

LED Flasher Module R4.1 Values for Resistors R1/R2

D1 In?		Target LED Current: 15					Vf= 2.5				
DC	Yes	Target R1/R2 value; ohms (R=V/I)					R1/R2 Watts (W=I ² *R)				
Supply Vdc	Eff Vdc at D1 output	No. of parrallel LEDs					Vs-Vf				
		6	4	3	2	1	6	4	3	2	1
16	14.6	134	202	269	403	807	12.1	0.18	0.18	0.18	0.18
14	12.6	112	168	224	337	673	10.1	0.15	0.15	0.15	0.15
12	10.6	90	135	180	270	540	8.1	0.12	0.12	0.12	0.12
10	8.6	68	102	136	203	407	6.1	0.09	0.09	0.09	0.09
9	7.6	57	85	113	170	340	5.1	0.08	0.08	0.08	0.08
8	6.6	46	68	91	137	273	4.1	0.06	0.06	0.06	0.06
6	4.6	23	35	47	70	140	2.1	0.03	0.03	0.03	0.03
5	3.6	12	18	24	37	73	1.1	0.02	0.02	0.02	0.02
Total ma:		90	60	45	30	15					

Limit: 0.25 watts

D1 must!		Target LED Current: 15					Vf= 2.5				
AC		Target R1/R2 value; ohms (R=V/I)					R1/R2 Watts (W=I ² *R)				
Supply Vac	Eff Vdc at D1 output	No. of parrallel LEDs					Vs-Vf				
		6	4	3	2	1	6	4	3	2	1
12	15.5	145	217	289	434	868	13.0	0.20	0.20	0.20	0.20
10	12.7	113	170	227	340	680	10.2	0.15	0.15	0.15	0.15
8	9.9	82	123	164	246	492	7.4	0.11	0.11	0.11	0.11
6	7.1	51	76	101	152	304	4.6	0.07	0.07	0.07	0.07
Total ma:		90	60	45	30	15					

Limit: 0.25 watts

NOTES; Adjust target LED current and LED Vf to suit.

For the DC case, in cell B5 select if bridge diode D1 is included on the board or jumpered. Eff Vdc values will be adjusted accordingly.
Round the calculated resistance up/down to the nearest standard value.

LED current <8 ma is kind of dim.

LED current >10 ma looks good.

LED current of 15 ma is quite bright and is a good target. Max should be 20 ma.