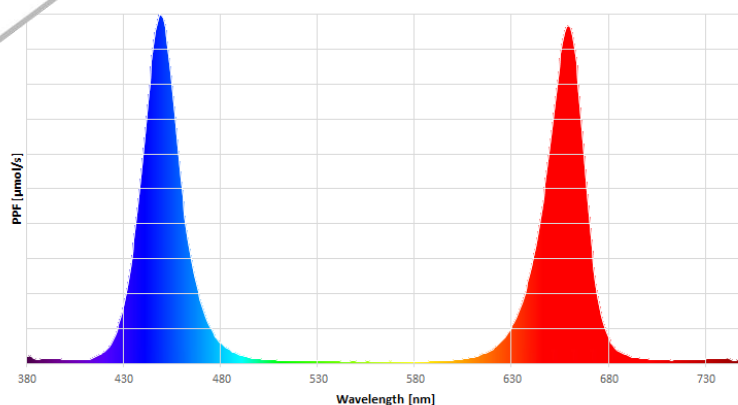
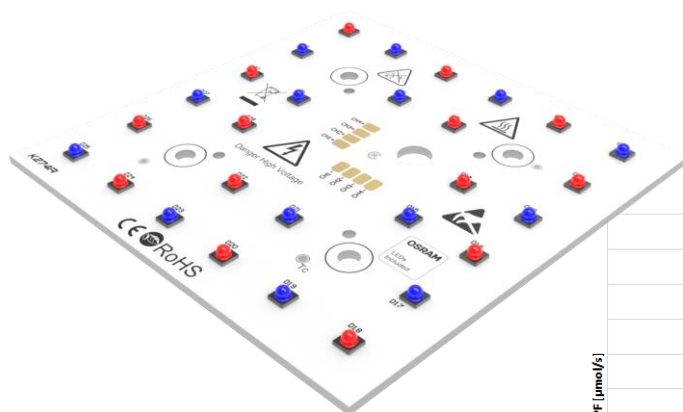


GROWEMITY 28 RRBB - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm]	Radiant Power [mW]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RRBB - K274	350	15,1	5,3	24,5	RED	657	2975	16,14	3,06	65,17	2,66	Q0-081081-RRBB-C1000-K274
		15,1	5,3		RED	657	2975	16,14	3,06			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
	500	15,8	7,9	36,1	RED	657	4195	22,75	2,89	91,23	2,53	Q0-081081-RRBB-C1000-K274
		15,8	7,9		RED	657	4195	22,75	2,89			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
	700	16,8	11,8	52,6	RED	657	5682	30,82	2,62	118,22	2,25	Q0-081081-RRBB-C1000-K274
		16,8	11,8		RED	657	5682	30,82	2,62			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
	800	17,4	13,9	61,3	RED	657	6486	35,17	2,53	132,86	2,17	Q0-081081-RRBB-C1000-K274
		17,4	13,9		RED	657	6486	35,17	2,53			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			

Parameters were calculated for temperatures $T_j = 25^\circ\text{C}$

Values of these parameters were calculated for default bin and with tolerances of 15%.



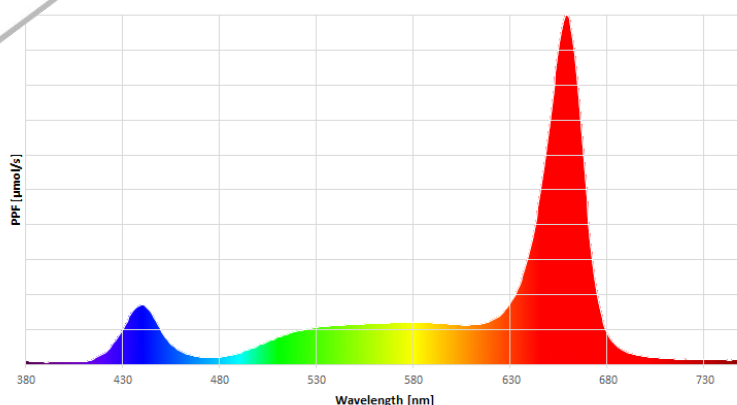
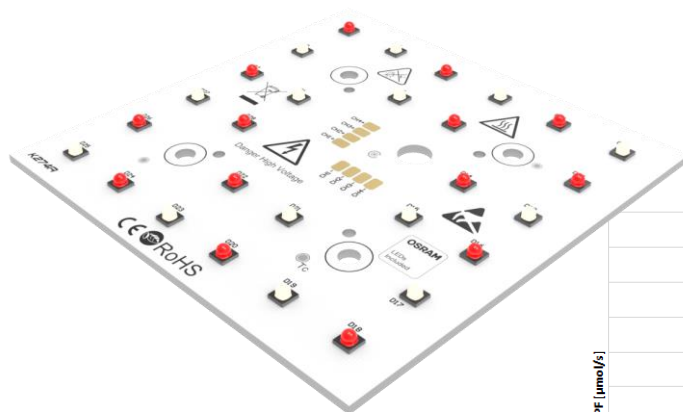
GROWEMITY 28 RRWW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RRWW - K274	350	15,1	5,3	24,0	RED	657	2975	16,14	3,06	59,71	2,49	Q0-081081-RRWW-C1000-K274
		15,1	5,3		RED	657	2975	16,14	3,06			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	15,8	7,9	35,7	RED	657	4195	22,75	2,89	82,18	2,30	Q0-081081-RRWW-C1000-K274
		15,8	7,9		RED	657	4195	22,75	2,89			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	16,8	11,8	52,4	RED	657	5682	30,82	2,62	109,24	2,08	Q0-081081-RRWW-C1000-K274
		16,8	11,8		RED	657	5682	30,82	2,62			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	17,4	13,9	61,2	RED	657	6486	35,17	2,53	122,71	2,01	Q0-081081-RRWW-C1000-K274
		17,4	13,9		RED	657	6486	35,17	2,53			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.

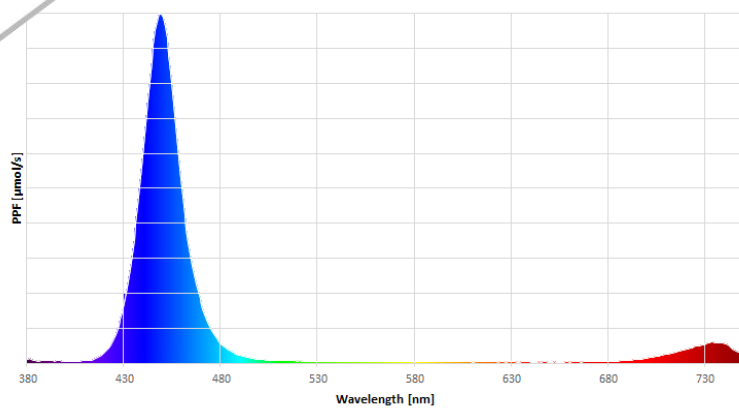
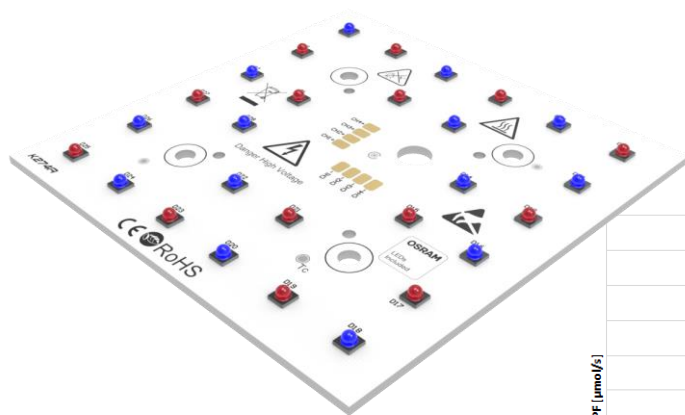


GROWEMITY 28 FFBB - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm]	Radiant Power [mW]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 FBWW - K274	350	13,0	4,5	23,0	FAR RED	727	1855	1,12	0,25	35,14	1,53	Q0-081081-FFBB-C1000-K274
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
	500	13,7	6,8	34,0	FAR RED	727	2616	1,58	0,23	48,89	1,44	Q0-081081-FFBB-C1000-K274
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
	700	14,5	10,1	49,4	FAR RED	727	3543	2,14	0,21	60,87	1,23	Q0-081081-FFBB-C1000-K274
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
	800	14,8	11,8	57,1	FAR RED	727	4044	2,44	0,21	67,39	1,18	Q0-081081-FFBB-C1000-K274
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			

Parameters were calculated for temperatures $T_j = 25^\circ\text{C}$

Values of these parameters were calculated for default bin and with tolerances of 15%.



