



Sintec Optronics Pte Ltd

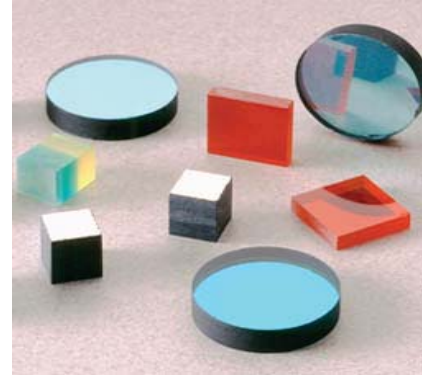
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Band Pass Filter

Description:

- Transmission rate at certain wave band is high and the waveband light at its both sides is stopped.
- Cut-off filters of from near UV to medium infrared are available.
- Broadband filter and narrowband filter ($\Delta\lambda / \lambda_c < 15\%$), divided so according to the central wavelength and bandwidth ratio.
- Stop depth: OD2 – OD6
- Peak transmittance and central wavelength λ_c is related to semi-width $\Delta\lambda$.
- Central wavelength deviation
- Substrate may be tailed to customers' request or be provided by customers.
- Typical substrate: all kinds of optical glass, quartz glass, Ge, Si, etc.
- Light transmission can be blocked effectively on extreme broad band by using color glass or double-sided coated glass.
- Substrate size: $\Phi 2 \sim \Phi 50$ mm; thickness: 0.1 to 20 mm



Advantages:

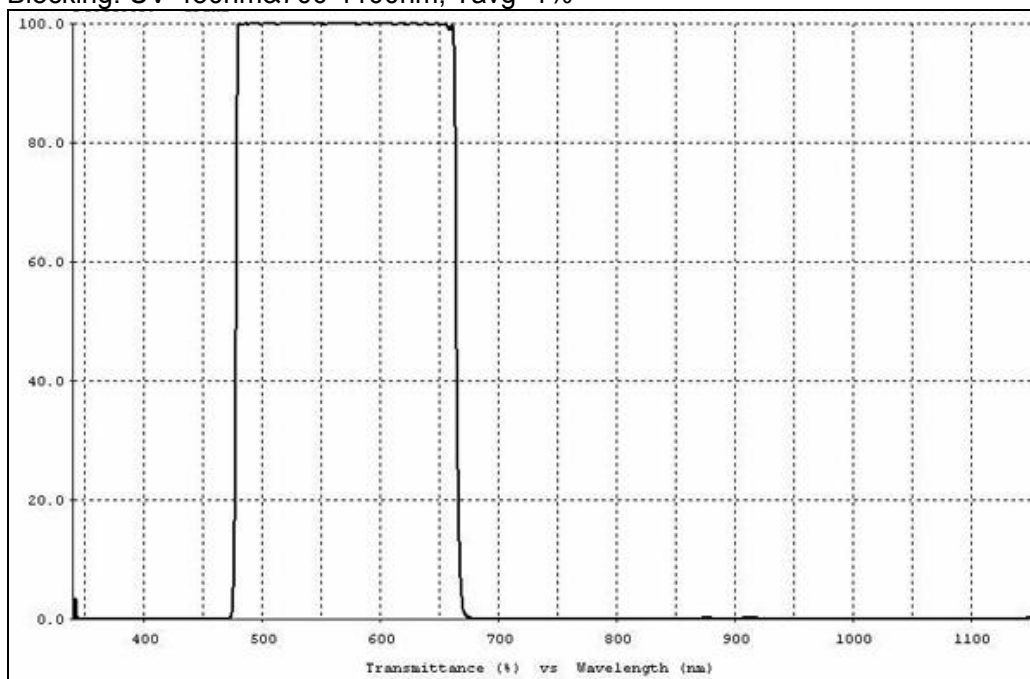
- High transmittance of the peak
- Level pass band spectrum
- Excellent stoppage within a wide waveband.
- Superior uniformity
- Coating: adopt plasma assistant plating and ion sputtering plating, and coating layers are firm, dense and do not absorb moisture.
- Good stability of temperature and humidity.

