

Configurations of GEMINI

We have different configurations of GEMINI:

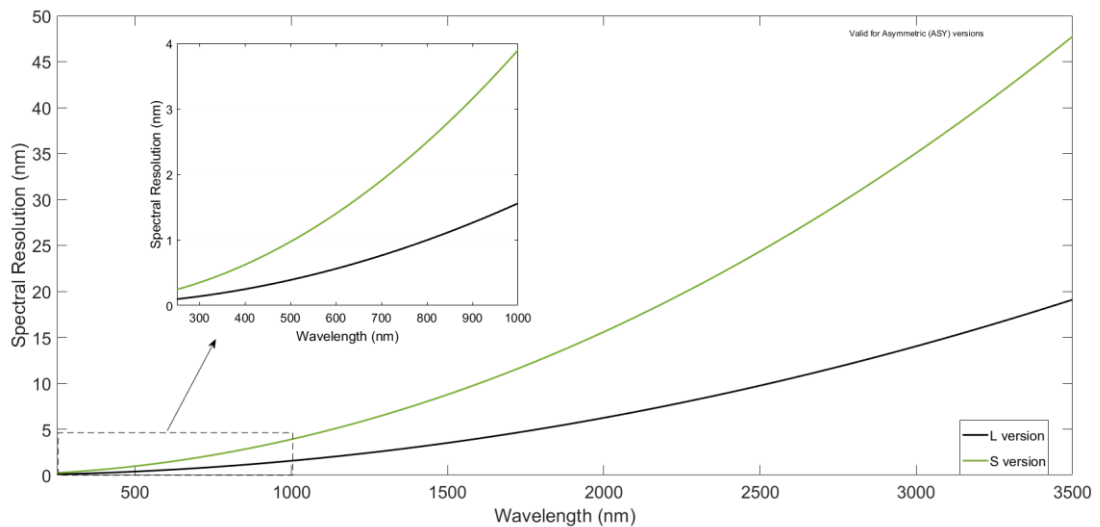
1) Accuracy and Speed of the Scan:

You can select one out of two versions of the controller of the positioner that controls the relative delay between the two generated replicas of light (“standard” and “high performance – HP”). With respect to the standard controller, the HP version guarantees a higher speed of the scan (up to 5 time faster: it typically takes 15-20 millisecond per step in a step-scan mode) and a much higher accuracy and stability in the relative delay (on the order of 1 attosecond – that is more than 1000 times better than the optical cycle of visible light). This ultimately translates into a much better signal to noise ratio of the retrieved spectrum of your signal. When GEMINI is coupled to SPAD detectors and TCSPC systems to detect time-resolved and very weak signals, we always recommend to go for the HP version.

2) Spectral resolution:

You can select one out of two versions (S, L) with different spectral resolutions – please refer to the fig. 1. Please note that this is the minimum achievable spectral resolutions for each version; if sometimes customer doesn’t need such a good spectral resolution, he can perform shorter – and thus faster – scans (these parameters can be easily selected via software) and get a worse spectral resolution. Please note that a change in the spectral resolution does not affect the throughput of the device.

Fig. 1. Spectral resolutions.





3) Bandwidth:

The standard model of GEMINI covers the range 400 nm – 2300 nm. There is the option of upgrading it to cover a much broader region (250 nm – 3500 nm). Moreover, on request, GEMINI can be customized to cover the 500 nm – 4200 nm range.