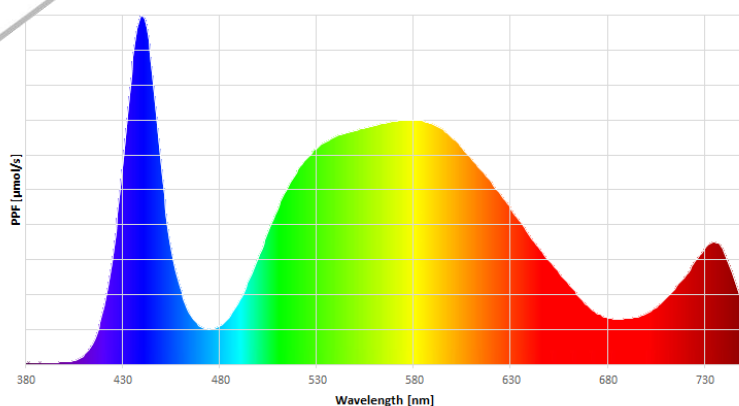
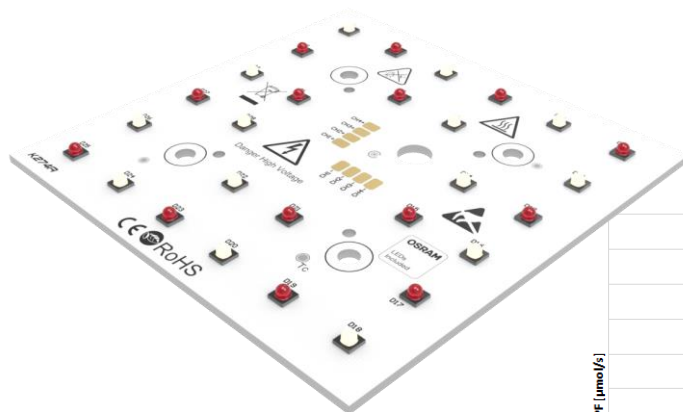
GROWEMITY 28 FFWW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 FFWW - K274	350	13,0	4,5	22,5	FAR RED	727	1855	1,12	0,25	29,68	1,32	Q0-081081-FFWW-C1000-K274
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	13,7	6,8	33,6	FAR RED	727	2616	1,58	0,23	39,84	1,19	Q0-081081-FFWW-C1000-K274
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	14,5	10,1	49,2	FAR RED	727	3543	2,14	0,21	51,88	1,05	Q0-081081-FFWW-C1000-K274
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	14,8	11,8	57,0	FAR RED	727	4044	2,44	0,21	57,24	1,00	Q0-081081-FFWW-C1000-K274
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.



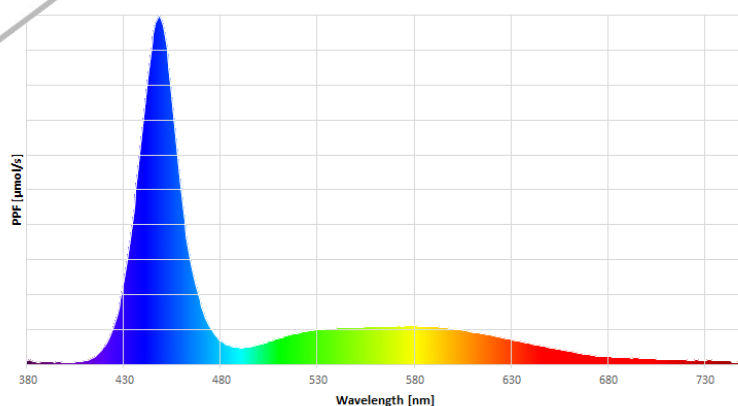
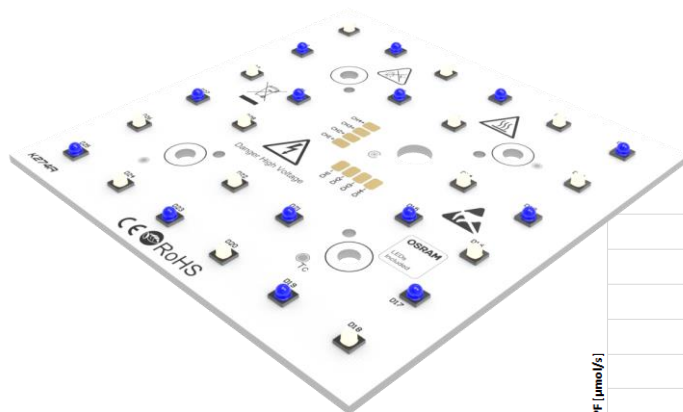
GROWEMITY 28 BBWW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 BBWW - K274	350	20,0	7,0	27,4	DEEP BLUE	455	4445	16,45	2,36	60,34	2,20	Q0-081081-BBWW-C1000-K274
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	20,3	10,2	40,3	DEEP BLUE	455	6179	22,87	2,25	82,41	2,05	Q0-081081-BBWW-C1000-K274
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	20,8	14,6	58,0	DEEP BLUE	455	7645	28,29	1,94	104,19	1,80	Q0-081081-BBWW-C1000-K274
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	20,9	16,7	66,9	DEEP BLUE	455	8446	31,26	1,87	114,87	1,72	Q0-081081-BBWW-C1000-K274
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.

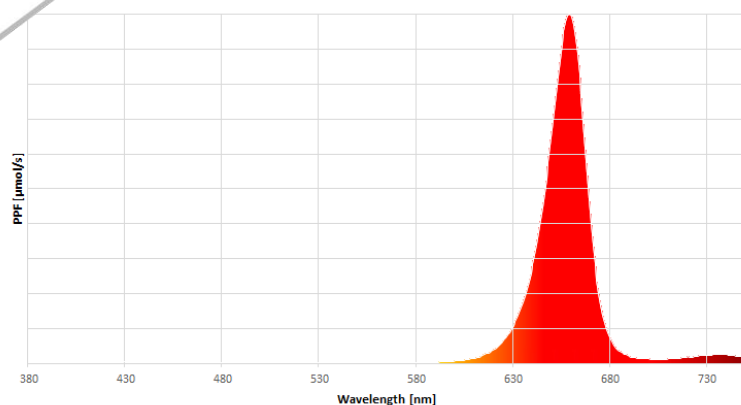
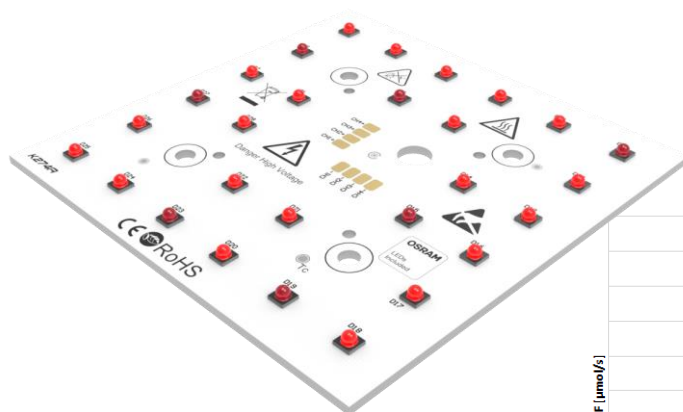


GROWEMITY 28 RRRF - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm]	Radiant Power [mW]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RRRF - K274	350	15,1	5,3	20,3	RED	657	2975	16,14	3,06	49,53	2,44	Q0-081081-RRRF-C1000-K274
		15,1	5,3		RED	657	2975	16,14	3,06			
		15,1	5,3		RED	657	2975	16,14	3,06			
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
	500	15,8	7,9	30,5	RED	657	4195	22,75	2,89	69,83	2,29	Q0-081081-RRRF-C1000-K274
		15,8	7,9		RED	657	4195	22,75	2,89			
		15,8	7,9		RED	657	4195	22,75	2,89			
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
	700	16,8	11,8	45,4	RED	657	5682	30,82	2,62	94,59	2,08	Q0-081081-RRRF-C1000-K274
		16,8	11,8		RED	657	5682	30,82	2,62			
		16,8	11,8		RED	657	5682	30,82	2,62			
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
	800	17,4	13,9	53,5	RED	657	6486	35,17	2,53	107,96	2,02	Q0-081081-RRRF-C1000-K274
		17,4	13,9		RED	657	6486	35,17	2,53			
		17,4	13,9		RED	657	6486	35,17	2,53			
		14,8	11,8		FAR RED	727	4044	2,44	0,21			

Parameters were calculated for temperatures $T_j = 25^\circ\text{C}$

Values of these parameters were calculated for default bin and with tolerances of 15%.

