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Supplementary Information

Has the perovskite LED stability problem been solved?

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Table S1. Performance parameters of LEDs in the blue spectral region. Letters Conv and Inv denote conventional and inverted architecture, respectively. Perovskite emitters are labelled as H and I for hybrid organic and inorganic, respectively, while the dimensionality is denoted as 3D, 2D, and quasi-2D for 3D films $APbX_3$, 2D films C_2PbX_4, and quasi-2D films $C_2A_{n-1}Pb_nX_{3n+1}$ respectively, where A denotes small organic cation or Cs^+ cation, C denotes bulky organic cation, and X denotes halide anion. For 2D and quasi-2D materials with Dion-Jacobson rather than Ruddlesden-Popper structure, the corresponding formulae are $CPbX_4$ and $CA_{n-1}Pb_nX_{3n+1}$ respectively. Label QD/NC denotes quantum dots/nanocrystals, while SC denotes single crystal. V_{on} denotes turn-on voltage, EQE_{max} denotes maximum EQE, L_{max} denotes maximum luminance, λ denotes emission wavelength, T_{50} denotes operational lifetime at 100 cd/m^2 (unless specified otherwise).

Device	V_{on} (V)	L_{max} (cd/m^2)	EQE_{max} (%)	λ (nm)	T_{50}	Ref.
Conv, H, quasi-2D	2.1	10392	14.5	493	13.85 min	S1
Conv, H, quasi-2D	3.0	2541	16.07	486	5 min	S2
Conv, H, SC exfoliated	~4.5	0.1	0.02	440	17 s at 0.1 cd/m^2	S3
Inv, H, quasi-2D	3.1	6426	2.58	475	16 h at 1000 cd/m^2	S4
Conv, I, QDs	~3	151.32	0.81	488	1.97 min	S5
Conv, I, QDs	~2.4	847.6	5.46	464	14 min	S6
Conv, H, quasi-2D	~3.1	163.2	5.8	467	25 min	S7
Conv, H, quasi-2D	3.6	2686.45	10.16	490	4 min	S8
Conv, H, quasi-2D	~3V	2191	12.1	488	~400 s	S9
Conv, I, QDs	3.7	12060	10.3	469	25 h at 115 cd/m^2	S10
Conv, I, quasi-2D	~3	9040	11.0	485	~100 min	S11
Conv, I, QDs	3.6	10410	5	469	59.2 h at 115 cd/m^2, 80 min at 1700 cd/m^2	S12
Conv, H, quasi-2D	3.2	1981	21.4	483	125 min	S13
Conv, H, quasi-2D	~3.5	~900	13.2	473	67 min	S13
Conv, H, quasi-2D	~3.7	~600	7.3	464	19 min	S13
Conv, H, 3D	2.6	~ 600	11.0,	477	87 s	S14
Conv, I, NCs	3.6	~300	11.9	463	17 min	S15
Conv, H, quasi-2D	3.8	442	3.82	487	78s at 30 cd/m^2	S16
Conv, I, 3D	~2.6	5351	4.5	489	6.5 min at 96 cd/m^2	S17
Conv, H, quasi-2D	~3	483 c	5.57	472	5.16 min at 80 cd/m^2	S18
Conv, H, quasi-2D	3.3	798	4.3	468	130 s at 60 cd/m^2	S19
Conv, H, quasi-2D	3.7	493	7.2	473	352 s at 50 cd/m^2	S20
Conv, H, quasi-2D	3.2	1937	14.82	475	120 s	S21
Conv, H, quasi-2D	~2.6	941	17.5	472	11.3 min	S22
Conv, H, quasi-2D	~3.5	391	4.1	~490	~60 s	S23
Conv, H, quasi-2D	3.0	547	17.32	478	306 s	S24
Conv, H, 3D	~4.5	~100	6.5	448	~50 min at 15.9 cd/m^2	S25
Conv, H, quasi-2D	~4.5	1750	6.7	481	21.6 min at 67 cd/m^2	S26
Conv, H, 2D	~3.5	1315	3.08	445	3.5 h	S27
Conv, H, quasi-2D	~3.5	2224	13.5	488	290 s	S28
Conv, H, quasi-2D	4.3	1130	7.84	485	311 s	S29
Conv, H, quasi-2D	2.9	4700	14.2	488	550 s	S30
Conv, H, quasi-2D	2.8	~10000	10.6	494	20 min at 100 cd/m^2, 102 s at 500 cd/m^2	S31
Conv, H, quasi-2D	~3	1931	14.2	475	72 min	S32
Conv, H, quasi-2D	~3.6	4215	15.03	490	19.6 min	S33
Conv, I, QDs	2.7	851	2.8	469	126 s	S34
Conv, I, 3D	2.6	150	4.1	459	~125 s at 10 cd/m^2	S35
Conv, H, quasi-2D	2.9	1926	6.3	489	200 s at 60 cd/m^2	S36
Conv, H, quasi-2D	3.24	968	2.54	483	546 s at 45 cd/m^2	S37
Conv, H, quasi-2D	2.8	891	8.3	470	325 s	S38
Conv, H, quasi-2D	3.0	8170	13.15	497	16.2	S39
Conv, H, quasi-2D	~3	710	11.87	468	23 min	S40
Conv, H, quasi-2D	3.0	1094.9	10.32	487	52.3 min	S41
Conv, H, quasi-2D	3.4	3028	16.55	493	52 s	S42
Conv, H, quasi-2D	~2.8	1628	7.9	478	630 s	S43

Conv, H, quasi-2D	3.0	840	9.0	492	261 s at 66 cd/m^2	S44
Conv, H, quasi-2D	3.1	8600	12.2	488	160 min at 270 cd/m^2,	S45
Conv, H, quasi-2D	2.4	958	10.85	486	6.5 min	S46
Conv, H, quasi-2D	~3.0	~900	6.7	475	~180 s at 161 cd/m^2	S47
Conv, I, QDs	~3	11100	8.7	470	35 h at 100 cd/m^2	S48
Conv, H, quasi-2D	3.3	3131	14.82	487	2900 s at 178 cd/m^2	S49
Conv, I, QDs	~3.7	3850	4.7	470	12 h at 100 cd/m^2, 100 min at 552 cd/m^2	S50
Conv, I, 3D	3.5	1775	9.2	490	740 s	S51
Conv, H, quasi-2D	3.6	1390	12.8	486	16.2 min at 150 cd/m^2	S52
Conv, H, quasi-2D	~3.0	2257	8.5	490	3.6 min	S53
Conv, I, NCs	3.6	158	3.18	460	372 s at 81.8 cd/m^2	S54
Conv, I, QDs	~3	6113	13.8	495	1000 s at 440 cd/m^2	S55
Conv, I, Platelet	2.6	1511	4.15	455	50 min	S56
Conv, H, quasi-2D	~3.2	368	12.31	486	~220 s at 40 cd/m^2	S57
Conv, H, quasi-2D	3V	548.65	10.98	480	7.68 min	S58
Conv, H, quasi-2D	3.07	1765	7.51	488	3961 s	S59
Conv, H, 2D	~3.8	4015	2.01	484	300 min at 80 cd/m^2	S60
Conv, H, 3D	2.0	18480	24.4	496	173 s at 1861 cd/m^2, 60 s at 778 cd/m^2	S61

