

Table S1: Light power of standard epifluorescence light source

SpectraX LED Excitation filter Beam splitter	Violet 390/18nm HCBS416	Violet 390/18nm T495LPXR	Violet 390/18nm HCBS520	Blue 438/24nm HCBS458	Cyan 480/20nm T495LPXR
10%	2.05	2.10	1.95	3.75	1.76
20%	3.83	3.92	3.74	6.84	3.57
30%	5.41	5.53	5.32	9.46	5.15
40%	6.87	7.03	6.79	11.92	6.59
50%	8.16	8.35	8.08	14.04	7.83
60%	9.39	9.62	9.30	16.03	8.96
70%	10.47	10.73	10.32	17.77	9.96
80%	11.50	11.80	11.33	19.44	10.89
90%	12.43	12.77	12.22	20.93	11.75
100%	13.34	13.75	13.08	22.40	12.57
SpectraX LED Excitation filter Beam splitter	Cyan 488/6nm T495LPXR	Cyan 488/6nm HCBS660	Cyan 494/41nm HCBS660	Cyan 480/20nm HCBS660	Teal 504/12nm HCBS520
10%	1.38	1.41	2.55	1.82	0.42
20%	2.47	2.51	4.71	3.59	0.84
30%	3.32	3.36	6.49	5.14	1.21
40%	4.03	4.06	8.07	6.54	1.54
50%	4.60	4.64	9.39	7.74	1.82
60%	5.11	5.15	10.63	8.84	2.09
70%	5.55	5.59	11.68	9.80	2.31
80%	5.95	6.00	12.67	10.72	2.53
90%	6.30	6.36	13.54	11.52	2.73
100%	6.64	6.70	14.40	12.28	2.91
SpectraX LED Excitation filter Beam splitter	Green 542/20nm ST562	Green 546/10nm ST560	Green 561/4nm HCBS573	Green 600/14nm HCBS624	Green 605/15 HCBS660
10%	2.00	1.24	0.71	0.76	0.48
20%	4.22	2.54	1.43	1.57	1.02
30%	6.19	3.70	2.08	2.30	1.51
40%	8.09	4.83	2.72	3.02	1.99
50%	9.79	5.84	3.30	3.67	2.44
60%	11.41	6.83	3.88	4.33	2.88
70%	12.85	7.71	4.41	4.94	3.28
80%	14.27	8.61	4.95	5.56	3.70
90%	15.56	9.37	5.46	6.15	4.10
100%	16.82	10.15	5.98	6.86	4.50

Light power at the sample plane using a "Lumencore Spectra X Light Engine" fluorescence lightsource and a Plan Fluor NA 1.3 40x oil immersion objective. Different combinations of excitation filters and beam splitters at different light intensity settings were tested. Values are given in $[\text{W cm}^{-2}]$. The spectrum for each LED-filterset combination can be found in Figure S5.