UP10P-2S-H5-L-D0
Thermal detector for laser power measurement up to 2 W.

**KEY FEATURES**

**LOW POWER THERMOPILE**
Noise level of a photo detector with the large bandwidth and high power capacity of a thermal device

**IR FILTER (UP10 MODELS)**
Removes unwanted IR interference

**HIGH PERFORMANCE**
- Fast rise time (1.4 sec)
- High damage threshold (36 kW/cm²)

**COMPACT DESIGN**
Only 13 mm thick (UP10P model)

**ENERGY MODE**
Measure single shot energy up to 3 J

**SMART INTERFACE**
Containing all the calibration data

**COMPATIBLE STAND**
STAND-S-233

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**SPECIFICATIONS**

**MEASUREMENT CAPABILITIES**

<table>
<thead>
<tr>
<th>Capability</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum average power (continuous)</td>
<td>2 W</td>
</tr>
<tr>
<td>Noise equivalent power¹</td>
<td>30 μW</td>
</tr>
<tr>
<td>Spectral range²</td>
<td>0.19 - 20 μm</td>
</tr>
<tr>
<td>Typical rise time³</td>
<td>1.4 sec</td>
</tr>
<tr>
<td>Typical power sensitivity⁴</td>
<td>2 mV/W</td>
</tr>
<tr>
<td>Power calibration uncertainty⁵</td>
<td>±2.5 %</td>
</tr>
<tr>
<td>Repeatability</td>
<td>±0.5 %</td>
</tr>
</tbody>
</table>

1. Nominal value, actual value depends on electrical noise in the measurement system.
2. For the calibrated spectral range, see the user manual.
3. With anticipation.
4. Into 100 kΩ load. Maximum output voltage = sensitivity x maximum power.
5. Including linearity with power.

**MEASUREMENT CAPABILITIES (ENERGY MODE)**

<table>
<thead>
<tr>
<th>Capability</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical energy sensitivity</td>
<td>2.4 mV/J</td>
</tr>
<tr>
<td>Maximum measurable energy¹</td>
<td>3 J</td>
</tr>
<tr>
<td>Noise equivalent energy²</td>
<td>5 mJ</td>
</tr>
<tr>
<td>Minimum repetition period</td>
<td>2 s</td>
</tr>
<tr>
<td>Maximum pulse width</td>
<td>63 ms</td>
</tr>
<tr>
<td>Energy calibration uncertainty³</td>
<td>±5 %</td>
</tr>
</tbody>
</table>

1. For 360 μs pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).
2. Nominal value, actual value depends on electrical noise in the measurement system.
3. When single-shot energy calibration is purchased

**DAMAGE THRESHOLDS**

<table>
<thead>
<tr>
<th>Capability</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum average power density¹</td>
<td>36 kW/cm²</td>
</tr>
<tr>
<td>Maximum energy density²</td>
<td>1 J/cm²</td>
</tr>
</tbody>
</table>

1. At 1064 nm, 10 W CW.
Thermal detector for laser power measurement up to 2 W.

KEY FEATURES

- LOW POWER THERMOPILE
- Noise level of a photo detector with the large bandwidth and high power capacity of a thermal device
- IR FILTER (UPF10 MODELS)
- Removes unwanted IR interference

HIGH PERFORMANCE

- Fast rise time (1.4 sec)
- High damage threshold (36 kW/cm²)

COMPACT DESIGN

- Only 13 mm thick (UP10P model)

ENERGY MODE

- Measure single shot energy up to 3 J

SMART INTERFACE

- Containing all the calibration data

COMPATIBLE STAND

- STAND-S-233

SPECIFICATIONS

MEASUREMENT CAPABILITIES

- Maximum average power (continuous): 2 W
- Noise equivalent power: 1.30 μW
- Spectral range: 20.19 - 20 μm
- Typical rise time: 1.4 sec
- Typical power sensitivity: 2 mV/W
- Power calibration uncertainty: ±2.5%
- Repeatability: ±0.5%

1. Nominal value, actual value depends on electrical noise in the measurement system.
2. For the calibrated spectral range, see the user manual.
3. With anticipation.
4. Into 100 kΩ load. Maximum output voltage = sensitivity x maximum power.
5. Including linearity with power.

- Typical energy sensitivity: 2.4 mV/J
- Maximum measurable energy: 13 J
- Noise equivalent energy: 25 mJ
- Minimum repetition period: 2 s
- Maximum pulse width: 63 ms
- Energy calibration uncertainty: ±5%

1. For 360 μs pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).
2. Nominal value, actual value depends on electrical noise in the measurement system.
3. When single-shot energy calibration is purchased

- Maximum average power density: 136 kW/cm²
- Maximum energy density: 1 J/cm²

1. At 1064 nm, 10 W CW.
2. At 1064 nm, 7 ns, 10 Hz.

- Aperture diameter: 10 mm
- Absorber: H5
- Dimensions: 46H x 46W x 13D mm
- Weight: 0.13 kg

INTERESTED IN THIS PRODUCT?

GET A QUOTE

Find your local sales representative at gentec-eo.com/contact-us