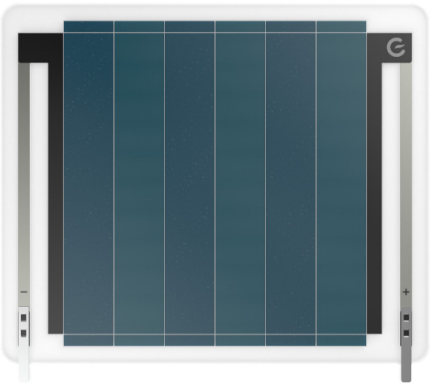
Epishine's Organic Indoor Light Energy Harvesting Modules (LEHs) are the result of 30+ years experience of research in organic electronics and photovoltaics. Epishine LEHs are flexible and can be used alone or in conjunction with capacitors to replace batteries or prolong their lifetime in low-power applications.

/ In short

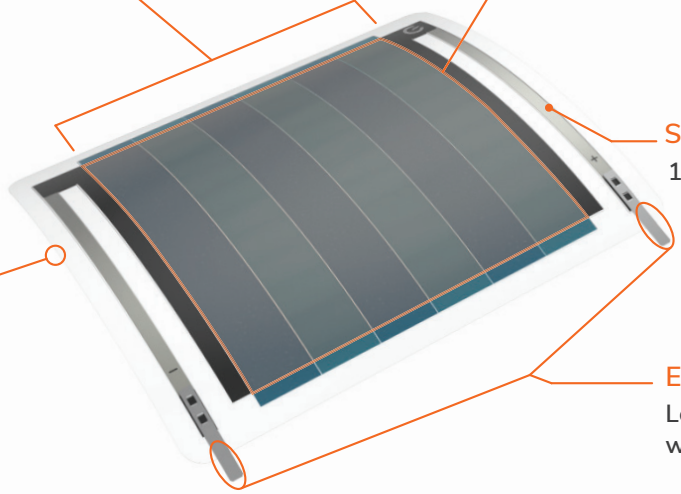
- Ideal for powering wireless indoor low-power applications, such as IoT devices, sensors and small electronics
- Cut total cost of ownership by half or more and significantly reduce the amount of waste batteries (by eliminating battery replacements)
- Industry leading performance under indoor light conditions, e.g. home, office, supermarket, etc.
- Flexible, compact and lightweight design with 0.2 mm thickness for easy integration
- Fully customizable[1] and available in 6 standard versions for optimal usage of available product area
- Radio-transparent, making it possible to use more product area for the module
- Based on organic materials. Made in Sweden



/ Our modules[2]

Operating Environment
Intended for indoor use
Temperature: -20°C to 40°C
Humidity: 0 to 85%RH

Power Density[3] of Active Area
18±2µW/cm² (at 500lux)
Active Area 6 cells = 88% of module area
Active Area 8 cells = 84% of module area



Smallest Bending Radius
1cm (along longer side)

Encapsulation Barrier
Protects the LEH module from oxygen and moisture

Electrical Contacting
Low resistance crimp contacts with soldering tabs

[1] We can provide layouts with cut-outs and holes
[2] We constantly try to improve our products (and ourselves) and hence all technical data is subject to change without notice
[3] Typical values measured at 500 lux warm white LED on white background at 22±2°C and a relative humidity of 45±2%

sales@epishine.com
www.epishine.com
Epishine AB
Wahlbecksgatan 25
58213 Linköping, Sweden

Key characteristics & general outputs

Generation

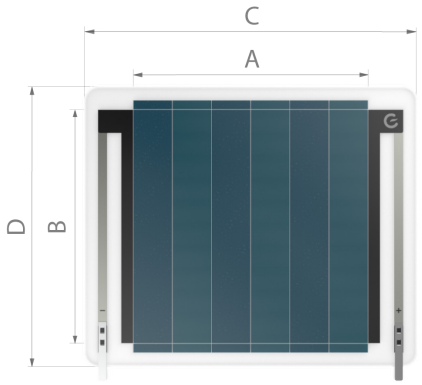
LEH3_AAxBB_C_NN

Number of Electrical Cells
6 cells
8 cells

Light Energy Harvesting

Module Area: Width(A)xLength(B)
50x50mm Active Area 6 cells = 88% of module area
50x30mm Active Area 8 cells = 84% of module area
50x20mm

