ED-100A^{UV}

ENERGY DETECTORS

Small & Sensitive

CE

- **Our Smallest Pyroelectric Energy Detector**
- **Flat Spectral Response**
- **Full NIST Traceability**
- **High Sensitivity to Energy**
- **Smart Interface**

ED-100A

Gentec-EO put a complete pyroelectric energy detector in the smallest package available. The entire detector is mounted inside a BNC connector! Tiny and robust, it is ideal for the most confining and tough OEM applications. The special broadband black absorber of the ED-100A is suited to applications from the UV to the far IR. Apply your laser in a single pulse or at high repetition rates. Their small size and low thermal mass absorbers make these the fastest and most sensitive energy detectors in the Gentec-EO family. Because of the sensitivity which can range as high as 250 V/J, the ED-100A is our best choice for the lowest energy pulses.

ED-100A^{UV}

The damage resistant absorber of the ED-100A^{UV} gives it the toughness to succeed in intense beam applications with up to 1.5 J/cm^2 of peak energy density in IR and an incredible 1 J/cm^2 in the UV! Apply your laser in a single pulse or at high repetition rates. Their small size and low thermal mass absorbers make these the fastest and most sensitive energy detectors in the Gentec-EO family.

ED-100A AND 100A^{UV} SPECIFICATIONS

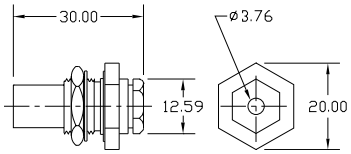
TYPICAL LASERS

- High repetition rate pulsed lasers
- Low repetition rate small lasers
- Low energy YAG
- Low energy CO_2
- Nitrogen
- Excimer (XeCl, ArF, F_2)
- Dye lasers

COMMON APPLICATIONS

- Internal laser monitoring
- Low energy OEM
- Medical systems
  - Exposure measurements
  - Opthamology
  - Cardiac surgery
- Material Processing
  - Marking
  - Welding
  - Drilling
  - Machining

ED-100A / ED-100A^{UV}



All dimensions in mm

	ED-100A	ED-100A^{UV}
MEASUREMENT CAPABILITY		
Spectral Range	0.19 – 20 µm	0.19 – 11 µm
Maximum Measurable Energy		
7 ns pulse, 1.064 µm [a]	40 mJ	170 mJ
Noise Equivalent Energy [b]	1 µJ	1 µJ
Sensitivity (typical) [c,d]	200 V/J	120 V/J
Max Repetition Frequency	300 Hz	200 Hz
Maximum Pulse Width	0.6 ms	0.7 ms
Rise Time (typical)	0.8 ms	0.9 ms
Calibration Uncertainty [e]	± 5 %	± 5 %
Repeatability	< 0.5 %	< 0.5 %
DAMAGE THRESHOLDS		
Max Average Power (continuous)	0.15 W	0.15 W
Max Energy Density		
1.064 µm, 7 ns, 10 Hz	0.15 J/cm^2	1.5 J/cm^2
266 nm, 7 ns, 10 Hz	6 mJ/cm^2	1 J/cm^2
PHYSICAL CHARACTERISTICS		
Effective Aperture Diameter	3.7 mm Ø	3.7 mm Ø
Absorber	Black Broadband	High Energy
Dimensions	20Ø x 30 mm	20Ø x 30 mm
Weight	20 g	20 g
Effective Area	0.11 cm^2	0.11 cm^2

a. Increasing pulse width increases maximum measurable energy.
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. 1.064 µm, 360 µs pulse. Load: 1 MΩ and ≤ 130 pF, Range 160 to 250 V/J.
d. Maximum output voltage = sensitivity x maximum pulse energy.
e. Not including linearity.

Specifications subject to change without notice.

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LEADER IN LASER BEAM MEASUREMENT SINCE 1972