

# Raman-HR-TEC-1064

StellarNet offers a variety of high performance spectrometers configured for 1064nm Raman spectroscopy. 1064nm laser excitation is a common wavelength chosen for Raman spectroscopy. The main benefit of 1064nm Raman spectroscopy is its has the lowest fluorescence of any excitation wavelength. Conversely, it has the lowest Raman signal strength (i.e. about 15x smaller) and requires a longer collection time to see your signal. This can damage certain sample types. Therefore, 1064nm Raman is ideal for certain colored polymers, dyes, oils, or other materials that may have fluorescing components but won't be damaged with long radiation exposures.



**Raman-HR-TEC-1064 Spectrometers** are our most popular 1064 Raman spectrometers and include an enhanced “low noise” InGaAs detector array with 1024 pixels tuned for 1064nm Raman with advanced detector lens assembly for ultra sensitivity at long exposure times. The spectrometer also includes a 2-stage Thermoelectric cooler for best performance.

**Raman-SR-TEC-1064 Spectrometer** is a slightly more affordable option with 512 pixels providing approximately half the resolution performance over the same range.

**StellarCASE-Raman-1064** is a portable and rugged Raman System for “Open & Measure” Application. This complete system includes a high performance Raman spectrometer (Raman-HR-TEC-1064), High power Laser, and vial holder. [More Info...](#)

#### Model Ranges and Resolutions

Raman Spectrometer	Wavelength Range (cm-1)	Resolution (cm-1)	Integrated 2-Stage TE Cooler
Raman-HR-TEC-1064	200-2,250	11	Yes
Raman-SR-TEC-1064	200-2,250	22	Yes

HR = High Resolution

SR = Standard Resolution

Note: -HR and -SR models use ultra low dark noise sensor

#### 1064nm Raman Spectrometers

<b>Optical Parameters</b>	
<b>Optical Resolution:</b>	HR/EHR= 11 cm-1 SR/ER = 22 cm-1
<b>Spectral Range:</b>	HR = 200-2,250 cm-1 SR= 200-2,250 cm-1 ER/EHR = 200-3500cm-1 Early Start Available
<b>Diffraction Gratings:</b>	2400/1200 g/mm with gold surface
<b>Stray Light:</b>	<0.05%
<b>Optical Input:</b>	SMA-905
<b>Detector &amp; Electronics</b>	
<b>Detector Type:</b>	InGaAs low noise PDA 512 or 1024 pixels

<b>Detector Lens:</b>	Advanced cylindrical lens assembly
<b>Thermo Electric Cooling:</b>	2 Stage = -30 Deg C
<b>Exposure Times:</b>	8 minutes
<b>Signal to Noise:</b>	>4000:1
<b>Physical</b>	
<b>Dimensions:</b>	HR/EHR = 6 x 17 x 15.5 cm SR = 5 x 7.6 x 12.7cm
<b>Weight:</b>	HR/EHR= 1.5 kg SR= 0.8 kg
<b>Software &amp; Interface</b>	
<b>Operating System:</b>	Win XP, 7,8,10 Linux
<b>Interface:</b>	USB-2 (Wifi & Webserver Options)
<b>Software:</b>	SpectraWiz, SpectraWiz-ID, LabView, Spectroscopy Pro-tools, Delphi, C, C#

