

For manufacturers of connected devices, Ambient Photonics makes the worlds most powerful indoor solar cells that deliver the highest energy density at a low cost, enabling customers to exceed carbon reduction goals by making single-use batteries obsolete in many existing devices and unlocking new features that haven't been possible until now.

Electrical Specifications (10 cm² cell) at 200 lux

Item	Unit	Minimum	Typical
Voltage at maximum power point (V_{MAX})	mV	700	750
Current at maximum power point (I_{MAX})	μ A	150	175
Maximum power (P_{MAX})	μ W	115	140
Open circuit voltage (V_{OC})	mV	840	870
Short circuit current (I_{SC})	μ A	165	200

All above specifications at 200 lux with white LED (5000K) at 25°C

Operating Conditions

Item	Unit	Minimum	Maximum
Surface temperature	°C	-30	40
Ambient humidity	%RH	non-condensing	

Storage Conditions

Item	Unit	Minimum	Maximum
Surface temperature	°C	-30	50
Ambient humidity	%RH	0	90

Precautions

Item	Unit	Minimum
Forward voltage maximum	mV	$V_{OC} + 1\%$
Reverse bias maximum	mV	-100

Effective Service Life

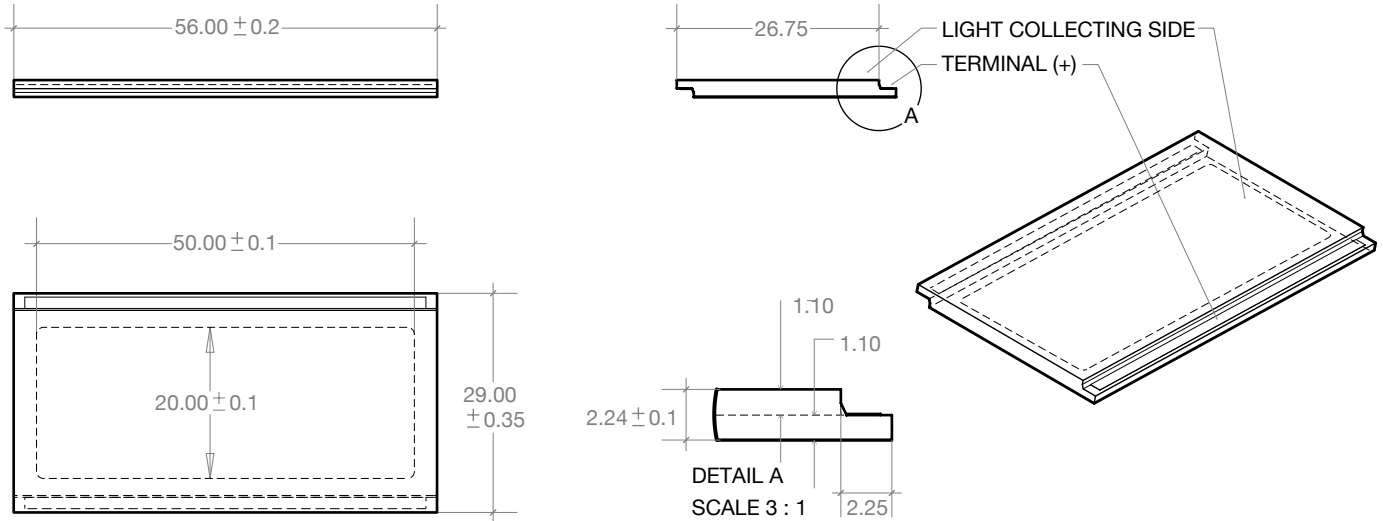
Ambient Photonics PV cells have been designed to deliver an effective service life of ten years, defined as no more than 20% degradation in electrical performance. The following Accelerated Life Tests (ALT) test conditions have been designed to ensure the effective service life of the PV cells.

Test Condition	Test Parameters
Light soaking (open circuit and load)	2,000 hours at 20,000 lux
Thermal aging (dark)	1,000 hours at 50°C; 200 hours at 65°C
Damp heat	1,000 hours at 42°C/93% RH
Temperature cycling	50 cycles -20 to 65°C

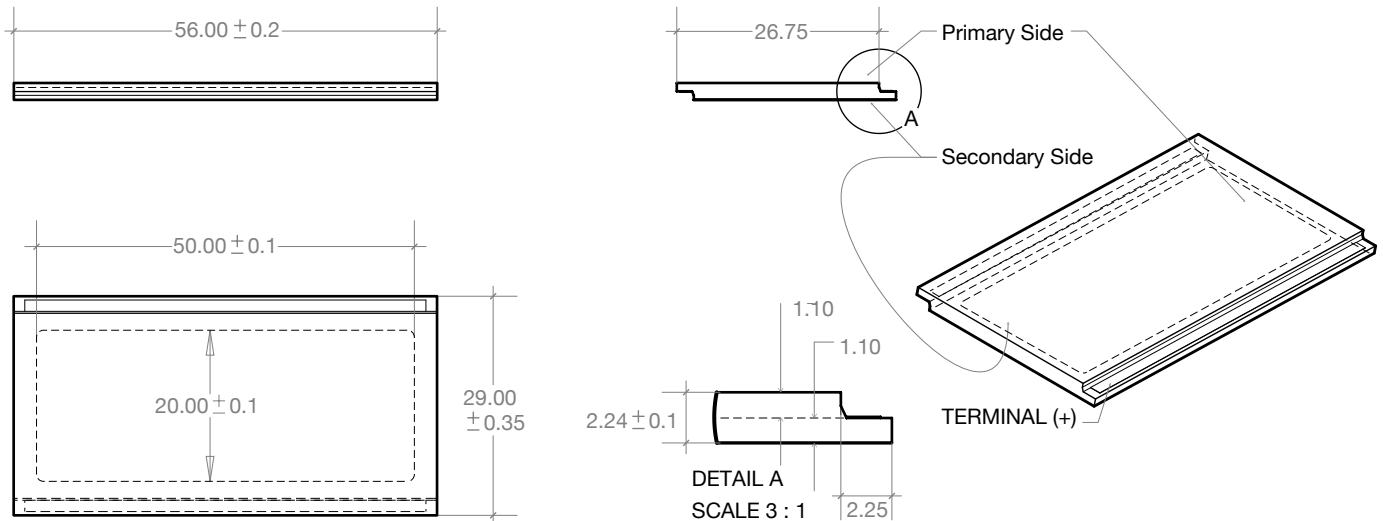
Irradiance (Lux)	V _{OC} (V)	I _{SC} (μA)	V _{MAX} (V)	P _{MAX} (μW)
25	.8380	33.6	.7208	24.2
50	.8489	48.9	.7529	36.5
100	.8691	102.6	.7566	75.6
200	.8864	206.2	.7607	152.9
500	.9116	487.4	.7548	354.9
1000	.9354	968.6	.7431	678.2

Power generated by a 10 cm² Ambient LLI Standard PV cell is shown above. A typical 10 cm² Bifacial PV cell will generate 150% of the above power when primary and secondary sides are subject to the same illumination and 100% if primary side only and 50% if secondary side only.

Standard Solar Cell Indicative Dimensions



Bifacial Solar Cell Indicative Dimensions



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