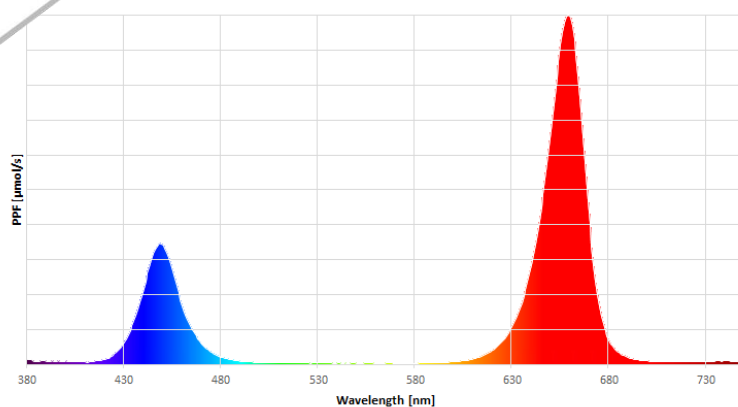
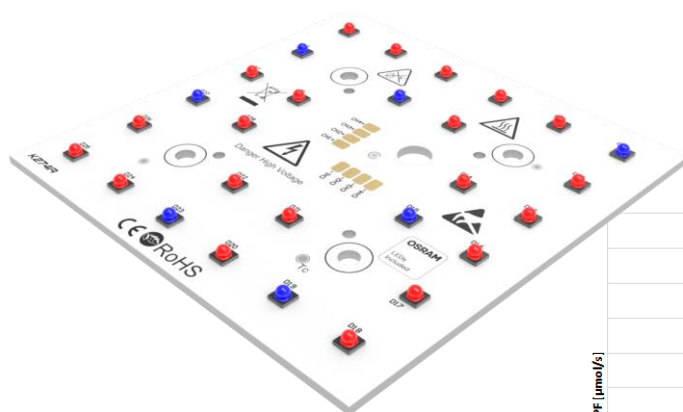


GROWEMITY 28 RRRB - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm]	Radiant Power [mW]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RRRB - K245	350	15,1	5,3	22,8	RED	657	2975	16,14	3,06	64,86	2,85	Q0-081081-RRRB-C1000-K274
		15,1	5,3		RED	657	2975	16,14	3,06			
		15,1	5,3		RED	657	2975	16,14	3,06			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
	500	15,8	7,9	33,8	RED	657	4195	22,75	2,89	91,12	2,70	Q0-081081-RRRB-C1000-K274
		15,8	7,9		RED	657	4195	22,75	2,89			
		15,8	7,9		RED	657	4195	22,75	2,89			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
	700	16,8	11,8	49,8	RED	657	5682	30,82	2,62	120,75	2,42	Q0-081081-RRRB-C1000-K274
		16,8	11,8		RED	657	5682	30,82	2,62			
		16,8	11,8		RED	657	5682	30,82	2,62			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
	800	17,4	13,9	58,4	RED	657	6486	35,17	2,53	136,78	2,34	Q0-081081-RRRB-C1000-K274
		17,4	13,9		RED	657	6486	35,17	2,53			
		17,4	13,9		RED	657	6486	35,17	2,53			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			

Parameters were calculated for temperatures $T_j = 25^\circ\text{C}$

Values of these parameters were calculated for default bin and with tolerances of 15%.



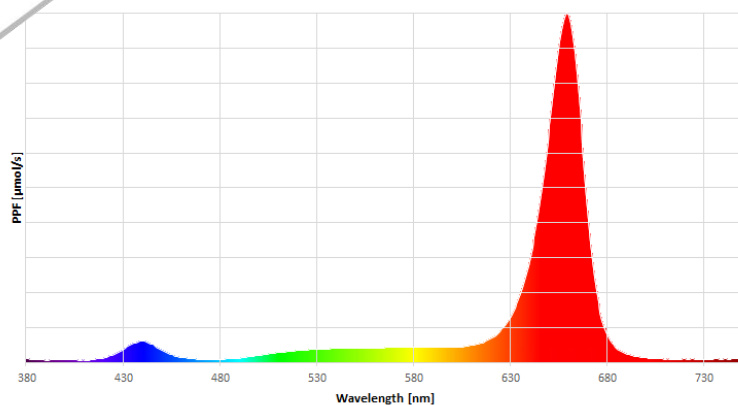
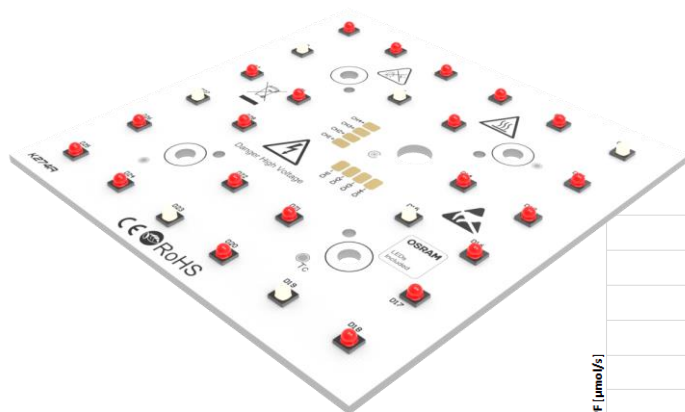
GROWEMITY 28 RRRW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RRRW - K245	350	15,1	5,3	22,5	RED	657	2975	16,14	3,06	62,13	2,76	Q0-081081-RRRW-C1000-K274
		15,1	5,3		RED	657	2975	16,14	3,06			
		15,1	5,3		RED	657	2975	16,14	3,06			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	15,8	7,9	33,6	RED	657	4195	22,75	2,89	86,59	2,58	Q0-081081-RRRW-C1000-K274
		15,8	7,9		RED	657	4195	22,75	2,89			
		15,8	7,9		RED	657	4195	22,75	2,89			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	16,8	11,8	49,7	RED	657	5682	30,82	2,62	116,25	2,34	Q0-081081-RRRW-C1000-K274
		16,8	11,8		RED	657	5682	30,82	2,62			
		16,8	11,8		RED	657	5682	30,82	2,62			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	17,4	13,9	58,4	RED	657	6486	35,17	2,53	131,70	2,26	Q0-081081-RRRW-C1000-K274
		17,4	13,9		RED	657	6486	35,17	2,53			
		17,4	13,9		RED	657	6486	35,17	2,53			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.

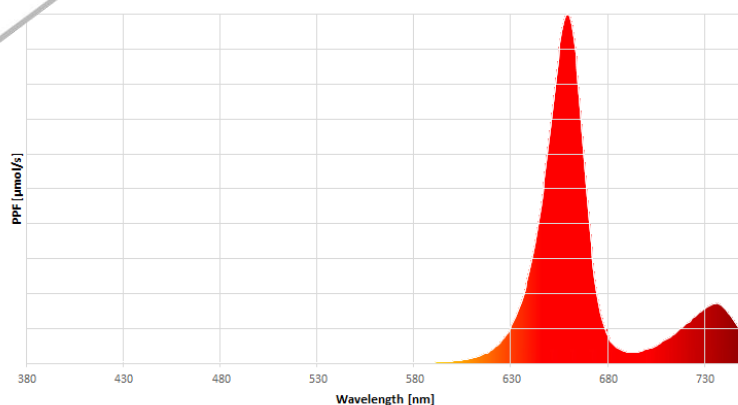
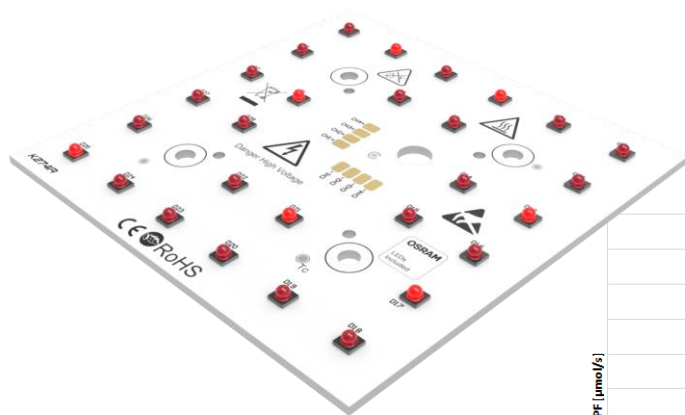


GROWEMITY 28 RFFF - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm]	Radiant Power [mW]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RFFF - K274	350	15,1	5,3	18,9	RED	657	2975	16,14	3,06	19,50	1,03	Q0-081081-RFFF-C1000-K274
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
	500	15,8	7,9	28,4	RED	657	4195	22,75	2,89	27,49	0,97	Q0-081081-RFFF-C1000-K274
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
	700	16,8	11,8	42,2	RED	657	5682	30,82	2,62	37,24	0,88	Q0-081081-RFFF-C1000-K274
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
	800	17,4	13,9	49,3	RED	657	6486	35,17	2,53	42,50	0,86	Q0-081081-RFFF-C1000-K274
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		14,8	11,8		FAR RED	727	4044	2,44	0,21			

Parameters were calculated for temperatures $T_j = 25^\circ\text{C}$

Values of these parameters were calculated for default bin and with tolerances of 15%.