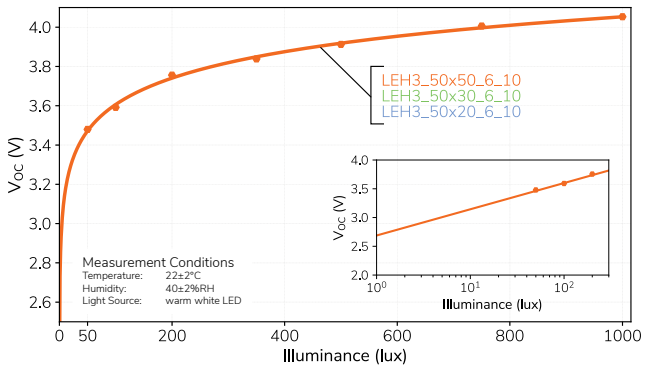
Type Specifier
00: electrode arms without contacts
10: electrode arms with crimp contacts
XX: custom



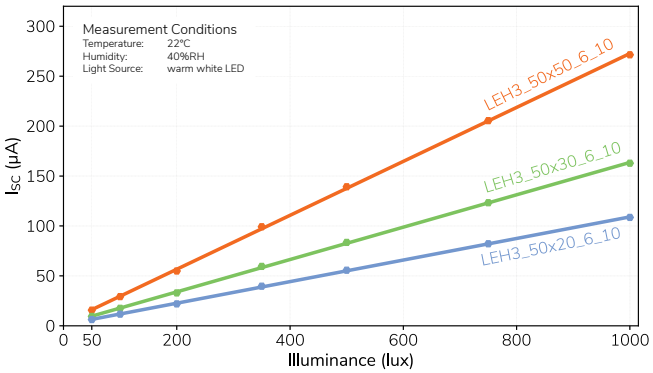
Product Code	Open Circuit Voltage[1,2] (V)	Short Circuit Current[1,2] (µA)	Output Power[1,2] (µW)	Cells	A (mm)	B (mm)	C (mm)	D (mm)
LEH3_50x50_6_10	3.8	147	418	6	50	50	71.5	60
LEH3_50x50_8_10	5.05	105	375	8	50	50	71.5	60
LEH3_50x30_6_10	3.8	88	250	6	50	30	71.5	40
LEH3_50x30_8_10	5.05	62	221	8	50	30	71.5	40
LEH3_50x20_6_10	3.8	59	167	6	50	20	71.5	30
LEH3_50x20_8_10	5.05	42	150	8	50	20	71.5	30

[1] We constantly try to improve our products (and ourselves) and hence all technical data is subject to change without notice
[2] Typical values measured at 500 lux warm white LED on white background at 22±2°C and a relative humidity of 45±2%

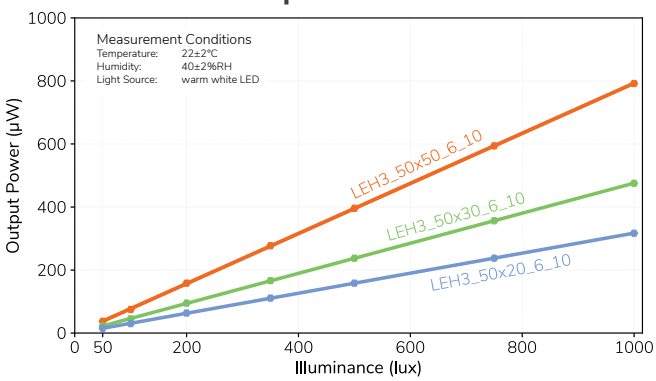
Open Circuit Voltage Voc



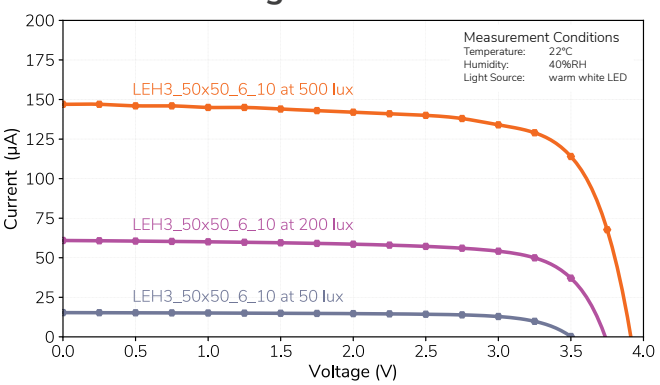
Short Circuit Current Isc



Maximum Output Power Pmax



Current-Voltage Characteristics



sales@epishine.com
www.epishine.com
Epishine AB
Wahlbecksgatan 25
58213 Linköping, Sweden

Low illumination Output

The electrical output of our LEH3 series modules is maintained at a high level also under low light conditions.

