

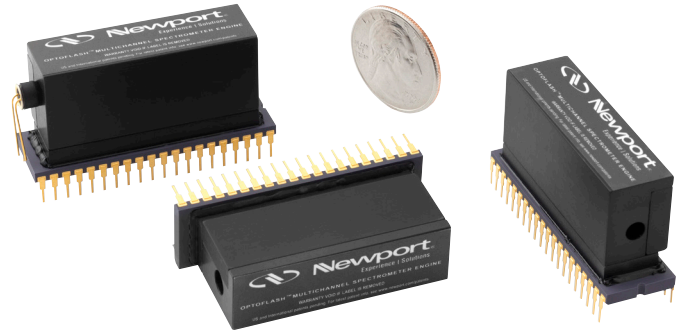
# OptoFlash® Spectrometer Engines



MKS' Newport OptoFlash® empowers spectral analysis across various industries where pre-determined wavelength detection is essential to acquiring fast sample measurements. OptoFlash spectrometer engines allow optical signal at each wavelength within the device to be simultaneously detected with negligible channel-to-channel crosstalk.

The simplified optical detection path enables OEM analytical instrument manufacturers to reduce the footprint of their measurement platform. The novel design of OptoFlash allows the elimination of many components in traditional filter-wheel based instruments by packaging beamsteering optics, bandpass filters, and the high sensitivity Silicon photodiode detector into a single compact element. OptoFlash provides similar demultiplexing functionality as grating-based spectrometers when only a select number of discrete wavelengths are required.

OptoFlash can be custom-configured to meet the needs of unique OEM applications. Select up to 10 discrete wavelength channels from a set of over 50 standard wavelength options, or specify custom-designed wavelengths to be installed in the standard package. Newport offers 16 standard configurations for clinical chemistry applications corresponding to the most commonly used wavelength data sets deployed in clinical analyzers.

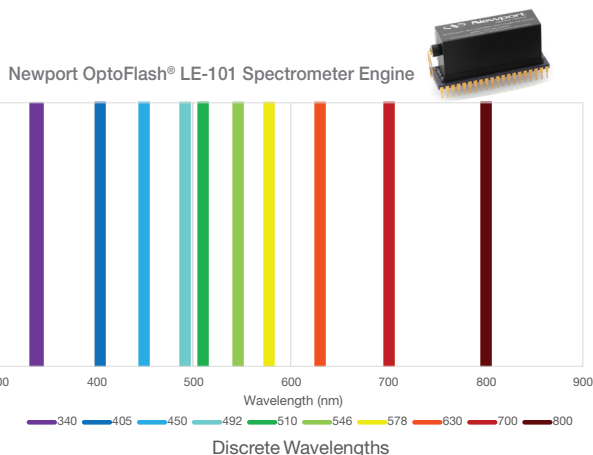


## Applications

- Chemical Signature Analysis
- Environmental Analysis - Soil, Water & Air
- Precision Agriculture
- Food & Beverage Analysis
- Waste Stream Sorting

## Performance Advantages

- Customize Spectral Range: 340 - 900 nm
- Excellent Temperature Stability & Vibration Insensitivity
- Up to 10 Discrete Wavelength Channels
- Custom Configurable > 50 Standard Wavelengths
- 16 Standard Configurations Available
- High Linearity
- Low Stray Light
- Low size, weight and power (SWaP)
- No moving parts



## Common Specifications

Spectral Range	340 - 900 nm
Wavelength Channels	Up to 10 per standard device; Custom devices with > 10 channels are available
Wavelength Options	>50 Standard wavelengths; Custom wavelengths available upon request
Channel Wavelength Spacing	>18 nm recommended
Spectral Resolution	10 nm @ $\lambda \leq 380$ nm; 8 nm @ $\lambda > 380$ nm
Stray Light	> OD 3
Linearity	> OD 3.5
Detector	Si photodiode linear array in 40 pin DIP
Detector Photosensitivity	Nominal 0.43 A/W @ 633 nm
Reverse Bias Voltage	-15 V Maximum
Operating Temperature Range	-20 °C to 60 °C
Storage Temperature Range	-20 °C to 80 °C
Mounting Options	Standard DIP socket or direct PCB solder connection
Physical Dimensions	(L) 51 mm x (W) 16 mm x (H) 25 mm
Entrance Pupil	Nominal 4 mm diameter
Weight	Nominal 30 grams

## Standard Wavelength Options (nm)

340	380	400	405	410	415
420	430	436	440	450	460
467	470	478	480	490	492
500	505	510	520	530	540
546	550	560	570	578	580
589	590	596	600	610	620
630	640	650	658	660	670
680	690	700	726	750	766
800	805	815	850	880	884

## Standard OptoFlash Device Configurations

Part #	$\lambda_1$	$\lambda_2$	$\lambda_3$	$\lambda_4$	$\lambda_5$	$\lambda_6$	$\lambda_7$	$\lambda_8$	$\lambda_9$	$\lambda_{10}$
LE-100	340	405	450	510	546	578	630	670	700	
LE-101	340	405	450	492	510	546	578	630	700	800
LE-102	340	405	450	505	546	578	620	670	700	
LE-103	340	405	450	510	546	578	630	700		
LE-104	340	405	450	510	546	578	630	670		
LE-105	340	405	450	505	546	600	630	700	800	
LE-106	340	405	450	505	546	578	630	670	750	
LE-107	340	405	450	505	546	570	610	660	700	
LE-108	340	405	450	505	546	578	630	670	700	
LE-109	340	380	405	450	505	546	578	630	670	700
LE-110	340	405	492	505	546	578	600	630	700	
LE-111	340	380	492	510	546	578	620			
LE-112	340	380	405	436	480	510	546	580	630	700
LE-113	340	405	510	546	578	620	670	700		
LE-114	340	405	450	546	578	630	670	700		
LE-115	340	405	510	546	578	630	700			

## Dimensional Drawing