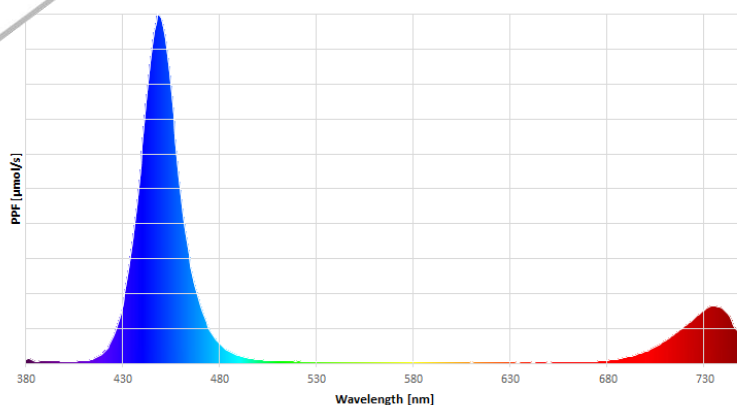
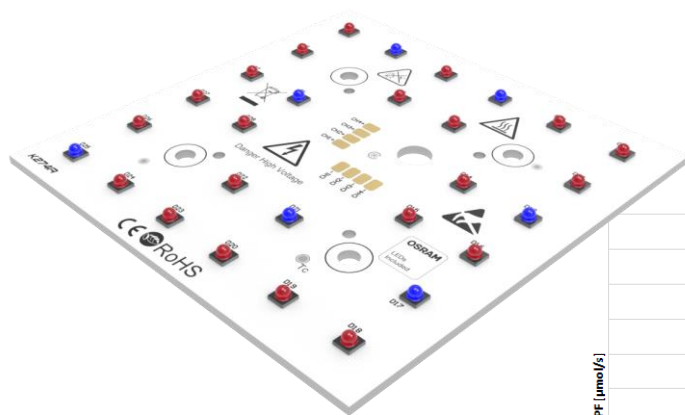


GROWEMITY 28 FFFB - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm]	Radiant Power [mW]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 FFFB - K274	350	13,0	4,5	20,6	FAR RED	727	1855	1,12	0,25	19,81	0,96	Q0-081081-FFFB-C1000-K274
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
	500	13,7	6,8	30,6	FAR RED	727	2616	1,58	0,23	27,60	0,90	Q0-081081-FFFB-C1000-K274
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
	700	14,5	10,1	45,0	FAR RED	727	3543	2,14	0,21	34,71	0,77	Q0-081081-FFFB-C1000-K274
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
	800	14,8	11,8	52,2	FAR RED	727	4044	2,44	0,21	38,58	0,74	Q0-081081-FFFB-C1000-K274
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			

Parameters were calculated for temperatures $T_j = 25^\circ\text{C}$

Values of these parameters were calculated for default bin and with tolerances of 15%.



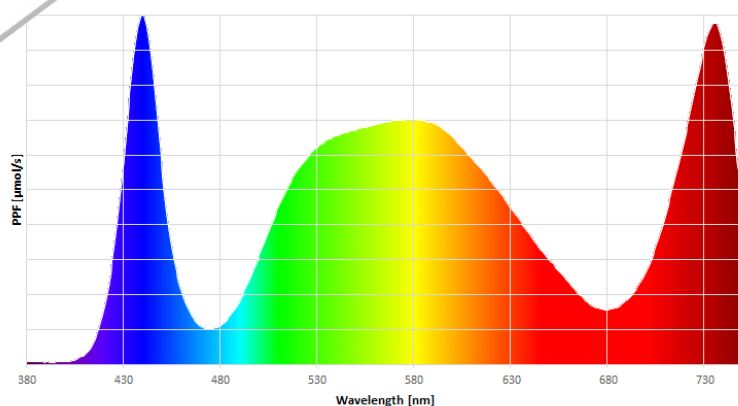
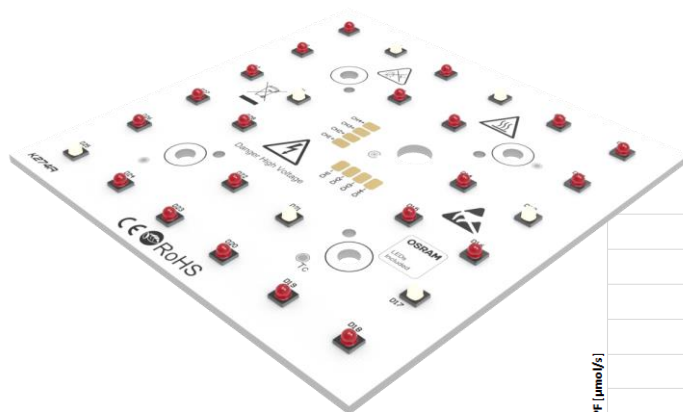
GROWEMITY 28 FFFW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 FFFW - K274	350	13,0	4,5	20,3	FAR RED	727	1855	1,12	0,25	17,08	0,84	Q0-081081-FFFW-C1000-K274
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	13,7	6,8	30,5	FAR RED	727	2616	1,58	0,23	23,08	0,76	Q0-081081-FFFW-C1000-K274
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	14,5	10,1	44,9	FAR RED	727	3543	2,14	0,21	30,22	0,67	Q0-081081-FFFW-C1000-K274
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	14,8	11,8	52,1	FAR RED	727	4044	2,44	0,21	33,50	0,64	Q0-081081-FFFW-C1000-K274
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.

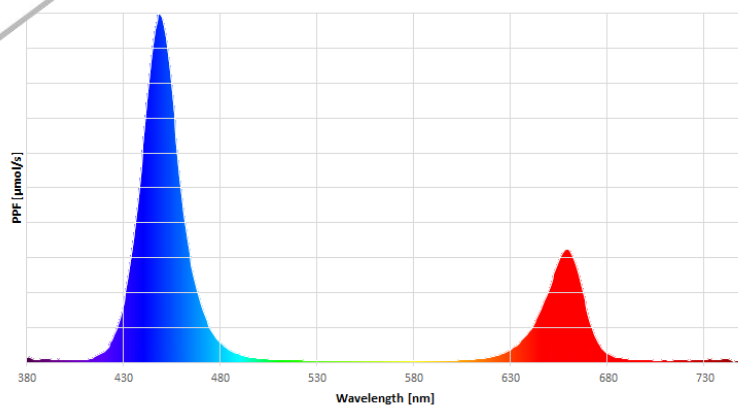
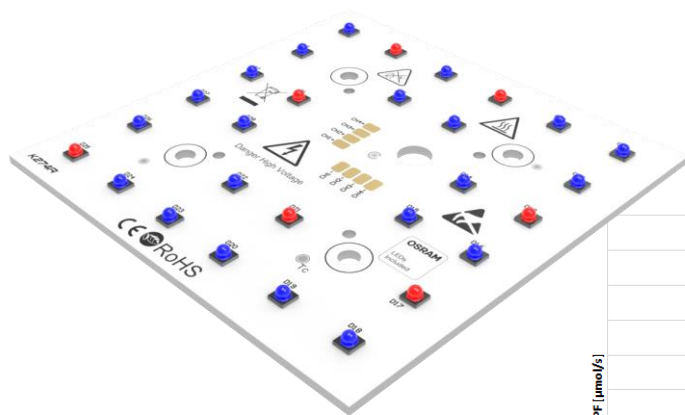


GROWEMITY 28 RBBB - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm]	Radiant Power [mW]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RBBB - K274	350	15,1	5,3	26,2	RED	657	2975	16,14	3,06	65,49	2,50	Q0-081081-RBBB-C1000-K274
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
	500	15,8	7,9	38,3	RED	657	4195	22,75	2,89	91,35	2,38	Q0-081081-RBBB-C1000-K274
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
	700	16,8	11,8	55,4	RED	657	5682	30,82	2,62	115,70	2,09	Q0-081081-RBBB-C1000-K274
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
	800	17,4	13,9	64,1	RED	657	6486	35,17	2,53	128,94	2,01	Q0-081081-RBBB-C1000-K274
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			

Parameters were calculated for temperatures $T_j = 25^\circ\text{C}$

Values of these parameters were calculated for default bin and with tolerances of 15%.

