

TECHNICAL DATA SHEET

ULTRA-NARROWBAND (<NM) FILTERS

Omega has a long history of producing ultra-narrow bandwidth filters, starting with the Hydrogen alpha (656.28 nm) filters over 40 years ago. Improvements in production methods which enable multi-cavity designs have allowed us to push to steeper edges and into the near-infrared wavelengths.

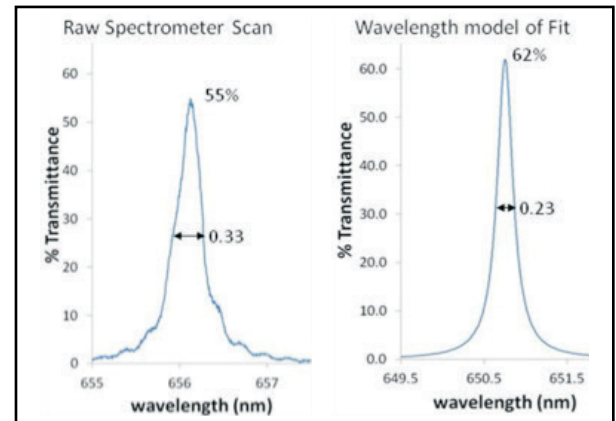
Testing of these very steep and narrow filters is a challenge- we have used a combination of standard spectrometers, tunable lasers and laser angle rocking to characterize the performance.

KEY FEATURES

- Sub-nanometer bandpass filters for UV, visible, and NIR wavelengths
- High transmission
- Multicavity designs available for steeper edge slopes
- Custom wavelengths
- Custom sizes
- High physical durability

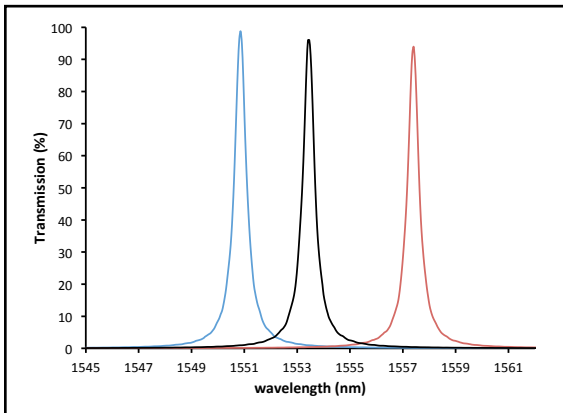
APPLICATIONS

- Astronomy
- Laser Cleanup
- LIDAR
- Free-space Optical Communications
- Range-finding
- Remote sensing



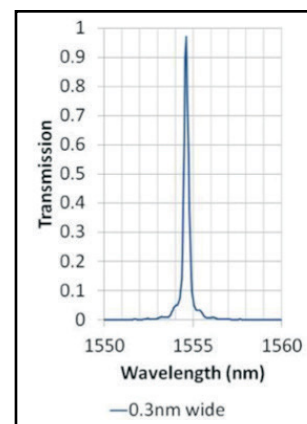
HYDROGEN ALPHA FILTERS

Shown above as measured (L) and modeled (R).



ITU- C-BAND LASER BANDPASS FILTERS

- Used in optical communications, the ITU C-band covers the spectral range of 1530 to 1565 nm.
- The ITU grid places 100 laser channels across this band.
- At right are filters at C-band laser lines ITU 29, 32 and 37.



ULTRA-NARROW NIR FILTERS