



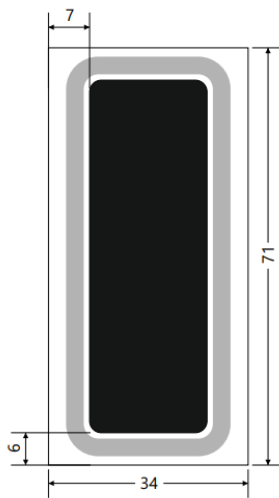
in-dye® Indoor

12 cm² version specifications (ver. 2.2)



The in-dye® Indoor PV cell is tailored for indoor use (20 – 10,000 lux), and for integration into Internet of Things (IoT) or low-power devices. They are specifically designed to power self-sustaining, energy-efficient electronics in indoor environments but can also be used outdoor. These ultra-thin PV cells can be customized in size and shape to meet the unique needs of our customers in terms of integration.

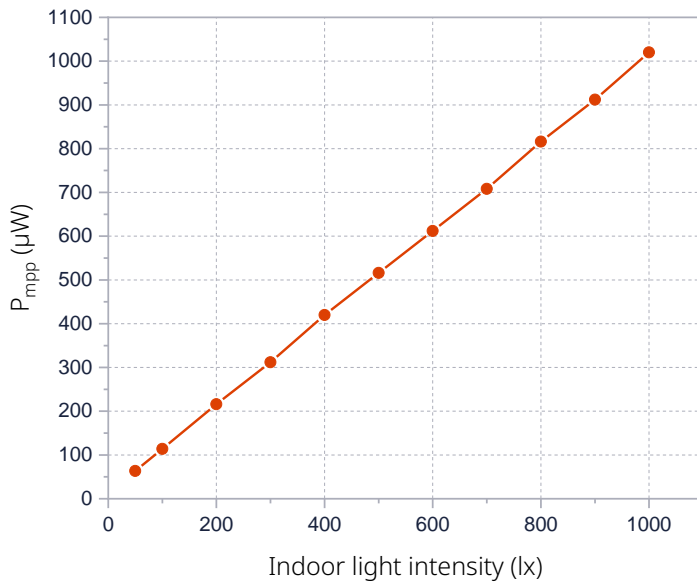
The in-dye® Indoor PV cell is optimized to convert light from LED and CFL lamp source regardless of its temperature. Depending on conditions, in-dye® Indoor technology can harvest and convert indoor light with efficiencies up to 25 %.



	Min	Max
Light intensity (lx)	20	10 000
Operating temperature (°C)	-20	40
Ideal absorbance (nm)	360	650
Thickness (mm)	2.2	

(Active area* = 12 cm²)

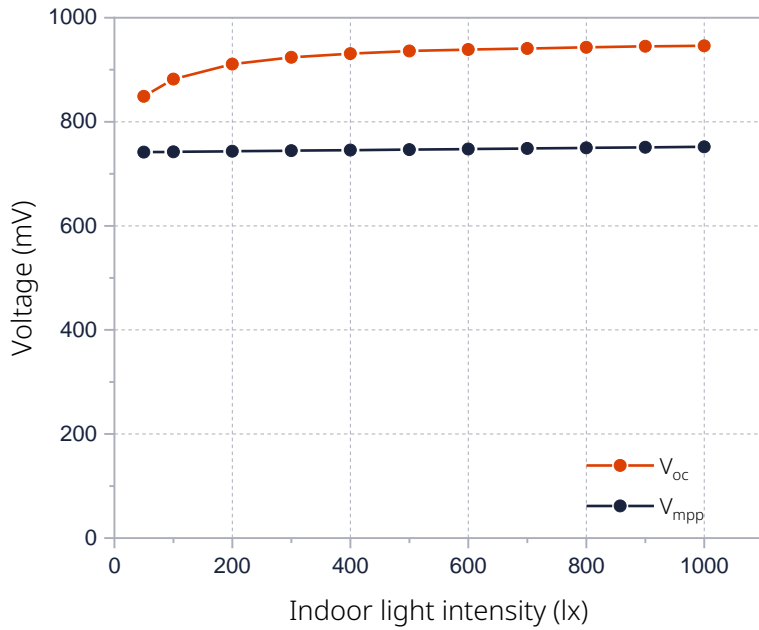
* Can be specifically designed as per customer requirements



Intensity (lx)	P _{mpp} (µW)	P _{mpp} (µW/cm ²)
50	63.6	5.3
100	114	9.5
200	216	18
300	312	26
400	420	35
500	516	43
600	612	51
700	708	59
800	816	68
900	912	76
1000	1020	85