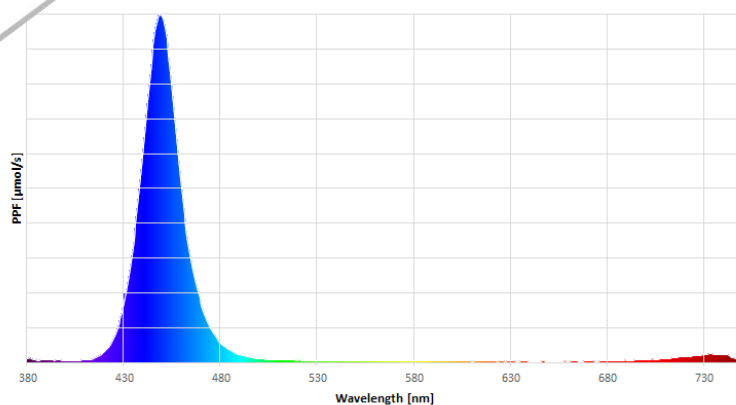
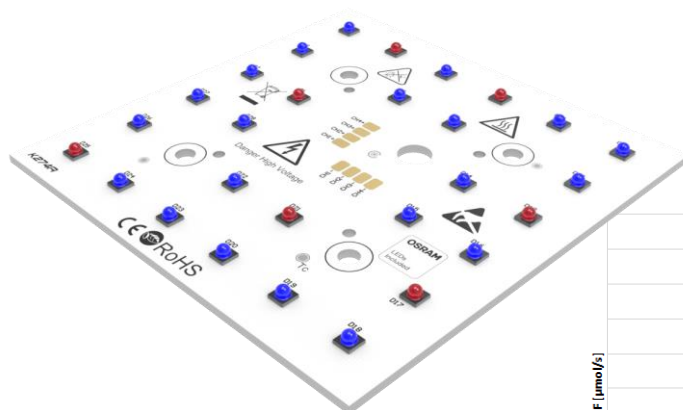


GROWEMITY 28 FB8B - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm]	Radiant Power [mW]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 FB8B - K274	350	13,0	4,5	25,5	FAR RED	727	1855	1,12	0,25	50,47	1,98	Q0-081081-FB8B-C1000-K274
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
	500	13,7	6,8	37,3	FAR RED	727	2616	1,58	0,23	70,18	1,88	Q0-081081-FB8B-C1000-K274
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
	700	14,5	10,1	53,8	FAR RED	727	3543	2,14	0,21	87,02	1,62	Q0-081081-FB8B-C1000-K274
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
	800	14,8	11,8	62,0	FAR RED	727	4044	2,44	0,21	96,21	1,55	Q0-081081-FB8B-C1000-K274
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Values of these parameters were calculated for default bin and with tolerances of 15%.



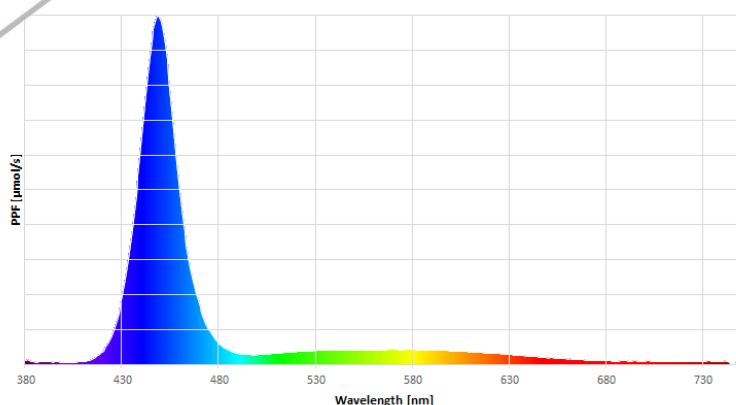
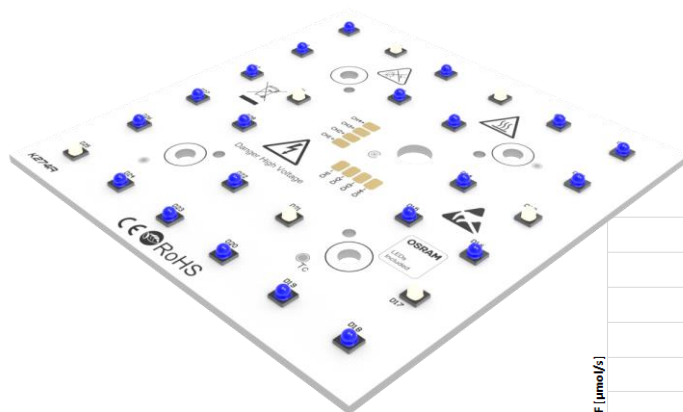
GROWEMITY 28 BBBW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 BBBW - K274	350	20,0	7,0	27,7	DEEP BLUE	455	4445	16,45	2,36	63,07	2,28	Q0-081081-BBBW-C1000-K274
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	20,3	10,2	40,4	DEEP BLUE	455	6179	22,87	2,25	86,94	2,15	Q0-081081-BBBW-C1000-K274
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	20,8	14,6	58,1	DEEP BLUE	455	7645	28,29	1,94	108,68	1,87	Q0-081081-BBBW-C1000-K274
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	20,9	16,7	66,9	DEEP BLUE	455	8446	31,26	1,87	119,95	1,79	Q0-081081-BBBW-C1000-K274
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.



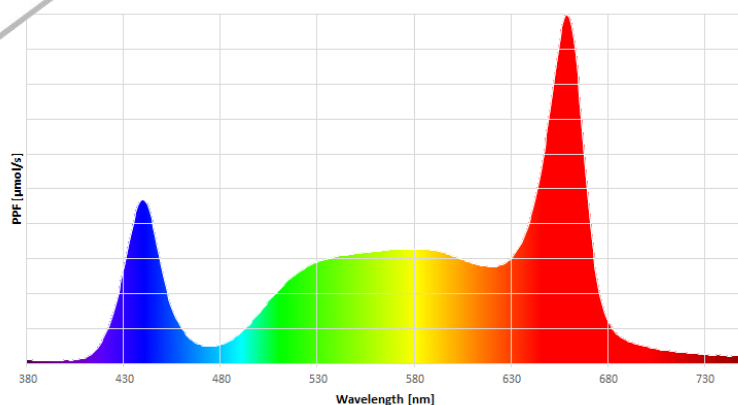
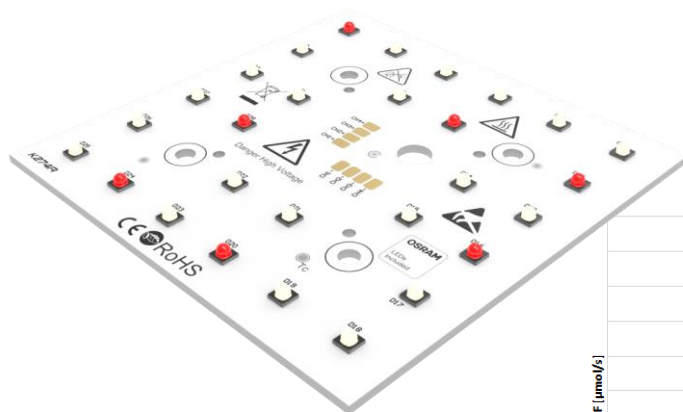
GROWEMITY 28 RWWW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RWWW - K274	350	15,1	5,3	25,5	RED	657	2975	16,14	3,06	57,30	2,25	Q0-081081-RWWW-C1000-K274
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	15,8	7,9	37,8	RED	657	4195	22,75	2,89	77,77	2,06	Q0-081081-RWWW-C1000-K274
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	16,8	11,8	55,1	RED	657	5682	30,82	2,62	102,22	1,85	Q0-081081-RWWW-C1000-K274
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	17,4	13,9	64,0	RED	657	6486	35,17	2,53	113,71	1,78	Q0-081081-RWWW-C1000-K274
		20,9	16,7		WHITE	5000	2050	26,18	1,57			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.