Table S2. Performance parameters of LEDs in the green spectral region. Letters Conv and Inv denote conventional and inverted architecture, respectively. Perovskite emitters are labelled as H and I for hybrid organic and inorganic, respectively, while the dimensionality is denoted as 3D, 2D, and quasi-2D for 3D films $APbX_3$, 2D films C_2PbX_4, and quasi-2D films $C_2A_{n-1}Pb_nX_{3n+1}$ respectively, where A denotes small organic cation or Cs^+ cation, C denotes bulky organic cation, and X denotes halide anion. For 2D and quasi-2D materials with Dion-Jacobson rather than Ruddlesden-Popper structure, the corresponding formulae are $CPbX_4$ and $CA_{n-1}Pb_nX_{3n+1}$ respectively. Label QD/NC denotes quantum dots/nanocrystals. V_{on} denotes turn-on voltage, EQE_{max} denotes maximum EQE, L_{max} denotes maximum luminance, λ denotes emission wavelength, T_{50} denotes operational lifetime at 100 cd/m^2 (unless specified otherwise). Data for both the best and control devices are included where available.

Device	V_{on} (V)	L_{max} (cd/m^2)	EQE_{max} (%)	λ (nm)	T_{50}	Ref.
Conv, H, Quasi-2D	3	54000	22.2	~530	53 min	S62
Conv, H, Quasi-2D	3	49000	17	~530	26 min	S62
Conv, I, NC	2.6	~10000	16.4	523	3578 min	S63
Conv, I, NC	2.6	~10000	8.5	~520	25 min	S63
Conv, H, NC	~2.7	~10000	23.26	530	64 min	S64
Conv, H, NC	2.75	~10000	23.12	530	***	S64
Conv, H, 3D & SC	~2.5 (3D), ~5 (1.5 µm SC)	84,000 (1.5 µm), 64500 (4.4 µm)	11.2 (1.5 µm), 6.4 (4.4 µm)	522 3D, 532 SC (1.5 µm), 551 (4.4 µm)	12500 h (1.5 µm SC) 8650 h (4.4 µm), 0.78 h (3D 50 nm)	S65
Conv, H, quasi-2D	3.0	17185 cd/m^2	18.64	530	2497 s (41.6 min)	S66
Conv, H, quasi-2D	3.4	3673 cd/m^2	11.68	529	410 s	S66
Conv, H, 3D	2.7	14000	20.3	525	104.56 h extrapolated, 46 h measured	S67
Conv, H, 3D	~2.75	***	***	522	***	S67
Conv, H, quasi-2D	2.8	17196.7	14.4	531	10.84 h	S68
Conv, H, quasi-2D	3.2	9724.7	2.79	531	58 min	S68
Conv, H, quasi-2D	2.5	11370	32.1	516	3.56 h	S69
Conv, H, quasi-2D	2.8	6223	18.2	516	1.37 h	S69
Conv, I, QD	2	41900	21.63	520	752 h estimated, 180.1 h measured	S70
Conv, I, QD	3.1	25000	~17	~520	9.5 h	S70
Inv, H, 3D	2.5	55370	12.98	569	173 h	S71
Inv, H, 3D	3.1	6426	2.58	475	16 h	S71
Conv, H, quasi-2D	2.68	~30000	24.4	~515	51 min	S72
Conv, H, quasi-2D	2.82	~30000	19.4	~515	9 min	S72
Conv, H, 3D	2.77	36656	4.23	~540	14 h	S73
Conv, H, 3D	3	46920	2.5	~540	38 min	S73
Conv, I, QD	~2.4	11000	18.7	516	15.8 h	S74
Conv, I, QD	~2.4	7000	7.7	516	1.4 min	S74
Conv, H, core-shell NC	2.22	473990	28.9	540	>30000 h at 100 cd/m^2, 520 h at 1000 cd/m^2, 14 h at 10000 cd/m^2	S75
Conv, H, core-shell NC	~2.56	~10000	~5	540	0.2 h	S75

Conv, I, 3D	2.8	16436	9.4	517	250 h	S76
Conv, I, 3D	2.5	8628	1.2	517	15 h	S76
Conv, H, quasi-2D	~2.5	147872.8	29.5	~518	18.67 at 12000 cd/m^2, 50317 h at 100 cd/m^2	S77
Conv, H, quasi-2D	~2.7	~15000	12.5	~518	0.67 h	S77
Conv, H, quasi-2D	3.5	45230	14.0	520	33 h at 100	S78
Conv, H, quasi-2D	3.5	26,700	4.5	519	11 min	S78
Conv, H, quasi-2D	~2.6	17320	21.4	520	117 min	S79
Conv, H, quasi-2D	~3	~1300	~5.8	520	29 min	S79
Conv, H, quasi-2D	2.8	13400	20.5	512	25 min	S80
Conv, H, quasi-2D	~2.7	6094	6.37	512	~12.5 min	S80
Conv, H, quasi-2D	~3	5200	12.4	527	1.5 h	S81
Conv, H, quasi-2D	~4	500	3.4	530	1.5 h	S81
Conv, H, quasi-2D	~2.7	82480	20.36	526	358 min	S82
Conv, H, quasi-2D	~2.7	19995	19.11	520	142 min	S82
Conv, H, quasi-2D	~3	133560	23.15	530	74.7 min at ~1000 cd/m^2	S83
Conv, H, quasi-2D	~3.1	~90000	17.4	~530	41.5 min at ~1000 cd/m^2	S83
Conv, H. quasi-2D	~2.7	47719	21	514	14 min at 1000 cd/m^2	S84
Conv, H. quasi-2D	~2.8	~40000	15.3	~514	1.4 min	S84
Conv, H. quasi-2D	~2.9	288798	25.9	530	91.1 min	S85
Conv, H. quasi-2D	~3.1	~80000	16.8	~530	27.8 min	S85
Inv, H, 3D	2.0	33996	9.99	534	6.3 h	S86
Inv, H, 3D	2.5	5495	0.34	534	~30 min	S86
Inv, H, 3D	2.1	128337	20.5	536	26.4 min at 10986 cd/m^2	S87
Inv, H, 3D	~3	~300	0.008	542	***	S87
Conv, H, quasi-2D	~2.6	~1000	13.14	525	148 s at 50 cd/m^2	S88
Conv, H, quasi-2D	~3.4	~800	9.47	525	91 s at 50 cd/m^2	S88
Conv, H, quasi-2D	2.8	14428	21.36	512	47 min at 1000 cd/m^2, 1486 min at 100 cd/m^2	S89
Conv, H, quasi-2D	2.8	17573	14.09	512	~11.7 min	S89
Conv, H, quasi-2D	~3	17160	14.7	512	8612 s (2.4 h)	S90
Conv, H, quasi-2D	~3	10290	4.26	512	1276 s (12.26 min)	S90

