

Supplementary Materials for

Roadmap on Established and Emerging Photovoltaics for Sustainable Energy Conversion

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Supplementary Table 1. Champion reported power conversion efficiencies of lab- and commercial-scale indoor photovoltaics. WLED = white light emitting diode, FL = fluorescent light tube

Year	Technology	Lab or commercial	PCE (%)	Illumination conditions	Ref.
2012	DSSC	Lab	12.03	0.05 Sun, 5 mW cm ⁻²	[1]
2016	DSSC	Lab	19.5	WLED, 350 lx	[2]
2017	DSSC	Lab	28.9	FL, 1000 lx	[3]
2018	DSSC	Lab	32	FL, 1000 lx	[4]
2020	DSSC	Lab	34	FL, 1000 lx	[5]
2023	DSSC	Lab	38	FL, 1000 lx	[6]
2015	OPV	Lab	11.6	WLED, 890 lx	[7]
2016	OPV	Lab	21.04	WLED, 20.5 mW cm ⁻²	[8]
2017	OPV	Lab	28.1	FL, 1000 lx	[9]
2020	OPV	Lab	31	WLED (3000 K), 1650 lx	[10]
2015	LHP	Lab	27.4	FL, 1000 lx	[11]
2018	LHP	Lab	35.2	FL, 1000 lx	[12]
2019	LHP	Lab	36.2	FL, 1000 lx	[13]
2020	LHP	Lab	37.2	WLED (6500 K), 1000 lx	[14]
2021	LHP	Lab	40.2	FL, 1000 lx	[15]
2023	LHP	Lab	41.2	WLED (2956 K), 1062 lx	[16]
2016	III-V	Lab	19.4	WLED, 580 lx	[17]
2011	III-V	Commercial	12	FL, 0.001-0.003 Sun	[18]
2017	III-V	Commercial	21	FL, 1000 lx	[19]
2015	a-Si:H	Commercial (Sanyo)	9.2	FL, 200 lx	[20]

N.B.: 1000 lux WLED or FL is typically 0.3-0.4 mW cm⁻² power density, but depends on the exact spectrum

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