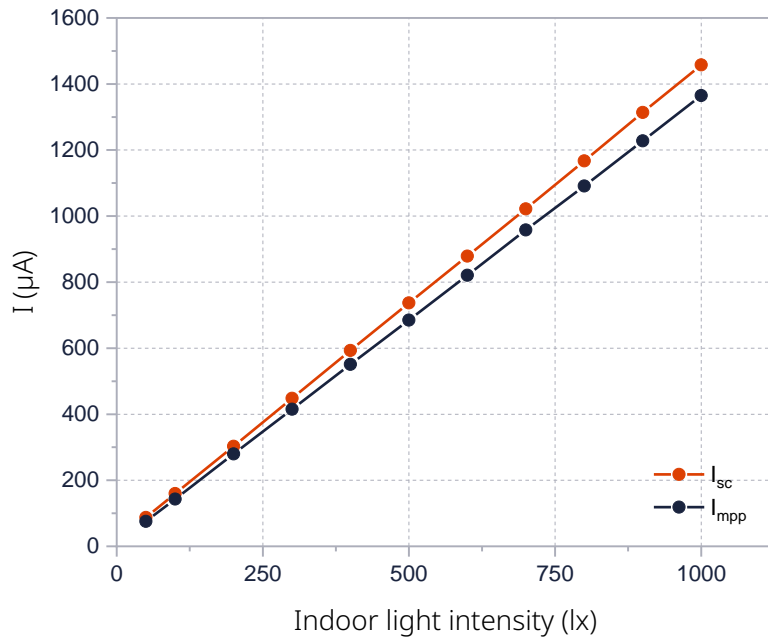
The data reflect the performance of a single in-dye® Indoor PV cell at 25 °C, under LED illumination 3,000 K, unless otherwise specified.

Voltage at open circuit and at maximum power point of in-dye® Indoor PV cell



Intensity (lx)	V_{oc} (mV)	V_{mpp} (mV)
50	849	742
100	882	742
200	911	743
300	924	744
400	931	746
500	936	747
600	939	748
700	941	749
800	943	750
900	945	751
1,000	946	752

Current at short-circuit and at maximum power point of in-dye® Indoor PV cell

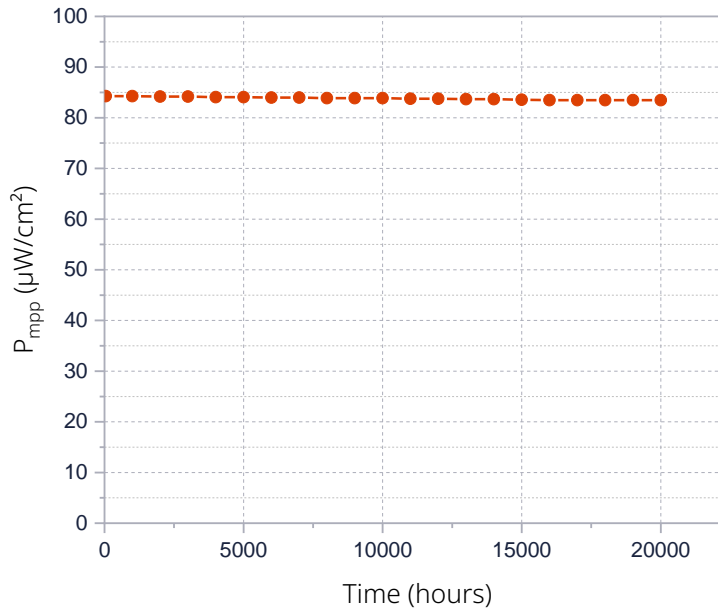


Intensity (lx)	I_{sc} (μA)	I_{mpp} (μA)
50	87.2	75.7
100	160	143
200	303	280
300	448	415
400	593	551
500	737	685
600	879	821
700	1022	958
800	1167	1091
900	1314	1228
1,000	1458	1365