Conv, H, quasi-2D	2.6	29860	21.5	512	2.81 h (DC), 4.12 h (100 kHz), 3.62 h (3 MHz)	S91
Conv, H, quasi-2D	3	9109	10.2	510	0.52 h (DC), 1.27 h (100 kHz), 0.98 h (3 MHz)	S91
Conv, H, quasi-2D	2.7	245375.4	27.13	~515	76.5 min	S92
Conv, H, quasi-2D	3	164259.6	18.61	~512	39.7 min	S92
Conv, H, quasi-2D	2.8	~20000	17.6	525	67.8 min at 100 cd/m^2, 55 s at 1771 cd/m^2	S93
Conv, H, quasi-2D	~3.2	~11000	~7	525	54.5 min	S93
Conv, I, 3D	2.4	10050	22.3	527	59 h at 130 cd/m^2	S94
Conv, I, 3D	***	***	***	***	***	S94
Conv, I, QD	~2	33009	24.13	517	54 min at 10000 cd/m^2, 2706 min at 1000 cd/m^2	S95
Conv, I, QD	***	***	***	***	***	S95
Conv, I, NC	~2.2	47927	17.3	521	123 min at 1000 cd/m^2, 47.4 h at 100 cd/m^2	S96
Conv, I, NC	~2.2	30653	12.5	521	28 min	S96
Conv, H, quasi-2D	~3.5	9363	14.4	~518	341 min	S97
Conv, H, quasi-2D	~3	7349	10.9	~518	105 min	S97
Conv, H, quasi-2D	~3V	80000	24.5	511	16 min at 500 cd/m^2	S98
Conv, H, quasi-2D	~3V	70687	15.3	512	3 min	S98
Conv, H, quasi-2D	~2.7	59119	18.8	513	185 min	S99
Conv, H, quasi-2D	~2.8	~30000	13.6	513	~150 min	S99
Conv, H, quasi-2D	~3	32556	30.84	524	100.6 min	S100
Conv, H, quasi-2D	~3	37660	17.8	524	13.8 min	S100
Conv, I, QD	~2.1	50537	20.3	518	127 h	S101
Conv, I, QD	~2.1	~10000	15.74	518	9.3 h	S101
Conv, H, 3D	2.6	190000	22.3	530	18.6 min at 138 cd/m^2	S102
Conv, H, 3D	~2.6	~40000	3.55	530	***	S102
Conv, H, NC	3.8	67115	19.2	532	20 min	S103
Conv, H, NC	4.2	19377	13.3	531	11 min	S103
Conv, I, 3D	~2.1	327932	13.7	524	157 min	S104
Conv, I, 3D	~3.7	~3000	0.02	521	26.33 min	S104
Conv, H. quasi-2D	~2.7	20230	26.5	516	213 min	S105
Conv, H. quasi-2D	~2.8	8751	15.9	516	52.2 min	S105
Conv, H, 3D	2.6	54234	24.2	536	45.6 h	S106
Conv, H, 3D	3	~15000	10.2	536	8.8 h	S106
Conv, H, quasi-2D	2.8	23657	23.9	530	70 min	S107

Conv, H, quasi-2D	~2.8	~10000	20.3	530	30 min	S107
Conv, H, quasi-2D	2.75	~20000	16.7	514	35 min at 200 cd/m^{2,}	S108
Conv, H, quasi-2D	~3	~18000	1.5	514	10 min	S108
Conv, H. quasi-2D	~2.5 V	32400	10.3	515	87 min at 300 cd/m^2, 9.5 h at 100 cd/m^2	S109
Conv, H. quasi-2D	~2.5 V	1363	2.5	515	4.4 min	S109
Conv, H, quasi-2D	2.8	4016	20.13	516	61 min at 150 cd/m^2	S110
Conv, H, quasi-2D	2.8	4016	11.26	516	21 min	S110
Conv, H, quasi-2D	2.9	9207	18.9	530	39 min	S111
Conv, H, quasi-2D	2.8	4195	12.71	530	~11.7 min	S111
Conv, H, quasi-2D	~2.8	52000	25.6	517	115 min at 7200 cd/m^2	S112
Conv, H, quasi-2D	~2.9	~20000	10.7	517	~8 min	S112
Conv, H, 3D	2.6	~23000	23.4	531	132 min at 100 cd/m^2, 7 min at 1000 cd/m^2	S113
Conv, H, 3D	~2.6	~10000	~12	~531	25 min	S113
Conv, H, quasi-2D	3.2	36500	28.1	514	4.04 h	S114
Conv, H, quasi-2D	2.8	32968.9	17.8	514	1.44 h	S114
Conv, H, quasi-2D	~2.8	~20000	22.8	512	31 min.	S115
Conv, H, quasi-2D	~2.8	~20000	14.7	512	6.2 min	S115
Conv, H, quasi-2D	~2.8	4650.5	19.9	517	855 s	S116
Conv, H, quasi-2D	~2.8	4012.5	13.87	517	612 s	S116
Conv, H, quasi-2D	2.8	12252	15.47	~530	~28 min at 106 cd/m^2	S117
Conv, H, quasi-2D	3.2	8580	9.28	~530	~13 min at 106 cd/m^2	S117
Conv, I, QD	2.41	43883.39	8.54	517	63.84 min	S118
Conv, I, QD	~2.42	7308	2.26	517	11.82 min	S118
Conv, H & I, 3D-MOF	~3.8	120000 (MA), 9000 (Cs)	15.96 (MA), 5.6 (Cs)	524 (MA), 518 (Cs)	MA: 40 h at 150 cd/m^2, 498 min at 5000 cd/m^2, Cs: 50 h at 700 cd/m^2, 48 min at 9000 cd/m^2,	S119
Conv, H & I, 3D-MOF	***	***	***	***	***	S119
Conv, I, NC	2.7	2030	19.3	511	50 s at 1000 cd/m^2, 25 min at 100 cd/m^2	S120
Conv, I, NC	~4	~500	0.13	511	12 s	S120
Conv, H, 3D	~1.9	~100000	8.87	~521	***	S121
Conv, H, 3D	2	316536	21.2	528	~4900h at 100 cdm^{-2}	S122
Conv, H, 3D	~2.2	~15000	1.5	528	0.7 h	S122

Table S3. Performance parameters of LEDs in the red spectral region. Letters Conv and Inv denote conventional and inverted architecture, respectively. Perovskite emitters are labelled as H and I for hybrid organic and inorganic, respectively, while the dimensionality is denoted as 3D, 2D, and quasi-2D for 3D films $APbX_3$, 2D films C_2PbX_4, and quasi-2D films $C_2A_{n-1}Pb_nX_{3n+1}$ respectively, where A denotes small organic cation or Cs^+ cation, C denotes bulky organic cation, and X denotes halide anion. For 2D and quasi-2D materials with Dion-Jacobson rather than Ruddlesden-Popper structure, the corresponding formulae are $CPbX_4$ and $CA_{n-1}Pb_nX_{3n+1}$ respectively. Label QD/NC denotes quantum dots/nanocrystals. V_{on} denotes turn-on voltage, EQE_{max} denotes maximum EQE, L_{max} denotes maximum luminance, λ denotes emission wavelength, T_{50} denotes operational lifetime at 100 cd/m^2 (unless specified otherwise).

