Laser Lab Instruments
InGaAs Photodiodes

FGA04 High Speed Fiber Coupled Photodiode

**Features:**
- Direct FC Coupled
- High Responsivity
- 1200nm-1800nm Spectral Range

**FGA10**

**Features:**
- High Responsivity
- Low Capacitance
- 1200nm-1800nm

**FGA21**

**Features:**
- TO-5 Package
- Large Active Area
- 1200nm-1800nm

<table>
<thead>
<tr>
<th>ITEM#</th>
<th>$</th>
<th>£</th>
<th>€</th>
<th>Y</th>
<th>RISE TIME</th>
<th>ACTIVE AREA</th>
<th>NEP</th>
<th>DARK CURRENT</th>
<th>SPECTRAL RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FGA04</td>
<td>132.00</td>
<td>99.00</td>
<td>138.60</td>
<td>22.440</td>
<td>100ps@12V</td>
<td>Fiber Input</td>
<td>1.5 x 10^-17 W/√Hz</td>
<td>0.5nA @ -5V</td>
<td>800-1800nm</td>
</tr>
<tr>
<td>FGA10</td>
<td>149.00</td>
<td>111.75</td>
<td>156.45</td>
<td>25.330</td>
<td>5ns@12V</td>
<td>0.8mm² (Ø1mm)</td>
<td>1 x 10^-17 W/√Hz</td>
<td>25nA @ -5V</td>
<td>800-1800nm</td>
</tr>
<tr>
<td>FGA21</td>
<td>181.00</td>
<td>135.75</td>
<td>190.05</td>
<td>30.770</td>
<td>66ns@0V</td>
<td>3.14mm² (Ø2mm)</td>
<td>3 x 10^-17 W/√Hz</td>
<td>200nA @ -1V</td>
<td>800-1800nm</td>
</tr>
</tbody>
</table>

1) Measured with 50Ω load
2) Measured at peak wavelength of 1550nm

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FGA20 Long Wavelength InGaAs Photodiode

**Features:**
- 1200-2600nm Spectral Range
- High Responsivity
- TO-18 Package

The FGA20 photodiode provides high responsivity from 1200-2600nm, allowing detection of wavelengths beyond the normal 1800nm range of typical InGaAs photodiodes.

<table>
<thead>
<tr>
<th>ITEM#</th>
<th>$</th>
<th>£</th>
<th>€</th>
<th>Y</th>
<th>PEAK WAVELENGTH</th>
<th>ACTIVE AREA</th>
<th>NEP</th>
<th>DARK CURRENT</th>
<th>SPECTRAL RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FGA20</td>
<td>228.50</td>
<td>171.38</td>
<td>239.92</td>
<td>38.845</td>
<td>2.3µm</td>
<td>Ø1mm</td>
<td>2 x 10^-14 W/√Hz</td>
<td>15µA @ -1V</td>
<td>1200-2600nm</td>
</tr>
</tbody>
</table>

PSD1 Quadrant Detector

The PSD1 is a four quadrant position sensitive InGaAs photodiode that is ideal for precise position detection. The output of the device provides four currents relative to the position of a light spot on the detector surface. For best accuracy the light spot must be in all four quadrants.

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<tr>
<th>ITEM#</th>
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<th>NEP</th>
<th>DARK CURRENT</th>
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</tr>
</thead>
<tbody>
<tr>
<td>PSD1</td>
<td>1,386.00</td>
<td>1,039.50</td>
<td>1,455.30</td>
<td>235.620</td>
<td>1.5µm</td>
<td>Ø2mm</td>
<td>2 x 10^-14 W/√Hz</td>
<td>0.15nA @ -1V</td>
<td>900-1700nm</td>
</tr>
</tbody>
</table>

DSD2 Dual Sandwich Detector

The DSD2 is a two element photodiode, Silicon and InGaAs, providing a very wide spectral response. This detector is ideal for remote temperature measurements where an extremely wide wavelength range needs to be monitored.

