

SuperK VARIA

Tunable wavelength & bandwidth filter

- 400-840nm tuning range, 4-100nm bandwidth
- High transmission and no polarization loss
- Easy Plug'n'Play connection to SuperK EXTREME
- Full computer control via SuperKontrol GUI
- SuperK Fiber Delivery
- Tested and approved for FLIM
- IR pass-through port

The SuperK VARIA is a unique filtering solution which allows not only the tuning of wavelength, but also the variation of bandwidth of the filtered channel.

In contrast to AOTF technology, the VARIA suffers no polarization loss and thus delivers high power throughput. For example, powers of over 50mW per wavelength across the full visible spectrum are easily achieved with the VARIA and the EXTREME EXW-12 using only a 10 nm bandwidth.

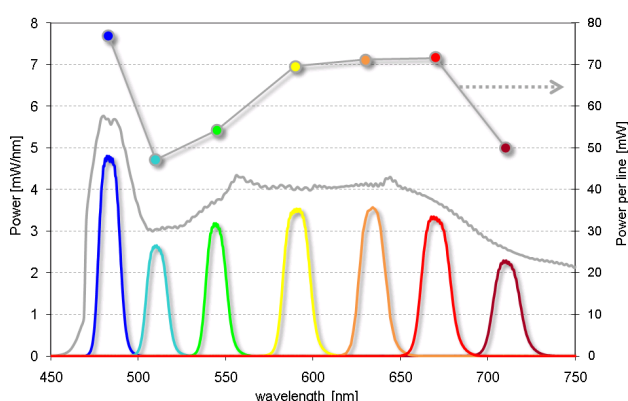
The VARIA is computer controlled through the SuperKontrol GUI and the optical output can be free-space collimated beam as standard or single mode fiber delivery via the SuperK Fiber Delivery range. For applications which require a single tunable channel with high power and/or variable bandwidth, the VARIA provides the ideal solution without the need for AOTF based systems.



Parameter	Value
Wavelength tuning range	400 – 840 nm
Minimum bandwidth FWHM	< 4 nm
Maximum bandwidth FWHM	100 nm
Transmission through module ($\Delta\lambda$ > FWHM, standard version)	> 90 % (Un-polarized)
Transmission through module ($\Delta\lambda$ > FWHM, high sup version)	> 85 % (Un-polarized)
Out of band suppression (20nm from center wavelength in 400-900 nm range)	> 25 dB (standard version) > 50 dB (high sup version)
Output Polarization	Un-polarized or P-Polarized (adding output polarizer)
Tuning speed	> 10 nm/s
Repeatability of wavelength position	< 0.2 nm
Absolute wavelength accuracy	+/- 3 nm
Wavelength temperature sensitivity	< 0.05nm/deg
Transmission temperature sensitivity	< 0.2 %/deg
Electrical interface	Edge PCB connector w. BUS interface, Analog feedback signal
Interlock	Collimator, lead
Output mode	Collimated free-space or SuperK CONNECT with FC-APC

Options / add-ons

- Standard (25dB) or high (50 dB) out-of-band suppression
- SuperK CONNECT fiber delivery
- Power Lock output stabilization with active feedback



SuperK VARIA output from a SuperK EXTREME EXW-12. The graph shows the output from the supercontinuum laser, the filtered channel tuned to different wavelengths and the output power per wavelength (right axis).

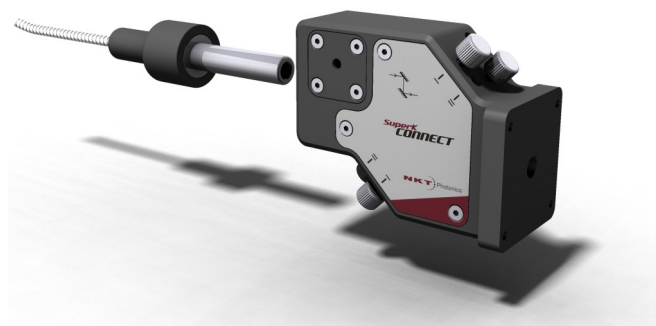
Specifications are subject to change without notice. SuperK-VARIA-111221



Options and add-ons

Fiber Delivery

SuperK CONNECT is a high performance fiber delivery system complete with broadband fibers and a range of termination options such as FC/PC connectors or high quality collimators. Interfacing the accessories are handled by the CONNECT fiber coupling block that ensure easy and extremely stable single-mode coupling that can be disconnected and reconnected without alignment.



Fiber Delivery System Specifications

Visible Coupling Efficiency	> 65%
Broadband Visible Coupling Efficiency	> 50%
Output Fiber Mode	Single Mode
Fiber Connector (Std. SMF)	VIS, nIR, IR, Ext. IR: FC/APC
Fiber Connector (Ultra broadband SMF)	VIS-nIR, VIS-IR: FC/PC
Fiber Length	2m (longer on request)
Polarization	PM or non-PM

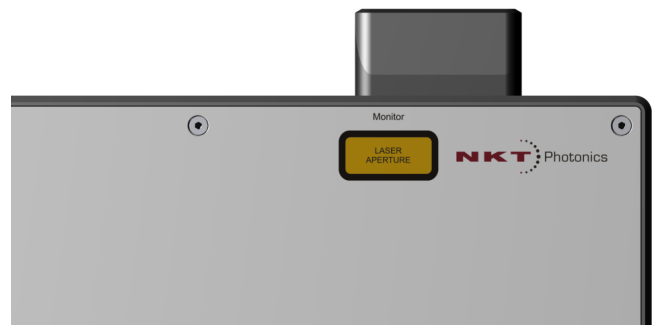
Out of Band Suppression

The SuperK VARIA is available in two different configurations. A standard version where the out of band suppression (i.e. the signal difference between the transmitted light within the selected wavelength region and the light leaking through outside the filter bandwidth) is > 25 dB and a high suppression version where the out of band signal suppression is an industry-leading > 50 dB.

Power Lock (external power locking)

The Power Lock options enables you to lock the power output of the SuperK VARIA via a build in photo detector. Simply connect the detector to the External Feedback BNC connector of the SuperK. Activate locking from the control panel and the SuperK will now lock the power output of the VARIA.

The long term stability of a locked output will typically be better than +/- 0.5 % (over many hours) - depending on the wavelength.



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