Device	V_{on} (V)	L_{max} (cd/m^2)	EQE_{max} (%)	λ (nm)	T_{50}	Ref.
Conv, I, 3D	3	1000	2	~655	10h	S123
Conv, H, quasi-2D	3.1	1308	15.7	~631	30min	S124
Conv, H, 3D	1.5	1475.69	13.52	664	1099sec	S125
Conv, I, 3D	2.6	3100	21.2	666	4806.7h	S126
Inv, H, NC	2	1258	~3.39	680	***	S127
Inv, H, 3D	3.3	8547	8.7	662	8h	S128
Conv, I, QD	3.2	1212	6.4	630	78 min	S129
Conv, H, quasi-2D	2.7	2410	18.3	630	540 min	S130
Conv, H, quasi-2D	2.8	1452	12.4	635	2.21h	S131
Conv, H, quasi-2D	~3	6483	20.73	656	71 min	S132
Conv, H, quasi-2D	~3.5	404.2	21.8	682	~6h	S133
Conv, I, quasi-2D	~2.3	100	8.16	655	1175 s	S134
Conv, H, quasi-2D	2V	1701	16.1	625	56.4 min	S135
Inv, I, QD	1.5	3691	15.24	695	220 min	S136
Conv, I, 3D	2.8	4258	9.93	666	2667 h	S137
Conv, H, quasi-2D	2.4	85.6	21.6	694	1000 s	S138
Inv, H, 3D	1.9	11592	14.06	671.6	15.4 h	S139
Conv, I, NC	~3.8	618	17.8	690	317 h	S140
Conv, I, QD	2.2	1200	25.2	632	120 min	S141
Conv, I, QD	2.99	1391	7.1	634	33 min	S142
Conv, I, NC	3.6	2671	3.55	637	50 min	S143
Conv, H, quasi-2D	~2.9	2377	18.7	650	476 min	S144
Conv, I, NC	3	2500	23.6	676n	2500 min	S145
Conv, I, QD	~2.5	807	16.3	633	~10	S146
Conv, I, NC	~2.5	~5000	12.6	630	312 min	S147
Inv, I, quasi-2D	1.55	10031	18.8	691	50.3 h	S148
Conv, H, NC	2.8	627	20.28	627	340 min	S149
Conv, H, 3D	~1.9	~ 10^3	20.29	630	27. h	S150
Conv, H, 2D	~1.5	380	4.97	632	>15h	S151
Conv, I, 3D	2.2	9000	17.8	638	40 min	S152
Conv, H, 2D	2.4	98.7	1.87	633	***	S153
Inv, H, 3D	2.7	8777	8.21	650	491 h	S154
Conv, I, QD	~2.2	3120.5	23.2	633	44.7 min	S155
Conv, I, QD	~2	7,000	21	636	T_{90}=500 min	S156

Table S4. Performance parameters of LEDs in the NIR spectral region. Letters Conv and Inv denote conventional and inverted architecture, respectively. Perovskite emitters are labelled as H and I for hybrid organic and inorganic, respectively, while the dimensionality is denoted as 3D, 2D, and quasi-2D for 3D films $APbX_3$, 2D films C_2PbX_4, and quasi-2D films $C_2A_{n-1}Pb_nX_{3n+1}$ respectively, where A denotes small organic cation or Cs^+ cation, C denotes bulky organic cation, and X denotes halide anion. For 2D and quasi-2D materials with Dion-Jacobson rather than Ruddlesden-Popper structure, the corresponding formulae are $CPbX_4$ and $CA_{n-1}Pb_nX_{3n+1}$ respectively. Label QD/NC denotes quantum dots/nanocrystals. V_{on} denotes turn-on voltage, EQE_{max} denotes maximum EQE, L_{max} denotes maximum luminance, λ denotes emission wavelength, T_{50} denotes operational lifetime.

Device	V_{on} (V)	Radiance (W $Sr^{-1}m^{-2}$)	EQE_{max} (%)	λ (nm)	T_{50}	Ref.
Inv, H, 3D	~1.4	17	18.6	802	682h	S157
Inv, H, 3D	1.3	378	16.9	761	25.8h	S158
Inv, H, 3D	~1.2	17.65	~13	802	100.05h	S159
Conv, H, 3D	~1.55	157	10.7	~760	15.5min at 50mA/cm^2	S160
Inv, H, 3D	~1.3	626.94	15.84	~790	>60h at 10 mA/cm^2	S161
Conv, H, 3D	~2	2555	16.4	~760	117min	S162
Inv, H, 3D	~1.3	964	23.6	802	106.1h	S163
Inv, H, 3D	~1.3	110	24.3	793	1126.3h at 5mA/cm^2	S164
Conv, H, 3D	1	399	11.4	759	525h at 50mA/cm^2	S165
Inv, H, quasi-2D	~1.9	175.6	21.6	790	90h	S166
Inv, H, quasi-2D	***	142.4	21.9	~ 794	479h at 20 mA/cm^2	S167
Inv, H, 3D	~2	~80	4.5	~790	20h, 200h under pulsed operation	S168
Inv, H, 3D	~1.2	~250	18.2	787	T_{70}=171h	S169
Conv, H, 3D	~2.2	~1200	15.6	752	~2h at 10 mA/cm^2	S170
Conv, H, 3D	***	***	3.92	787	35min at 300mAcm^{-2}, 170min under pulsed operation	S171
Inv, H, 3D	***	1282.8	17.5	789	130h at 100 mA/cm^2	S172
Conv, H, quasi-2D	~2.7	~20	10	763	T_{90}=5.3h at 5 mAcm^{-2}	S173
Inv, H, 3D	~1.5	650	22.2	802	T_{80}= 14h	S174
Conv, H, quasi-2D	~3.5	~0.17	23.2	~740	20.8h at 5mA cm^{-2} in a N_2 glove-box	S175
Inv, H, 3D	1.3	241	14.2	802	24h	S176
Inv, H, 3D	~1.1	~200	17.3	802	100h	S177
Inv, H, 3D	~1.5	50.47	24.1	804	110.7h at 10 mA cm^{-2}	S178
Inv, H, 3D	~1.5	50.64	21.39	804	174.3h at 10 mA cm^{-2}	S178
Inv, H, 3D	~1.2	2.1	18.5	803	32675 h at 3.2 mA cm^{-2}	S179
Conv, H, 3D	~2	226	2.4	948	39.5h at 100 mAcm^{-2}	S180
Inv, H, 3D	~1.3	104	18.5	805	28 min at 100 mA cm^{-2}	S181
Inv, H, 3D	~1.25	393	20.2	802	~26h	S182
Inv, H, 3D	~1.25	250	22.2	800	19h	S183
Conv, H, quasi-2D	2	89	11.6	~898	23min at 100 mA cm^{-2}	S184
Inv, H, quasi-2D	~1.15	~7	20.1	~790	46h	S185
Inv, H, 3D	1.25	308	21.4	800	20h at 20 mA cm^{-2}	S186
Conv, H, 3D	~2.2	12	8.3	~894	3h	S187
Inv, H, quasi-2D	~1.2	88.5	5.2	785	100h at 25 7mAcm^{-2}	S188
Inv, H, quasi-2D	1.7	55	5.8	785	$T_{87.7}$=1848 h	S189
Inv, H, 3D	~1.35	80	~15	790	2.5h at 100 mAcm^{-2}	S190
Conv, H, 3D	~2.5	~140	20.0	763	17.1min	S191