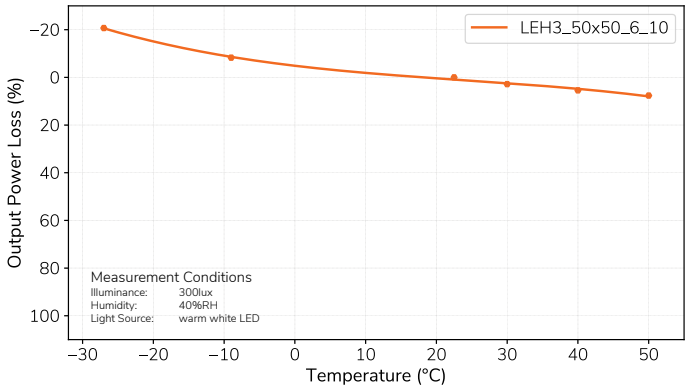
Power[1] (µW)			
	LEH3_50x50_6_10	LEH3_50x30_6_10	LEH3_50x20_6_10
50 Lux	35	21	14
100 Lux	75	45	30
200 Lux	155	94	62

[1] Typical values measured at 500 lux warm white LED on white background at 22±2°C and a relative humidity of 45±2%

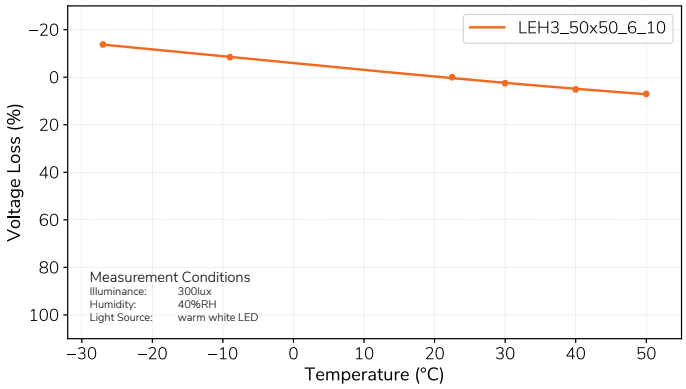
Temperature Dependence

The electrical output charactersitics of our LEH3 series modules show a slight temperature dependence within the specified operating environment, with excellent low-temperature behaviour. Note that humidity does not affect the output characteristics within the standard operating conditions. All mechanical properties remain the same throughout a wide range of conditions.

Maximum Output Power



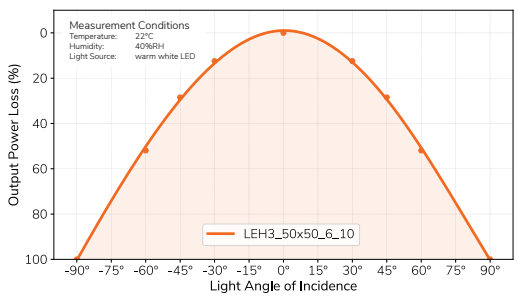
Open Circuit Voltage



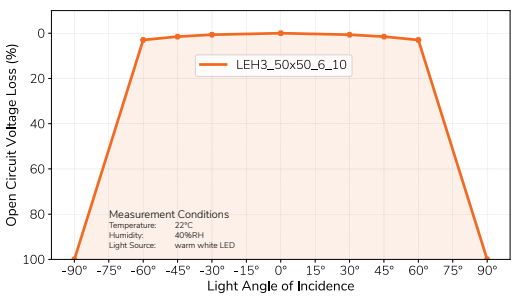
Light Angle Dependence

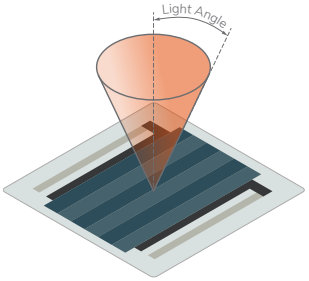
The electrical output characteristics of our LEH3 series modules have a comparably low angular dependence. The angular dependence is a function of light refraction and reflection at the surface and may be further improved by e.g. surface modification. Please contact us for more information.

Maximum Output Power



Open Circuit Voltage





sales@epishine.com
www.epishine.com
Epishine AB
Wahlbecksgatan 25
58213 Linköping, Sweden