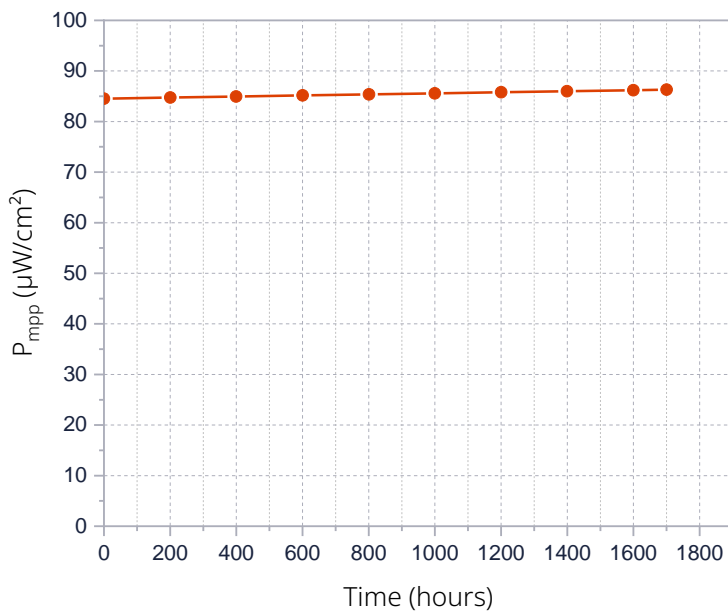
Stability of in-dye® Indoor PV cell

(measurements at 1000 lux, LED 2700 K)