Inv, H, 3D	~1.2	~500	19.2	802	43h at 100 $mAcm^{-2}$	S192
Inv, H, 3D	~1.6	366.1	21.3	792	190.1h at 20 mA cm^{-2}	S193
Inv, H, 3D	~1.3	600	22.7	781	1774h at 20 $mAcm^{-2}$	S194

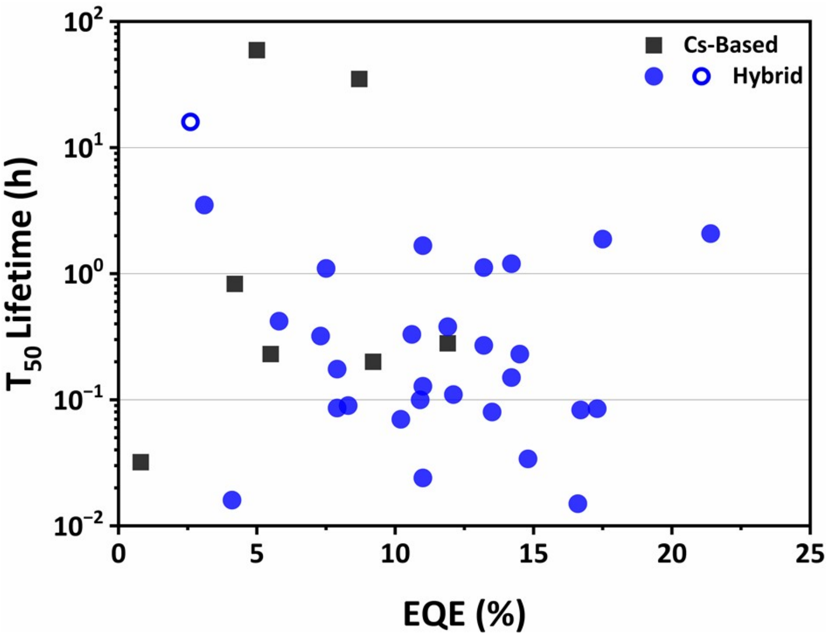

Figure S1. Device lifetime as a function of EQE for blue PeLEDs. Open symbols denote inverted architecture, filled symbols denote conventional architecture. In cases where acceleration factor n is not specified, we assume n=1.5 as a commonly used value in literature and calculate expected lifetime at L_0=100 cd/m^2 from the equation T_{50} L_n=constant.

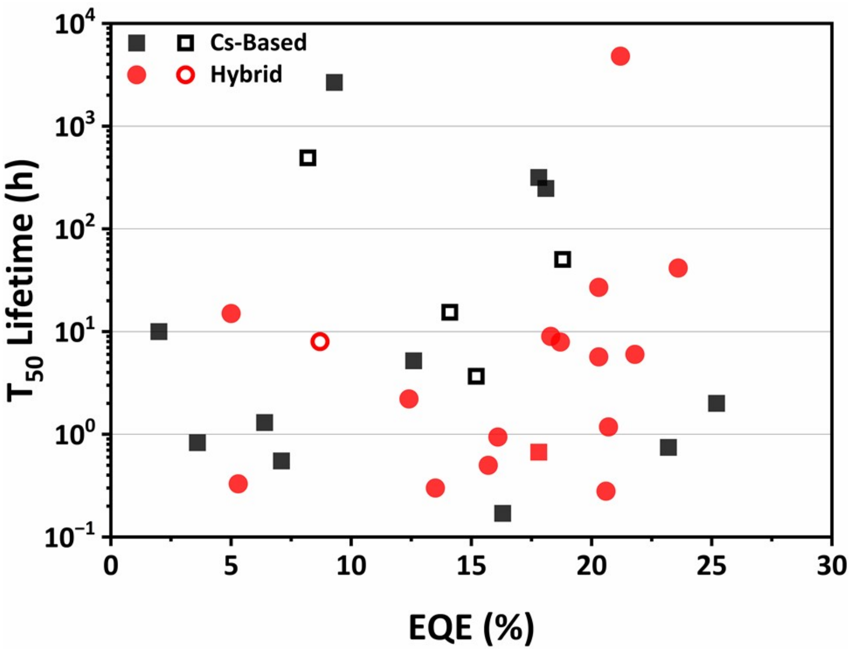

Figure S2. Device lifetime as a function of EQE for red PeLEDs. Open symbols denote inverted architecture, filled symbols denote conventional architecture. In cases where acceleration factor n is not specified, we assume n=1.5 as a commonly used value in literature and calculate expected lifetime at L_0=100 cd/m^2 from the equation T_{50} L_n=constant.

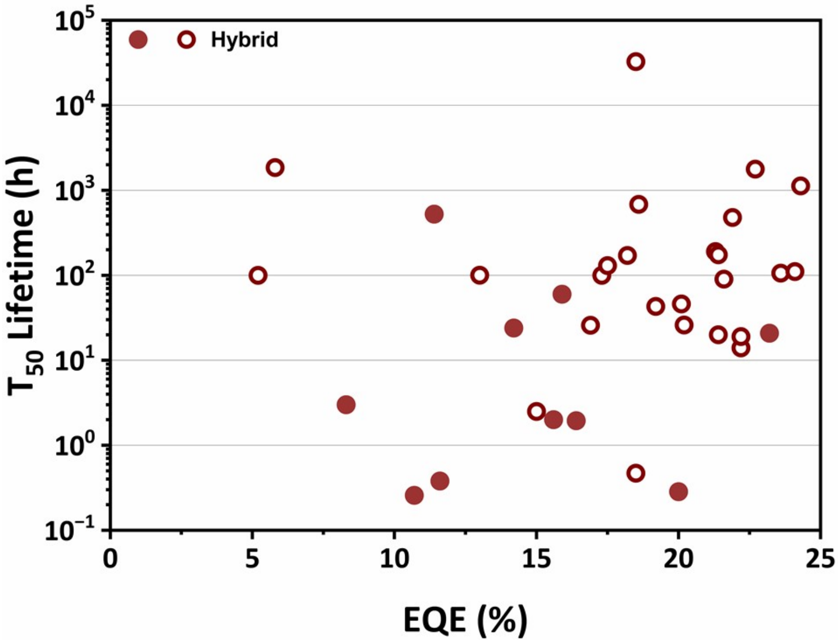

Figure S3. Device lifetime as a function of EQE for NIR PeLEDs. Open symbols denote inverted architecture, filled symbols denote conventional architecture.