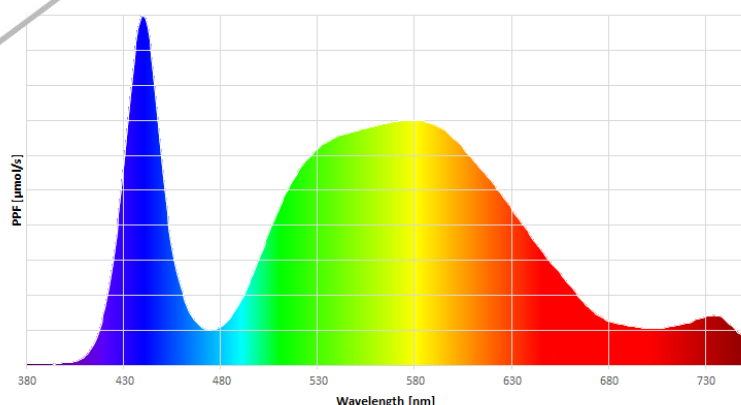
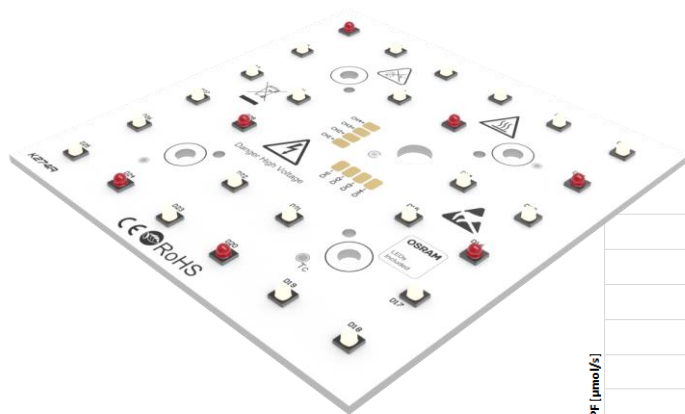
GROWEMITY 28 FWWW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 FWWW - K274	350	13,0	4,5	24,7	FAR RED	727	1855	1,12	0,25	42,28	1,71	Q0-081081-FWWW-C1000-K274
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	13,7	6,8	36,8	FAR RED	727	2616	1,58	0,23	56,60	1,54	Q0-081081-FWWW-C1000-K274
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	14,5	10,1	53,5	FAR RED	727	3543	2,14	0,21	73,54	1,37	Q0-081081-FWWW-C1000-K274
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	14,8	11,8	61,9	FAR RED	727	4044	2,44	0,21	80,98	1,31	Q0-081081-FWWW-C1000-K274
		20,9	16,7		WHITE	5000	2050	26,18	1,57			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_j = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.



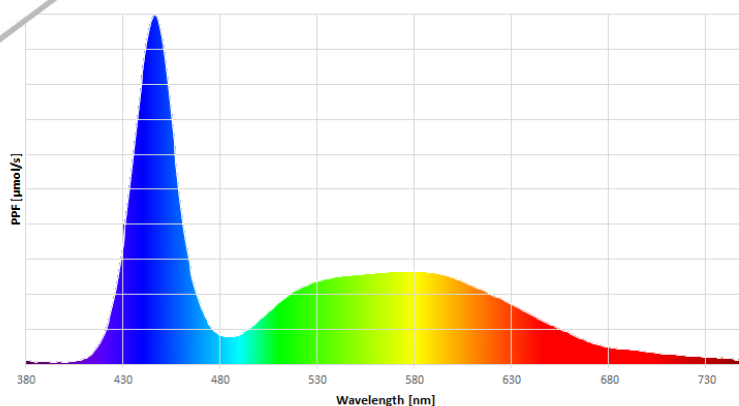
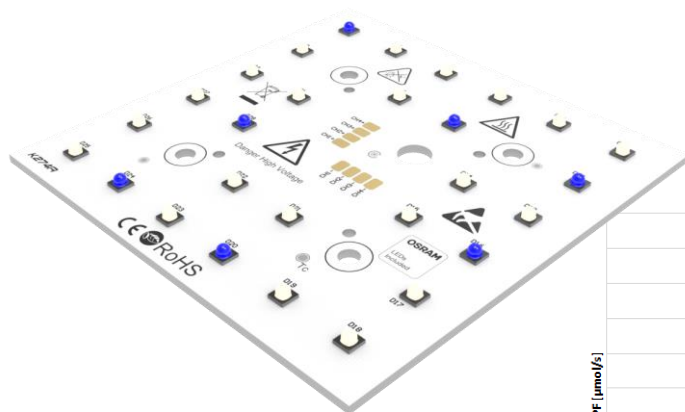
GROWEMITY 28 BWWW - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm] / CCT [K]	Radiant Power [mW] / Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 BWWW - K274	350	20,0	7,0	27,2	DEEP BLUE	455	4445	16,45	2,36	57,61	2,12	Q0-081081-BWWW-C1000-K274
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	20,3	10,2	40,1	DEEP BLUE	455	6179	22,87	2,25	77,89	1,94	Q0-081081-BWWW-C1000-K274
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	20,8	14,6	57,9	DEEP BLUE	455	7645	28,29	1,94	99,69	1,72	Q0-081081-BWWW-C1000-K274
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	20,9	16,7	66,8	DEEP BLUE	455	8446	31,26	1,87	109,80	1,64	Q0-081081-BWWW-C1000-K274
		20,9	16,7		WHITE	5000	2050	26,18	1,57			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_J = 25^\circ\text{C}$

Radiant power and wavelength for color LEDs; Luminous flux and color temperature for white LEDs.

Values of these parameters were calculated for default bin and with tolerances of 15%.

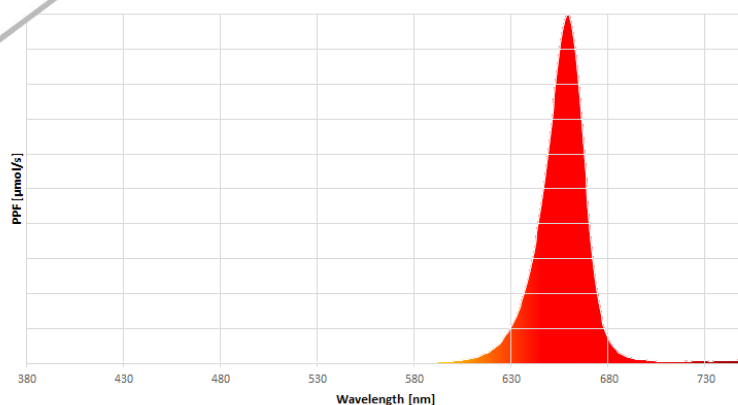
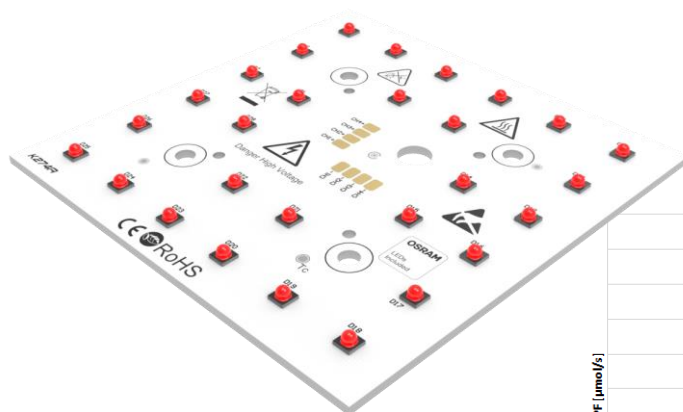


GROWEMITY 28 RRRR - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm]	Radiant Power [mW]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 RRRR - K274	350	15,1	5,3	21,1	RED	657	2975	16,14	3,06	64,54	3,06	Q0-081081-RRRR-C1000-K274
		15,1	5,3		RED	657	2975	16,14	3,06			
		15,1	5,3		RED	657	2975	16,14	3,06			
		15,1	5,3		RED	657	2975	16,14	3,06			
	500	15,8	7,9	31,5	RED	657	4195	22,75	2,89	91,00	2,89	Q0-081081-RRRR-C1000-K274
		15,8	7,9		RED	657	4195	22,75	2,89			
		15,8	7,9		RED	657	4195	22,75	2,89			
		15,8	7,9		RED	657	4195	22,75	2,89			
	700	16,8	11,8	47,0	RED	657	5682	30,82	2,62	123,27	2,62	Q0-081081-RRRR-C1000-K274
		16,8	11,8		RED	657	5682	30,82	2,62			
		16,8	11,8		RED	657	5682	30,82	2,62			
		16,8	11,8		RED	657	5682	30,82	2,62			
	800	17,4	13,9	55,6	RED	657	6486	35,17	2,53	140,70	2,53	Q0-081081-RRRR-C1000-K274
		17,4	13,9		RED	657	6486	35,17	2,53			
		17,4	13,9		RED	657	6486	35,17	2,53			
		17,4	13,9		RED	657	6486	35,17	2,53			

Parameters were calculated for temperatures $T_j = 25^\circ\text{C}$

Values of these parameters were calculated for default bin and with tolerances of 15%.