Typical bandpass filter:

A. Broadband bandpass filter

Band Pass: 485-650nm, $T_{avg} > 90\%$

Blocking: UV-450nm&700-1100nm, $T_{avg} < 1\%$



B. Narrowband filter

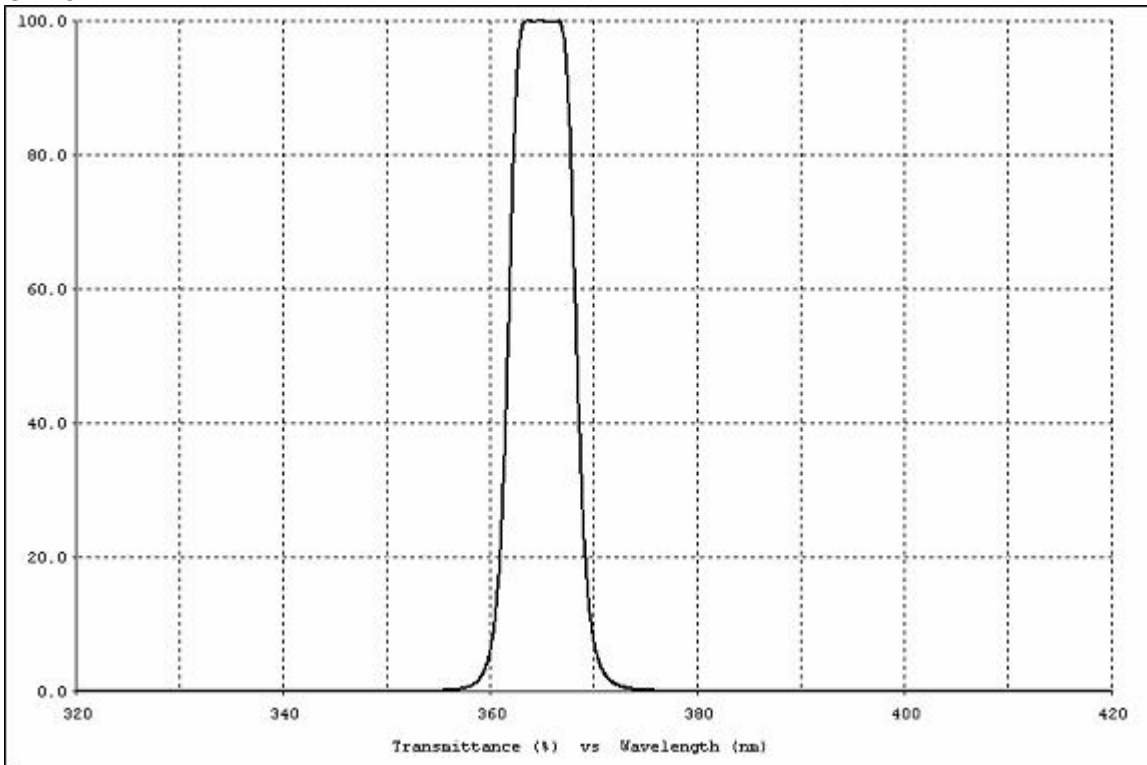
CWL: 365nm

HW: 7nm

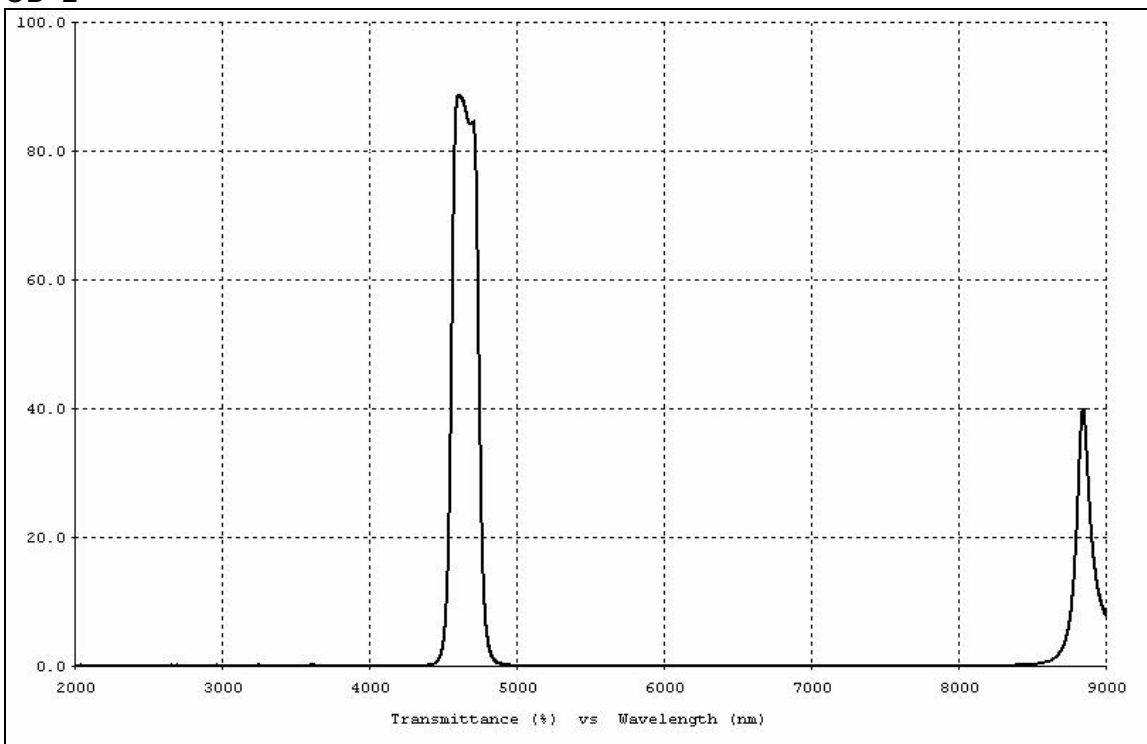
T_{peak} >95%

Blocking: 270-340nm&405-490nmv

OD>3

**C. Infrared bandpass filter**CWL: 4.65 μ mHW: 0.2 μ mT_{peak}>70%Blocking: UV-4.2 μ m&5.2-8.0 μ m

OD>2



Band Stop Filter

Description:

- Block spectrum transmission within a certain small waveband.
- Central wavelength deviation
- Stop depth:
- Substrate may be tailed to customer's request or be provided by customers.
- Typical substrate: all kinds of optical glass, quartz glass, etc.
- Substrate size: $\Phi 2 \sim \Phi 50$ mm; thickness: 0.1 to 20 mm.

Advantages:

- High pass band transmittance
- Level pass band spectrum
- High stop depth: OD2 – OD6
- Superior uniformity
- Coating: to adopt plasma assistant plating and ion sputtering plating, and coating layers are firm, dense and not absorbing moisture.
- Good stability of temperature and humidity.