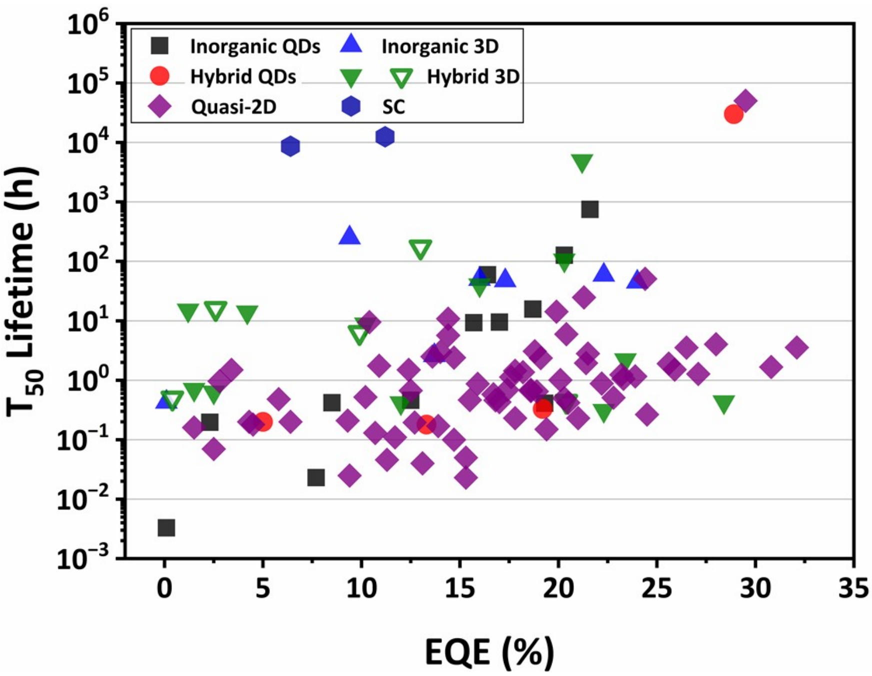

Figure S4. Device lifetime as a function of EQE for green PeLEDs. Open symbols denote inverted architecture, filled symbols denote conventional architecture. In cases where acceleration factor n is not specified, we assume n=1.5 as a commonly used value in literature and calculate expected lifetime at L_0=100 cd/m^2 from the equation T_{50} L_n=constant.

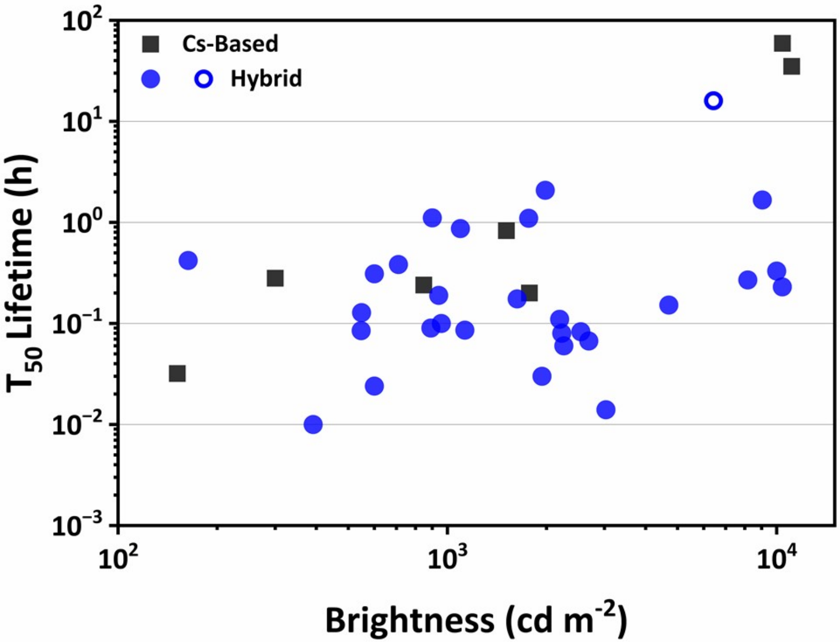

Figure S5. Device lifetime as a function of brightness for blue PeLEDs. Open symbols denote inverted architecture, filled symbols denote conventional architecture. In cases where acceleration factor n is not specified, we assume n=1.5 as a commonly used value in literature and calculate expected lifetime at L_0=100 cd/m^2 from the equation T_{50} L_n=constant.

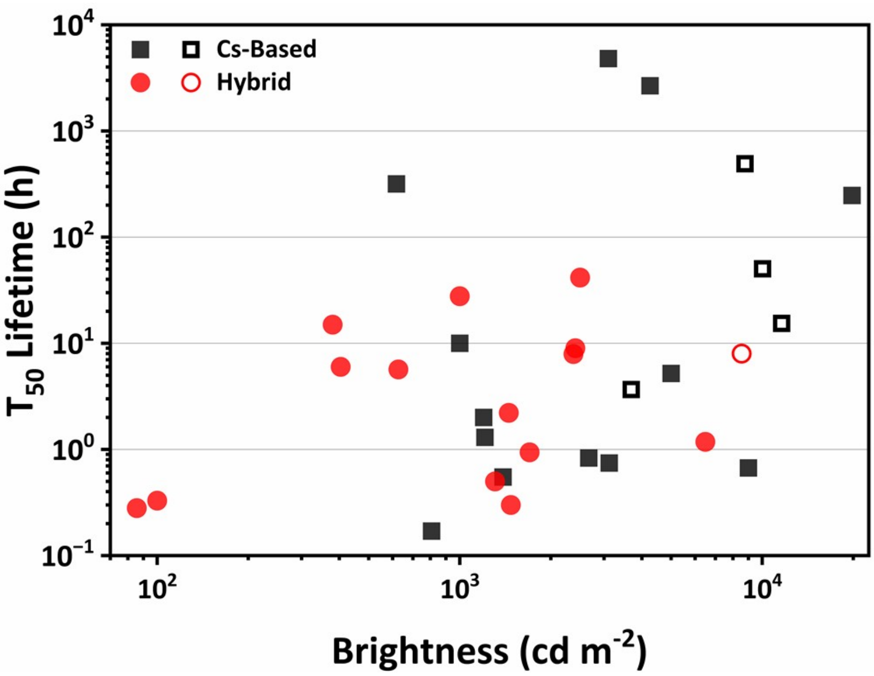

Figure S6. Device lifetime as a function of brightness for red PeLEDs. Open symbols denote inverted architecture, filled symbols denote conventional architecture. In cases where acceleration factor n is not specified, we assume n=1.5 as a commonly used value in literature and calculate expected lifetime at L_0=100 cd/m^2 from the equation T_{50} L_n=constant.