Stability under real indoor condition

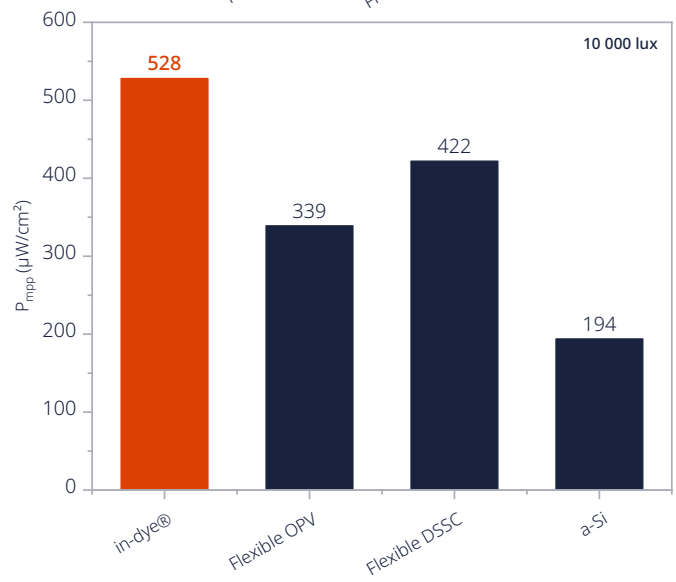
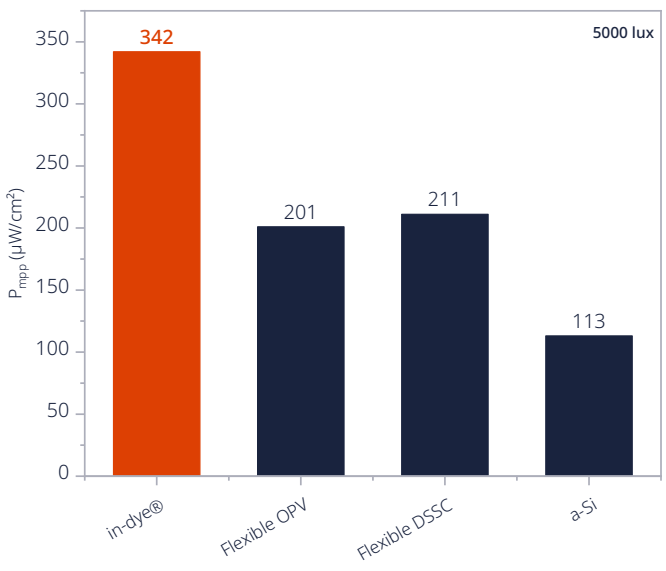
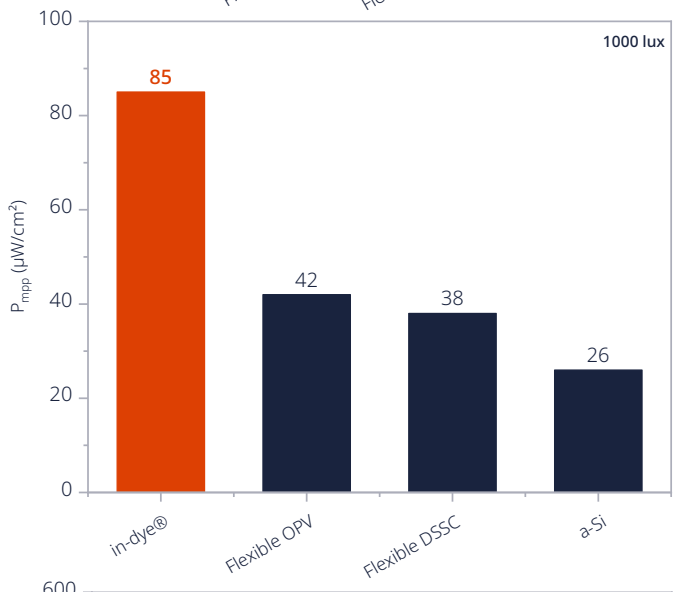
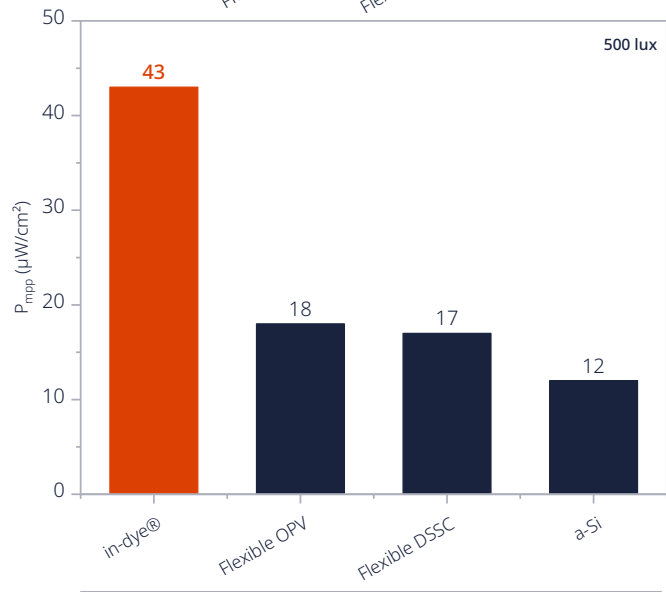
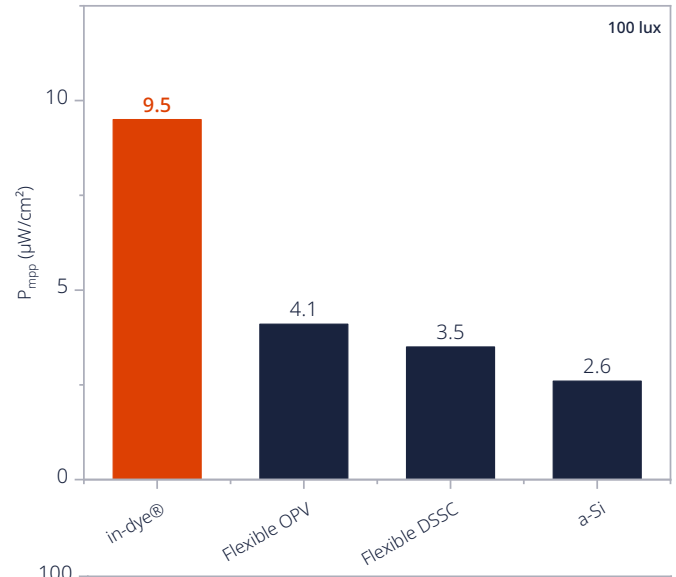
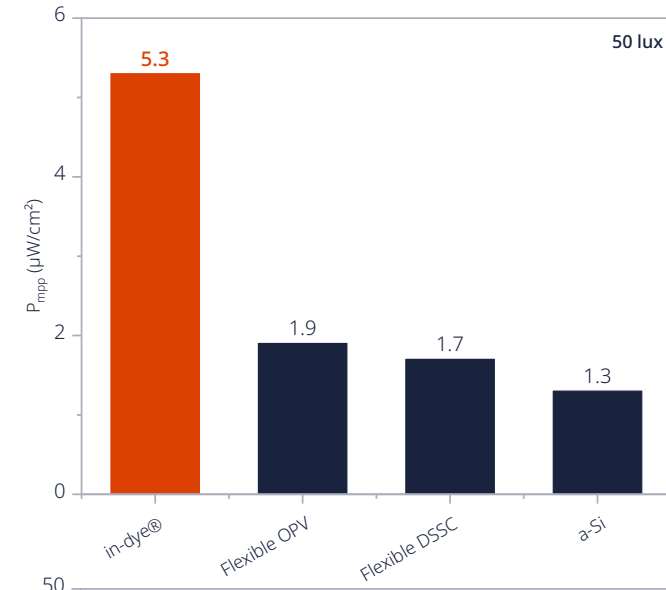


Stability under 100 % relative humidity at 40 °C



in-dye® *Indoor* PV cell compared to commercialized Indoor PV technologies

(Comparison data are given as indications)



For more information about customization and integration options, or if you want to test our product, please get in touch with our team:

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