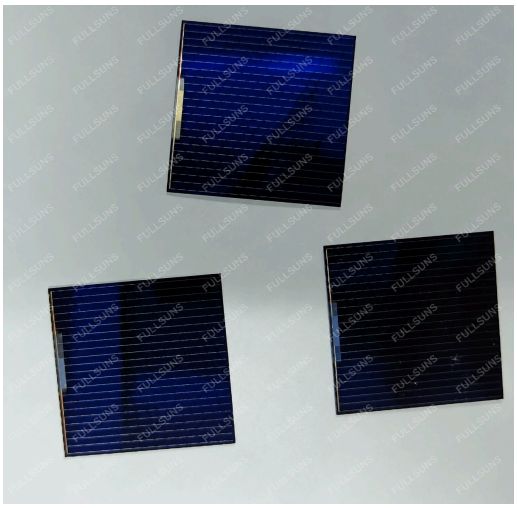
# RPV Cells & Betavoltaic Converters

Device selection, sample enquiries and project-specific integration



Match your radiation-conversion project with the right semiconductor device. FULLSUNS supports RPV photovoltaic cell selection and SiC betavoltaic converter enquiries, with dimensions, interfaces and packaging reviewed for your application.

FULLSUNS RPV photovoltaic cell samples — indirect conversion

## Two routes. One application-led selection process.

**RPV · Indirect conversion**
Radiation → Scintillator / phosphor → PV cell → Electricity

**Betavoltaics · Direct conversion**
Beta particles → Semiconductor junction → Electricity

## Products & Project Support

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|---|---|
| **RPV photovoltaic cells** | Emission-spectrum and low-light matching; dimensions, contacts and packaging reviewed per project. |
| **SiC betavoltaic converters** | Source-specific design enquiries for H-3, Ni-63 and C-14 energy conditions; thin devices and non-standard outlines. |
| **C-14 micropower projects** | C-14 source-containing systems and energy management reviewed against load and integration requirements. Configuration, availability and delivery confirmed per project. |

## Application studies

Radioluminescent energy conversion, scintillator–PV coupling, low-duty-cycle sensing, unattended monitoring and micropower research.

Photo shows RPV photovoltaic cells, not a SiC converter or a complete source-containing battery. Application suitability and delivery configuration require project confirmation.

# Select by Input, Load & Integration

## Reference Data

### SiC converter chip

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|---|---|
| **Example chip size** | 10 × 10 mm |
| **Active region** | 7.6 × 7.6 mm |
| **Example thickness** | 350 µm |
| **Custom design directions** | 100–200 µm thin devices; non-standard outlines |

### C-14 micropower reference

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|---|---|
| **Maximum electrical output** | 1.13 µW |
| **Open-circuit voltage** | 2.06 V |
| **Package volume** | 16.8 cm³ |
| **Total efficiency / source power** | Approx. 3% / 38 µW |

Ni-63 source test reference: Voc approx. 2 V; maximum power density 18 nW/cm²; converter efficiency approx. 7%, referenced to 257 nW/cm² of surface-emitted source power.

Sample-specific values from supporting technical documentation, not independent FULLSUNS test results or universal specifications. Dimensions and output data do not necessarily describe the same device. Voc is not a regulated output voltage.

## Tell Us About Your Project

| | |
|---|---|
| **RPV enquiries** | Emission spectrum, optical power density at the cell, active area, coupling and operating temperature. |
| **Betavoltaic enquiries** | Isotope and source conditions; converter-only or source-containing system requirements. |
| **Load & installation** | Continuous and peak power, duty cycle, target voltage, size, temperature, target service life and quantity. |

## Discuss samples, custom designs and integration requirements

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Converter chips need a matched energy input. Isotope half-life is not device service life. Continuous output and stored-energy pulses are evaluated separately. Specifications, pricing, lead time and source-related supply, transport, use and return conditions are confirmed per project.