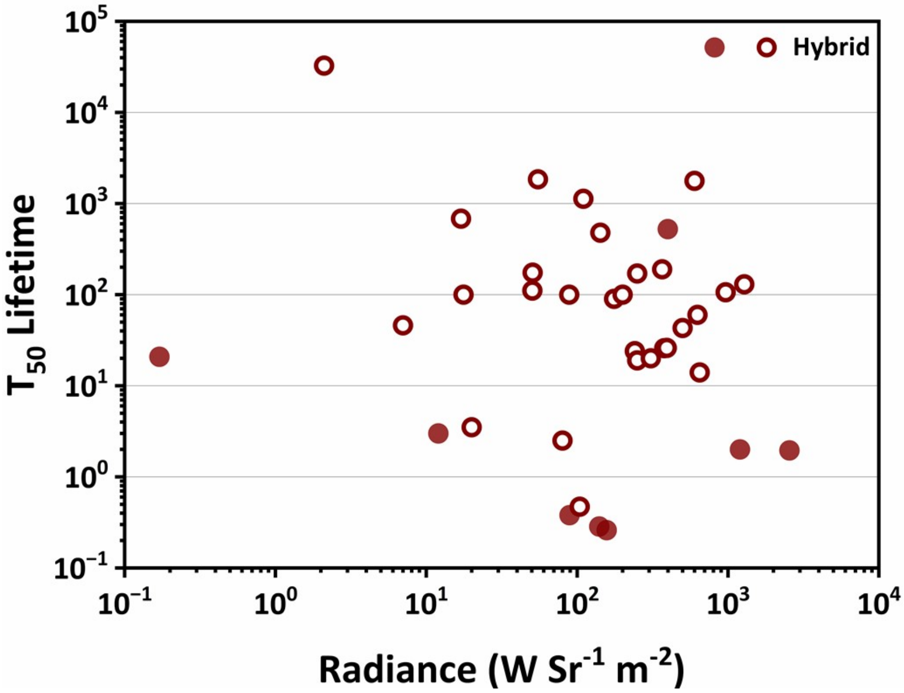

Figure S7. Device lifetime as a function of radiance for NIR PeLEDs. Open symbols denote inverted architecture, filled symbols denote conventional architecture.

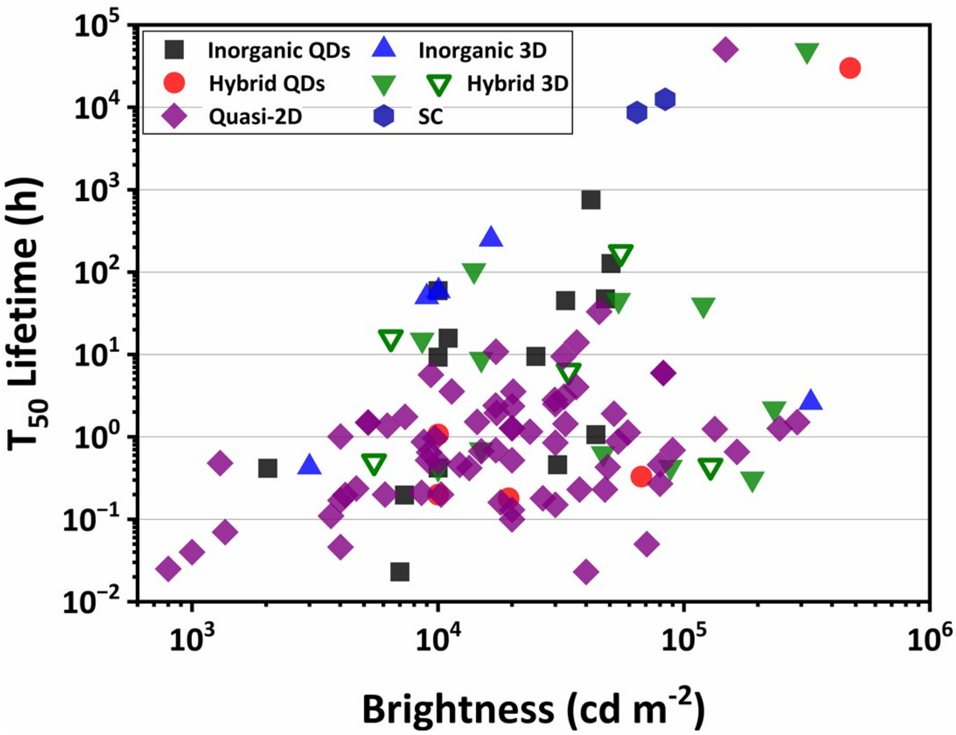

Figure S8. Device lifetime as a function of brightness for green PeLEDs. Open symbols denote inverted architecture, filled symbols denote conventional architecture. In cases where acceleration factor n is not specified, we assume n=1.5 as a commonly used value in literature and calculate expected lifetime at L_0=100 cd/m^2 from the equation T_{50} L_n=constant.

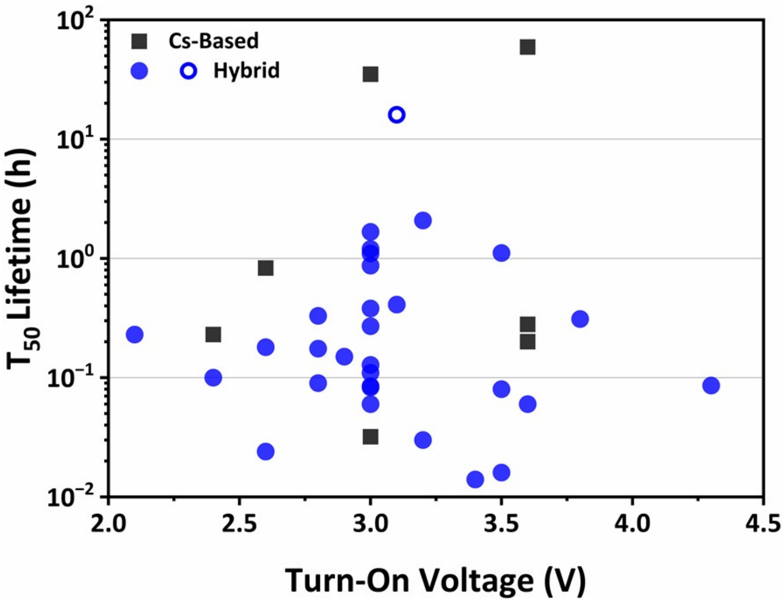

Figure S9. Device lifetime as a function of turn-on voltage for blue PeLEDs. Open symbols denote inverted architecture, filled symbols denote conventional architecture. In cases where acceleration factor n is not specified, we assume n=1.5 as a commonly used value in literature and calculate expected lifetime at L_0=100 cd/m^2 from the equation T_{50} L_n=constant.

