



Spectrometer SD1024G

Spectrometer Series

Spectrometers are optical spectrum emission monitors that integrate sophisticated embedded processors and software designed to provide intelligent instrument control, data acquisition and endpoint detection capabilities.

All SD1024G Series Instruments are RoHS Compliant

- [SD1024G™ – High Performance](#)
- [SD2048GH™ – High Performance & High Resolution](#)
- [SD1024GH™ – Ultra Performance](#)
- [SD1024GM™ – Medium Performance](#)
- [SD2048GM™ – Medium Performance & High Resolution](#)
- [SD1024GL™ – General Purpose](#)
- [SD2048GL™ – High Resolution](#)
- [SE1024GL™ – General Purpose](#)
- [SE2048GL™ – High Resolution](#)
- [SD512GR™ – High Performance](#)

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We've gone the extra mile, so you don't go the extra nanometer.

SD1024G™

High Performance



The SD1024G was designed for demanding semiconductor process applications. Its optical system employs a 1024-element, scientific-grade CCD array specifically designed for multi-channel spectroscopy, offering high performance at a moderate cost. The advantages of the SD1024G include excellent ultraviolet (UV) response (down to 200nm), stability against degradation under UV exposure, high sensitivity, wide dynamic range and superior output linearity. The unique optical platform results in

highly efficient imaging of spectral information at the image plane of the two-dimensional detector array.

Features & Benefits

- High performance
- Provides robust endpoint determination
- Can be used with existing SpectraView™ software
- Use for endpoint detection, fault detection, and process diagnostics
- 200 – 800 nm or 200 – 900 nm range
- For demanding applications
- Single or multi-fiber input
- Scientific grade CCD
- Low systematic noise
- Similar optics as SD1024F
- RoHS Compliant

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SD2048GH™

High Performance/High Resolution

The **SD2048GH** is similar to the SD1024G. However, it uses a 2048-element high performance CCD, the "H" high optical throughput optics, a narrower slit, and reports spectral data in 0.25 nm increments.

Features & Benefits

- Provides robust endpoint determination
- Can be used with existing SpectraView™ software
- Use for endpoint detection, fault detection, and process diagnostics
- 200 – 800 nm range or 200 – 900 nm range
- For demanding high resolution applications



SD1024GH™

Ultra Performance



The SD1024GH incorporates special high throughput optics and lower systematic noise as compared to the SD1024G. The optics used in the SD1024GH increase optical throughput by about 75%. The SD1024GH is recommended for applications that require maximum signal to noise, especially when measuring relatively low intensity signals.

- Scientific grade TE cooled CCD
- Same optics as SD1024GH

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Features & Benefits

- Ultra performance
- Provides robust endpoint determination
- Can be used with existing SpectraView™ software
- Use for endpoint detection, fault detection, and process diagnostics
- 200 – 800 nm range
- For the most demanding applications
- Same as SD1024G, except:
 - Higher throughput optics (similar to SD1024FH)
 - Lower systematic noise
- RoHS Compliant

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SD1024GM™

Medium Performance



The SD1024GM is similar to the SD1024G. However, it uses a 2048 element mid-grade CCD. Since the CCD is 2 dimensional the SD1024GM can support multi fiber applications.

- For high resolution applications
- Single or multi-fiber input
- Mid-grade not TE cooled CCD
- Same optics as SD1024G
- 200 -800 nm or 200 – 900 nm range

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SD2048GM™

Medium Performance/High Resolution



The **SD2048GM** is nearly identical to the SD1024GM, but reports spectral data in 0.25nm increments instead of 0.5nm readings as with the SD1024GM. Compared to the SD1024GM, the SD2048GM features a narrower inlet slit and modified embedded software parameters. Although the SD2048GM has better resolution than the SD1024GM, its sensitivity is significantly less.

- Provides robust endpoint determination
- Can be used with existing SpectraView™ software
- Use for endpoint detection, fault detection, and process diagnostics
- 200 – 800 nm range or 200 – 900 nm range
- For moderately demanding applications
- Single or multi-fiber input
- Mid-grade not TE cooled CCD
- Same optics as SD1024G

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SD1024GL™

General Purpose

The SD1024GL uses a general purpose CCD and was designed for general purpose semiconductor process applications.

- Provides robust endpoint determination
- Can be used with existing SpectraView™ software
- Use for endpoint detection, fault detection, and process diagnostics

Features & Benefits



SD2048GL™

High Resolution



The **SD2048GL** is nearly identical to the SD1024GL, but reports spectral data in 0.25nm increments instead of 0.5nm readings as with the SD1024G and SD1024GL. Compared to the SD1024GL, the SD2048GL features a narrower inlet slit and modified embedded software parameters. Although the SD2048GL has better resolution than the SD1024GL, its sensitivity is significantly less.

- 200 – 800 nm range
- For general purpose applications
- Similar to SD1024FL
- Uses different CCD from SD1024FL
- RoHS Compliant

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Features & Benefits

- Provides robust endpoint determination
- Can be used with existing SpectraView™ software
- Use for endpoint detection, fault detection, and process diagnostics
- 200 – 800 nm range
- For high resolution applications
- Bright source emission required
- Similar to SD2048DL
- Uses different CCD from SD2048DL
- RoHS Compliant

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Features & Benefits

- Cost-effective
- Similar performance to the SD1024GL spectrometer
- Use with existing SpectraView™ software
- 48% smaller than the SD1024G Series spectrometers
- 200-800 nm range
- RoHS Compliant

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Features & Benefits

- Cost-effective
- Similar performance to the SD1024GL spectrometer
- Use with existing SpectraView™ software
- 48% smaller than the SD1024G Series spectrometers
- 200-800 nm range
- RoHS Compliant

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Features & Benefits

- 900- 1700 nm range
- Provides robust endpoint determination

SE1024GL™

General Purpose



The SE1024GL- CMOS spectrometer provides a cost effective solution for general purpose applications. As compared to the SD1024GL, cost is reduced by the use of simpler packaging, LCD removal, reduced connector count and a detector that can be driven using simpler electronics.

SE2048GL™

General Purpose



The SE2048GL- CMOS spectrometer provides a cost effective solution for general purpose applications. As compared to the SD2048GL, cost is reduced by the use of simpler packaging, LCD removal, reduced connector count and a detector that can be driven using simpler electronics.

SD512GR™ (NIR)

The SD512GR was designed for demanding semiconductor process applications. Its optical system employs a 512-element, linear Indium Gallium Arsenide Photodiode Array. The advantages of the



SD512GR include excellent sensitivity over the 900 – 1700 nm range, user-selectable sensitivity, a thermoelectric cooler which reduces thermal noise, and an integrated blocking filter which eliminates second and higher orders.

- Can be used with existing SpectraView™ software
- Use for endpoint detection, fault detection, process diagnostics, and as part of a spectral reflectometer

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