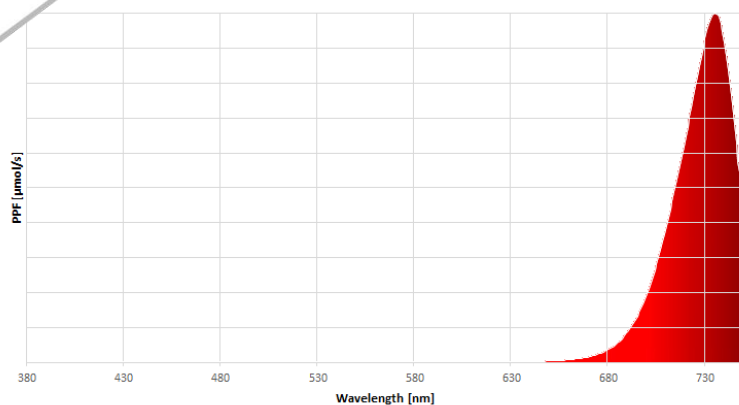
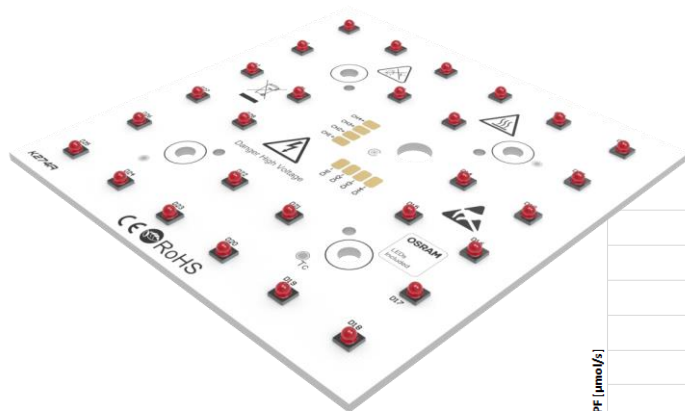


GROWEMITY 28 FFFF- K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm]	Radiant Power [mW]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 FFFF - K274	350	13,0	4,5	18,1	FAR RED	727	1855	1,12	0,25	4,48	0,25	QO-081081-FFFF-C1000-K274
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
		13,0	4,5		FAR RED	727	1855	1,12	0,25			
	500	13,7	6,8	27,3	FAR RED	727	2616	1,58	0,23	6,32	0,23	QO-081081-FFFF-C1000-K274
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
		13,7	6,8		FAR RED	727	2616	1,58	0,23			
	700	14,5	10,1	40,6	FAR RED	727	3543	2,14	0,21	8,56	0,21	QO-081081-FFFF-C1000-K274
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
		14,5	10,1		FAR RED	727	3543	2,14	0,21			
	800	14,8	11,8	47,3	FAR RED	727	4044	2,44	0,21	9,77	0,21	QO-081081-FFFF-C1000-K274
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		14,8	11,8		FAR RED	727	4044	2,44	0,21			
		14,8	11,8		FAR RED	727	4044	2,44	0,21			

Parameters were calculated for temperatures $T_j = 25^\circ\text{C}$

Values of these parameters were calculated for default bin and with tolerances of 15%.

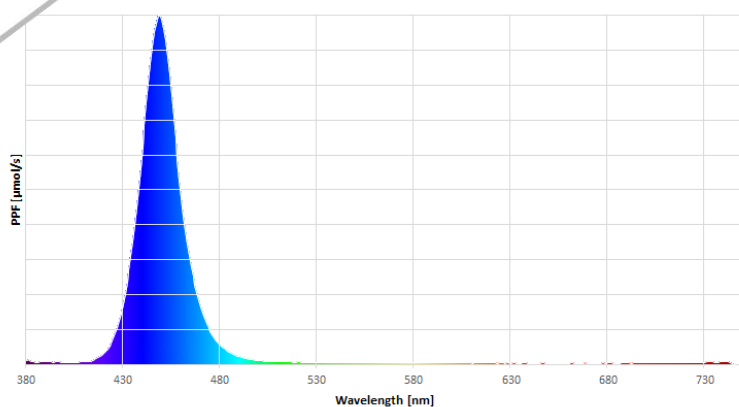
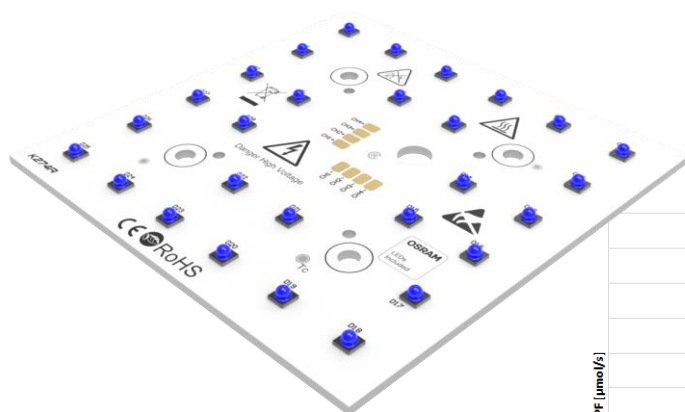


GROWEMITY 28 BBBB - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	λ [nm]	Radiant Power [mW]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 BBBB - K274	350	20,0	7,0	27,9	DEEP BLUE	455	4445	16,45	2,36	65,80	2,36	Q0-081081-BBBB-C1000-K274
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
		20,0	7,0		DEEP BLUE	455	4445	16,45	2,36			
	500	20,3	10,2	40,6	DEEP BLUE	455	6179	22,87	2,25	91,46	2,25	Q0-081081-BBBB-C1000-K274
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
		20,3	10,2		DEEP BLUE	455	6179	22,87	2,25			
	700	20,8	14,6	58,2	DEEP BLUE	455	7645	28,29	1,94	113,18	1,94	Q0-081081-BBBB-C1000-K274
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
		20,8	14,6		DEEP BLUE	455	7645	28,29	1,94			
	800	20,9	16,7	67,0	DEEP BLUE	455	8446	31,26	1,87	125,02	1,87	Q0-081081-BBBB-C1000-K274
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			
		20,9	16,7		DEEP BLUE	455	8446	31,26	1,87			

Parameters were calculated for temperatures $T_j = 25^\circ\text{C}$

Values of these parameters were calculated for default bin and with tolerances of 15%.

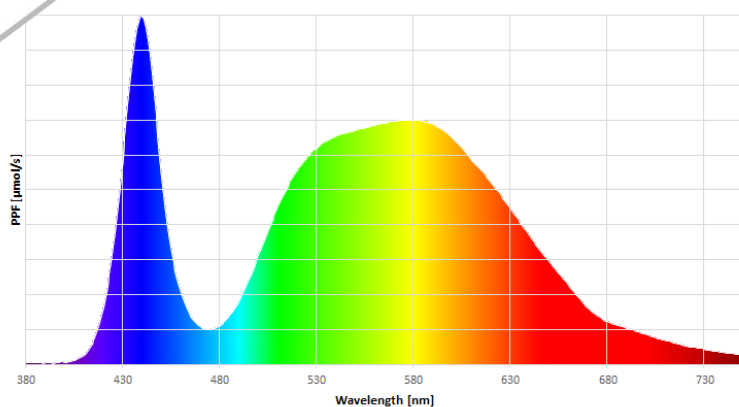
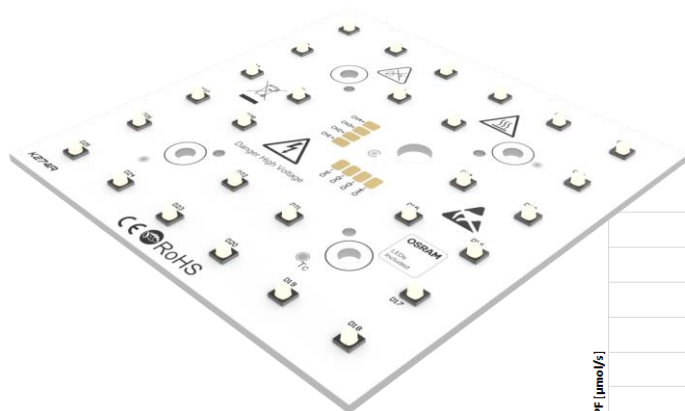