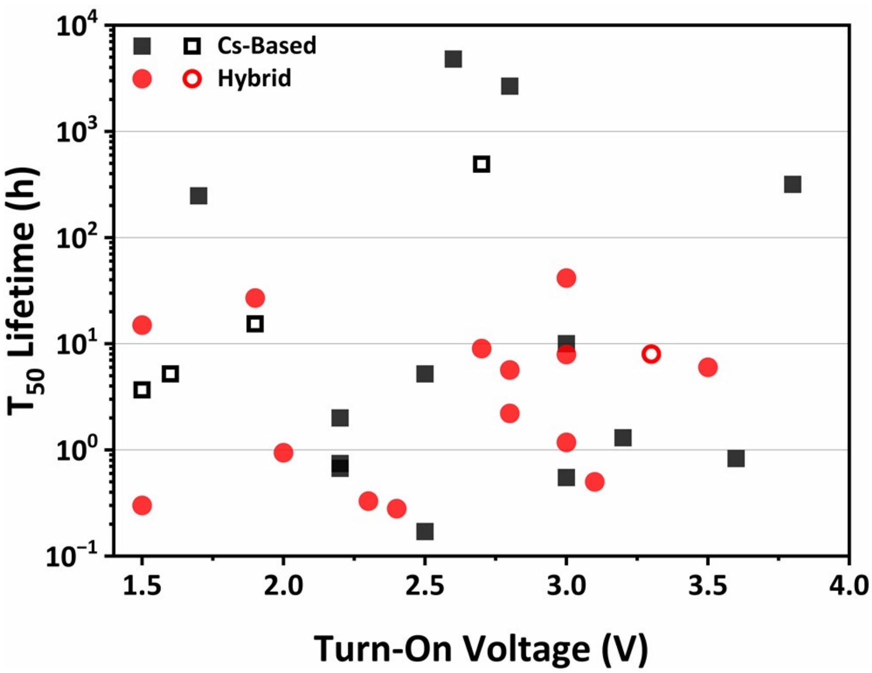

Figure S10. Device lifetime as a function of turn-on voltage for red PeLEDs. Open symbols denote inverted architecture, filled symbols denote conventional architecture. In cases where acceleration factor n is not specified, we assume n=1.5 as a commonly used value in literature and calculate expected lifetime at L_0=100 cd/m^2 from the equation T_{50} L_n=constant.

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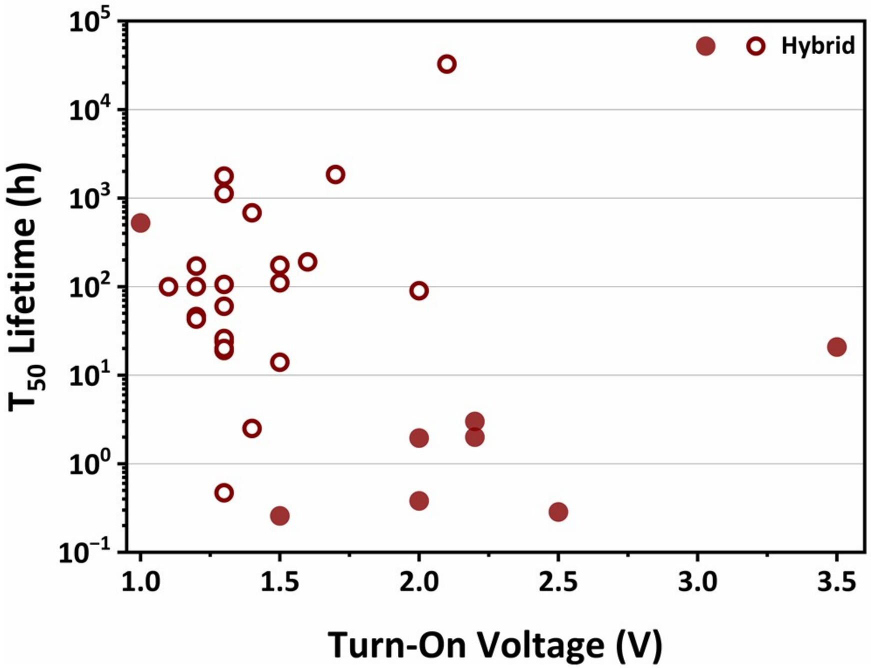

Figure S11. Device lifetime as a function of turn-on voltage for NIR PeLEDs. Open symbols denote inverted architecture, filled symbols denote conventional architecture.

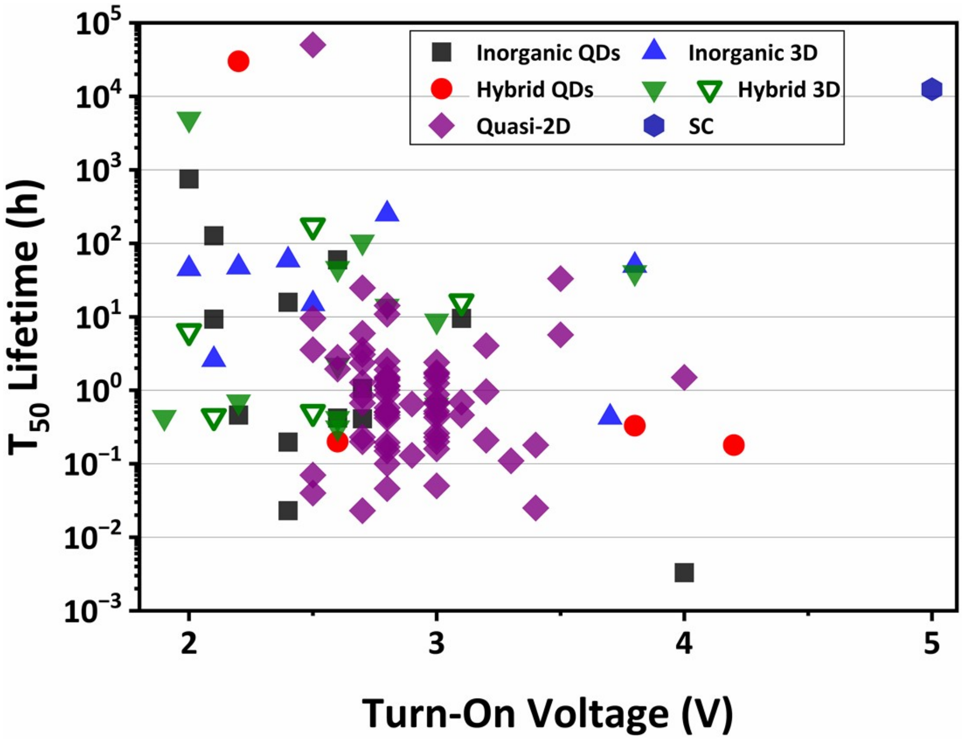

Figure S12. Device lifetime as a function of turn-on voltage for green PeLEDs. Open symbols denote inverted architecture, filled symbols denote conventional architecture. In cases where acceleration factor n is not specified, we assume n=1.5 as a commonly used value in literature and calculate expected lifetime at L_0=100 cd/m^2 from the equation T_{50} L_n=constant.

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