

Supplementary information

Metal halide perovskites for light-emitting diodes

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Supplementary Information for

Metal halide perovskites for light-emitting diodes

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Supplementary Table 1. Summary of performance parameters of blue, green, red and near-infrared PeLEDs used for the Figure B1,b and Figure 4a.

Color	Peak Wavelength (nm)	Peak EQE (%)	Maximum Luminance (cd m ⁻²) ^a	Ref.	Figure B1,b	Figure 4a
Blue	490	1.9	35	<i>Adv. Mater.</i> 28, 8718 (2016).		√
	490	1.5	2600	<i>Nat. Commun.</i> 9, 3541 (2018).		√
	488	1.41	830	<i>Adv. Mater.</i> 30, 1706226 (2018).		√
	487	6.2	3340	<i>Chem. Mater.</i> 31, 83–89 (2019).	√	√
	485	2.6	200	<i>ACS Appl. Mater. Interfaces</i> 9, 29901–29906 (2017).		√
	485	11.0	9040	<i>Nat. Commun.</i> 10, 5633 (2019).	√	√
	483	9.5	770	<i>Nat. Photon.</i> 13, 760–764 (2019).	√	√
	480	5.7	3780	<i>Nat. Commun.</i> 10, 1027 (2019).		√
	477	4.8	5500	<i>Nat. Commun.</i> 10, 5633 (2019).		√
	476	2.25	678	<i>ACS Energy Lett.</i> 4, 2703–2711 (2019).		√
	475	1.35	100.3	<i>Nat. Commun.</i> 10, 1868 (2019).		√
	471	6.3	465	<i>ACS Energy Lett.</i> 5, 3, 793–798 (2020).	√	√
	470	2.4	612	<i>ACS Appl. Mater. Interfaces</i> 12, 12, 14195–14202 (2020).		√
	469	0.5	111	<i>Adv. Mater.</i> 30, 1706226 (2018).		√
	468	0.71	122	<i>Adv. Opt. Mater.</i> 8, 1901094 (2020).		√
	467	2.4	962	<i>Chem. Mater.</i> 31, 83–89 (2019).		√
	465	2.34	144	<i>ACS Energy Lett.</i> 5, 5, 1593–1600 (2020).		√
	465	2.12	245	<i>Joule</i> 2, 2421–2433 (2018).	√	√
	465	2.6	211	<i>Adv. Mater.</i> 31, 1904319 (2019).		√

	463	1.2	318	<i>ACS Appl. Mater. Interfaces</i> 11, 21655–21660 (2019).		√
Green	~540	8.53	~20000	<i>Science</i> 350, 1222–1225 (2015).	√	
	534	1.2	~700	<i>Nano Lett.</i> 15, 2640–2644 (2015).	√	
	532	14.36	9120	<i>Nat. Commun.</i> 9, 570 (2018).	√	√
	526	16.3	13970	<i>ACS Nano</i> 12, 8, 8808–8816 (2018).		√
	525	20.3	14000	<i>Nature</i> 562, 245–248 (2018).	√	√
	524	12.9	22830	<i>Nano Lett.</i> 18, 5, 3157–3164 (2018).		√
	523	9.3	496320	<i>Appl. Phys. Rev.</i> 6, 031402 (2019).		√
	520	10.4	91000	<i>Nat. Commun.</i> 8, 15640 (2017).	√	√
	518	16.48	76940	<i>Adv. Mater.</i> 30, 1805409 (2018).	√	√
	518	15.6	100080	<i>Adv. Mater.</i> 30, 1805409 (2018).		√
	516	0.12	926	<i>Adv. Mater.</i> 44, 7162 (2015).	√	
	515	11.6	55800	<i>Adv. Mater.</i> 30, 1800764 (2018).	√	
	514	10.4	14000	<i>ACS Nano</i> 11, 11100–11107 (2017).		√
	514	15.5	7000	<i>Nat. Commun.</i> 9, 3892 (2018).	√	√
	514	13.14	45990	<i>Adv. Opt. Mater.</i> 7, 1801534 (2019).		√
	512	14.4	23380	<i>ACS Appl. Mater. Interfaces</i> 10, 24320–24326 (2018).		√
	512	17.4	8353	<i>Adv. Opt. Mater.</i> 7, 1900747 (2019).		√
512	6.27	15185	<i>Adv. Mater.</i> 6, 1603885 (2017).	√		
Red	698	5.7	206	<i>Adv. Mater.</i> 28, 3528–3534 (2016).		√
	691	13.5	1152	<i>Adv. Mater.</i> 30, 1804691 (2018).		√
	690	11.2	1106	<i>ACS Energy Lett.</i> 3, 1571–1577 (2018).		√
	688	5.02	748	<i>J. Am. Chem. Soc.</i> 140, 562–565 (2018).		√

	686	13.7	14725	<i>Nano Lett.</i> 20, 4, 2829–2836 (2020).		√
	682	8.65	210	<i>Adv. Funct. Mater.</i> 28, 1804285 (2018).		√
	680	6.23	1392	<i>Adv. Mater.</i> 30, 1707093 (2018).		√
	678	5.92	1250	<i>J. Am. Chem. Soc.</i> 141, 2069–2079 (2019).		√
	664	13.3	968	<i>ACS Photon.</i> 6, 587–594 (2019).		√
	653	21.3	500	<i>Nat. Photon.</i> 12, 681–687 (2018).	√	√
	650	4.6	20000	<i>Appl. Phys. Rev.</i> 6, 031402 (2019).		√
	648	6.3	2216	<i>J. Phys. Chem. Lett.</i> 7, 4602–4610 (2016).		√
	645	14.1	794	<i>Nat. Photon.</i> 12, 681–687 (2018).		√
	637	3.55	2671	<i>J. Am. Chem. Soc.</i> 142, 6, 2956–2967 (2020).		√
	630	5.1	2000	<i>Nano Energy</i> 62, 434–441 (2019).		√
Near-infrared	803	20.7	390	<i>Nature</i> 562, 249–253 (2018).	√	
	800	21.6	308	<i>Nat. Photon.</i> 13, 418–424 (2019).	√	
	795	20.1	~5	<i>Nat. Photon.</i> 12, 783–789 (2018).	√	
	773	0.76	13.2	<i>Nat. Nanotechnol.</i> 9, 687–692 (2014).	√	
	768	3.5	20	<i>Adv. Mater.</i> 27, 2311–2316 (2015).	√	
	~760	8.8	80	<i>Nat. Nanotechnol.</i> 11, 872–877 (2016).	√	
	763	11.7	82	<i>Nat. Photon.</i> 10, 699–704 (2016).	√	
	748	10.4	-	<i>Nat. Photon.</i> 11, 108–115 (2017).	√	

^a Maximum radiance ($\text{W sr}^{-1} \text{m}^{-2}$) for near-infrared PeLEDs.