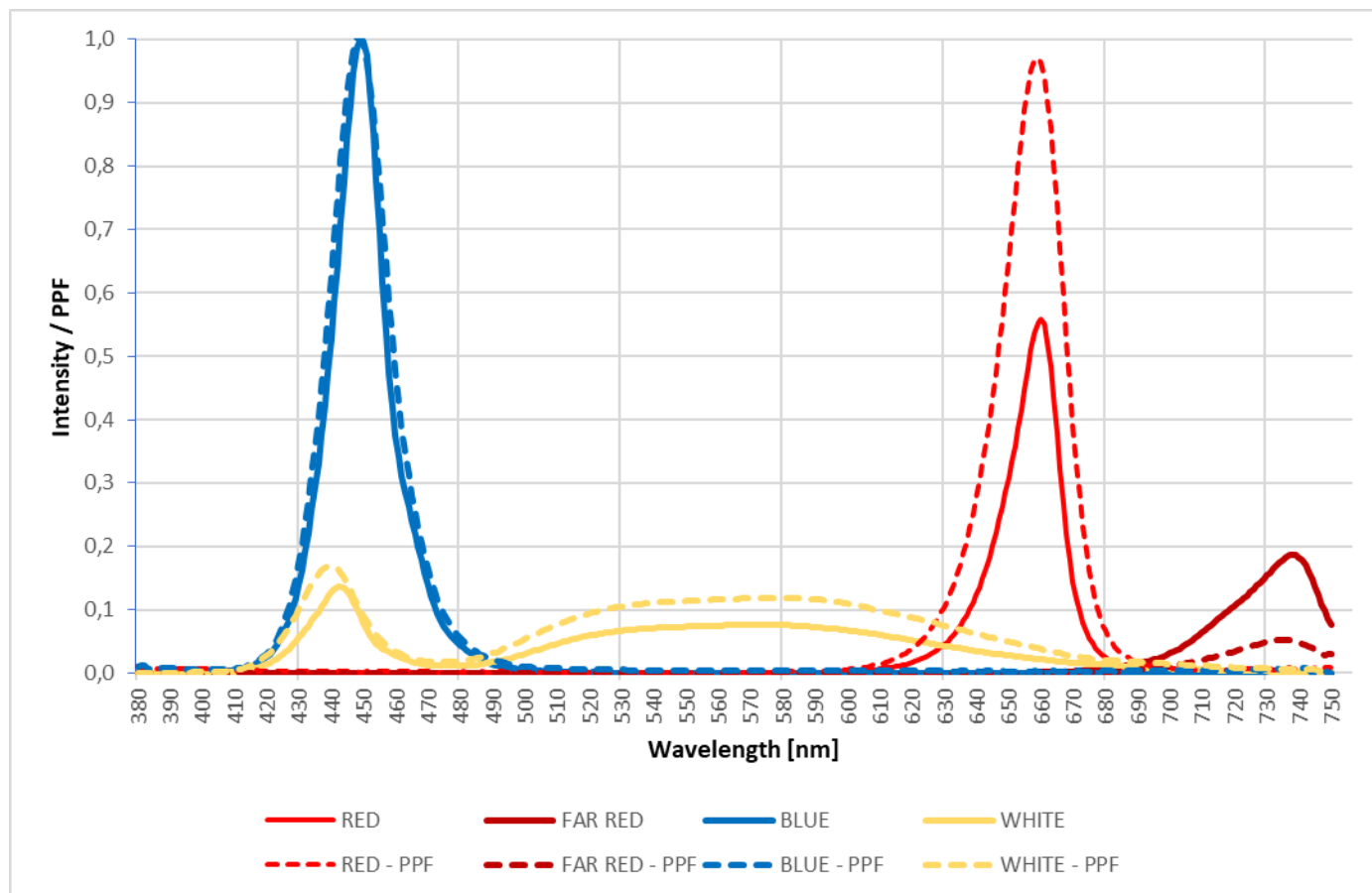
GROWEMITY 28 MONO - K274

	Input Current [mA]	Forward Voltage [V]	Power [W]	Total Power [W]	Colour	CCT [K]	Luminous Flux [lm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Total PPF [$\mu\text{mol/s}$]	Total PPF/W [$\mu\text{mol/J}$]	Article Number
GrowEmity 28 MONO - K274	350	19,3	6,7	27,0	WHITE	5000	1035	13,72	2,04	54,88	2,04	Q0-081081-MONO-C1000-K274
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
		19,3	6,7		WHITE	5000	1035	13,72	2,04			
	500	20,0	10,0	39,9	WHITE	5000	1418	18,34	1,84	73,36	1,84	Q0-081081-MONO-C1000-K274
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
		20,0	10,0		WHITE	5000	1418	18,34	1,84			
	700	20,7	14,5	57,8	WHITE	5000	1864	23,80	1,65	95,20	1,65	Q0-081081-MONO-C1000-K274
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
		20,7	14,5		WHITE	5000	1864	23,80	1,65			
	800	20,9	16,7	66,8	WHITE	5000	2050	26,18	1,57	104,72	1,57	Q0-081081-MONO-C1000-K274
		20,9	16,7		WHITE	5000	2050	26,18	1,57			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			
		20,9	16,7		WHITE	5000	2050	26,18	1,57			

Parameters were calculated for temperatures $T_j = 25^\circ\text{C}$

Values of these parameters were calculated for default bin and with tolerances of 15%.



SPECTRUM OF LEDs

Spectrum graph of the red, far red, blue and white LEDs at 350 mA current. Spectrum can be changed by choosing LEDs and power output.

GrowEmity modules can be ordered as ready unit with heat-sink and optic. Couple of units can be mounted together, to create the GrowEmity light source with the same or different type of LEDs configuration. It ensures better efficiency and flexibility of GrowEmity lighting system. For the GrowEmity 28 – K274 are recommended:

- **COMPATIBLE HEAT-SINK** – COOLBLOCK® HB-28-B MechaTronix
- **COMPATIBLE OPTIC** – STRADELLA-IP-28 LEDiL

Almost half of the input power is converted to heat, which means that GrowEmity light sources must be mounted to a heat-sink with thermal tape for better heat dissipation.

COOLING

GrowEmity light source isn't self-cooling and additional heat-sink is required. The lifetime of the light source depends on the operating temperature and used LEDs. The temperature should be measured in the middle of the board. The temperature can be measured with thermocouple or simple temperature probe. Lifetime of LEDs decreases with the rise of temperature and luminous intensity in higher temperatures may be lower than nominal. Construction of the lamp or any place of installation should ensure correct heat dissipation from LED light sources. Overheat can damage or destroy some elements or entire LED light source. Never use overheated light source again as it may be damaged and can cause losses or even fire. We are not responsible for any loss, or damage resulting from overheating! Guarantee become void in such cases.

SAFETY

LED light source can change light intensity, but even dimmed LEDs generate high-intensity light. Looking into LEDs beam is unhealthy and may cause irreversible injury to eye's retina. Never look into the beam without protection glasses with an appropriate filter. Additionally, they may change LEDs light intensity almost immediately. If people are photosensitive, LEDs light may be a trigger to epileptic seizures and alter the perception, especially when light change very fast.

LED light source can work on high power supply current, so never touch components and wires of LED light source when power supply is on.

PROTECTION MEASURES AGAINST DAMAGE

LED light sources are delicate, even small mechanical stress may damage them. Such stresses should be avoided. If it is impossible, it should be kept to the minimum. Mechanical stresses such as pressure, bending, breaking, drilling, etc. may cause irreversible damage. Damaged LED light source aren't suitable for use.

Electrostatic Discharge (ESD) is a serious threat to electronics devices. The human body can accumulate very high electrostatic charge which can decrease the lifetime of electronics significantly and in worst cases may destroy electronic components. To avoid damages use of electrostatic protection is required. It is needed to follow ESD precautions during manipulation of these devices. Do not touch electronic components directly to avoid damages. Observe the official regulations for electrical devices (like DIN, VDE, EN). It is necessary to isolate components like controllers, LED light sources, power supply, wires etc. from any metal parts which can conduct electrostatic charges or cause a short circuit. LED light source aren't equipped with short circuit protection. During a short circuit, very high current is flowing from a power supply and can destroy it, causing risk of fire. Electronics must not be modified. Any modification causes loss of guarantee. The electric wiring/connection must comply with all current and valid national requirements, be constructed by a certified electrical tradesman, and comply with all the requirements set forth in this manual. We are not responsible for any loss, or damage resulting from electrostatic voltage discharge and a short circuit caused by inappropriate handling or wrong construction of the lamp! Guarantee become void in such cases.

Additionally LED light source can be damaged by some chemical substances. Depends on elements the damage may be different. It is important not to use chemical substances like acids, organic acids, sulphur, alkalis, organic solvents, mineral oils, vegetable oils and synthetic oils, etc. We are not responsible for any loss, or damage resulting from improper use of LED light source! Guarantee become void in such cases.

Do not operate LED light source when they aren't working properly. If LED light source are working incorrectly, turn off a power supply. Damaged LED light source may cause electric shock or short circuit.

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Subject to errors and technical changes.