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<tr>
<th>ITEM#</th>
<th>$</th>
<th>£</th>
<th>€</th>
<th>Y</th>
<th>PEAK WAVELENGTHS</th>
<th>ACTIVE AREA</th>
<th>RISE TIME</th>
<th>SPECTRAL RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSD2</td>
<td>398.00</td>
<td>298.50</td>
<td>417.90</td>
<td>67.660</td>
<td>950/1300nm</td>
<td>Ø2.54mm / Ø1.5mm</td>
<td>4µs typ. both layers</td>
<td>400-1700nm</td>
</tr>
</tbody>
</table>

Sales: 973-579-7227
**Photodiodes: Si**

**FDS010**
Fast 1ns small area Si detector packaged in a TO5 transition can with a UV grade Fused Silica window to provide sensitivity down to 200nm.

**FDS100**
Large area Si detector packaged in a TO5 can.

**FDS1010**
Large 100mm² detector, mounted on an insulating ceramic substrate.

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</tr>
</thead>
<tbody>
<tr>
<td>FDS100</td>
<td>$12.60</td>
<td>£9.45</td>
<td>€13.23</td>
<td>¥2,142</td>
<td>20ns</td>
<td>13mm² (3.6 x 3.6mm)</td>
<td>1.2x10⁻¹¹W/√Hz</td>
<td>20nA</td>
<td>350-1100nm</td>
</tr>
<tr>
<td>FDS010</td>
<td>$39.57</td>
<td>£29.68</td>
<td>€41.55</td>
<td>¥6,727</td>
<td>1ns</td>
<td>0.8mm² (Ø1mm)</td>
<td>5x10⁻¹¹W/√Hz</td>
<td>2.5nA</td>
<td>200-1100nm</td>
</tr>
<tr>
<td>FDS1010</td>
<td>$41.25</td>
<td>£30.94</td>
<td>€43.31</td>
<td>¥7,012</td>
<td>40ns</td>
<td>100mm² (10 x 10mm)</td>
<td>4x10⁻¹¹W/√Hz</td>
<td>0.6µA</td>
<td>350-1100nm</td>
</tr>
</tbody>
</table>

1) Measured with 50Ω load and 12V Bias.

**Photodiodes: Ge**

**Features**
- Large Active Area: Ø5.00mm
- Ideal for Pulsed and CW Sources
- Package Size: 0.275" x 0.310"
- 800nm-1800nm Spectral Range
- AR Coated for 1300-1550nm

**FGAP71 Features**
- High Responsivity (0.12 A/W @ 440nm)
- Rise Time 1ns / Fall Time 140ns
- 150 - 550nm Spectral Range

The FGAP71 has a wide bandwidth and high spectral sensitivity in the UV and visible ranges (150 - 550 nm). The diode is mounted in hermetically sealed packages with a sapphire window.

<table>
<thead>
<tr>
<th>ITEM#</th>
<th>$</th>
<th>£</th>
<th>€</th>
<th>Y</th>
<th>RISE/FALL TIME</th>
<th>ACTIVE AREA</th>
<th>NEP</th>
<th>DARK CURRENT</th>
<th>SPECTRAL RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FGAP71</td>
<td>$81.00</td>
<td>£60.75</td>
<td>€85.05</td>
<td>¥13,770</td>
<td>1ns /140ns</td>
<td>4.8mm²</td>
<td>1.0 x 10⁻¹¹W/√Hz</td>
<td>10nA max.</td>
<td>150-550nm</td>
</tr>
</tbody>
</table>

1) Measured with 50Ω load.

**Diode Sockets**

**S8058**
Ø0.406 O.D.
Ø0.20" Pin Circle
Use With: FDS100, FDS010 & FGA10

**S8060**
Ø0.25" O.D.
Ø0.13" Pin Circle
Use With: FGA04 & FGA20

<table>
<thead>
<tr>
<th>ITEM#</th>
<th>$</th>
<th>£</th>
<th>€</th>
<th>Y</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>S8058</td>
<td>$8.40</td>
<td>£6.30</td>
<td>€8.82</td>
<td>¥1,428</td>
<td>Socket for TO5 Diode Package</td>
</tr>
<tr>
<td>S8060</td>
<td>$5.49</td>
<td>£4.12</td>
<td>€5.76</td>
<td>¥935</td>
<td>Socket for FGA04 Diode</td>
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</tbody>
</table>

Sales: 973-579-7227

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