Typical band stop filter

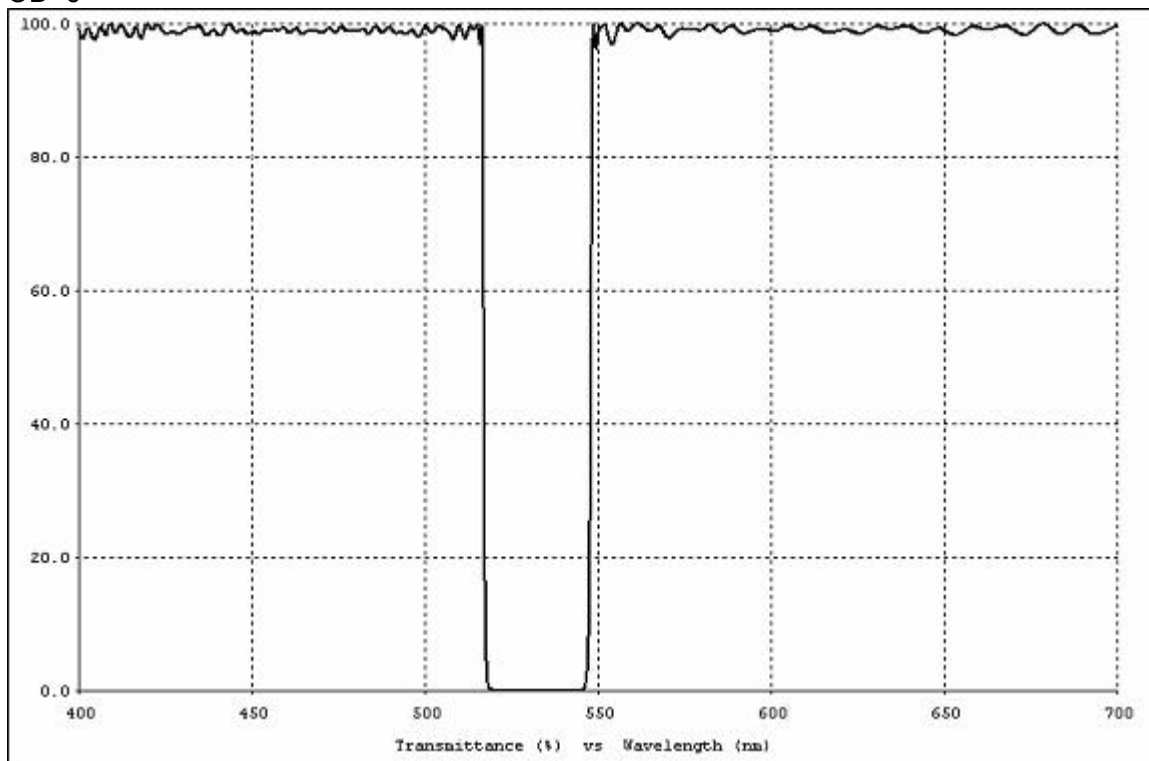
CWL: 532nm

HW: 30nm

Tavg >90%

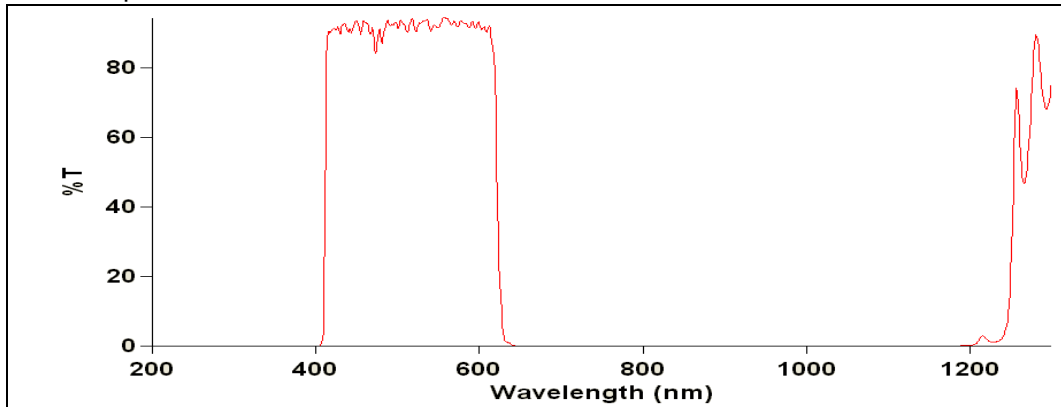
Band pass: 420-515nm & 550-700nmv

OD>6



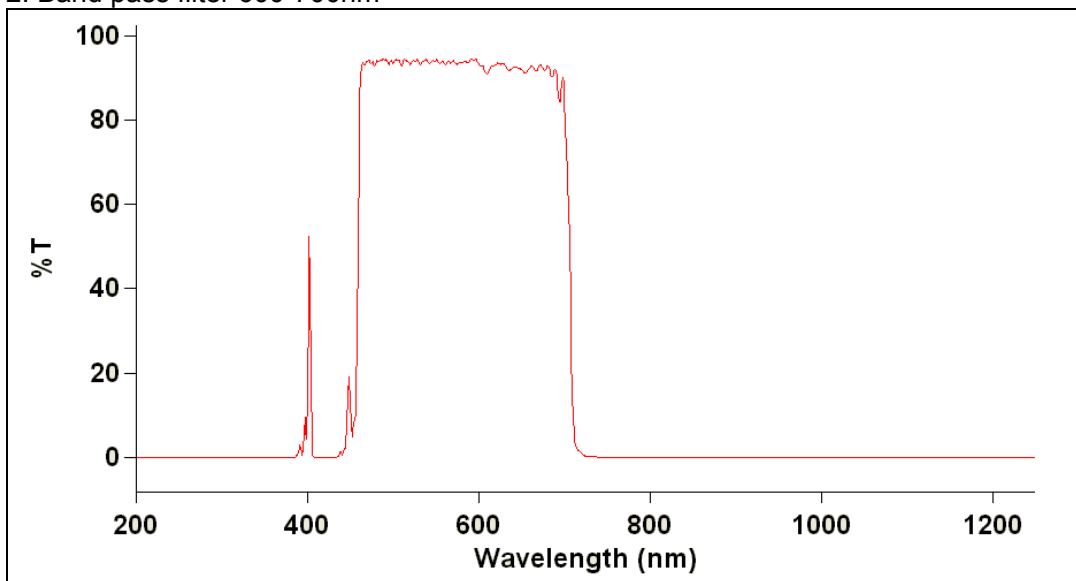
Typical Filters

1. Band pass filter 500-600nm



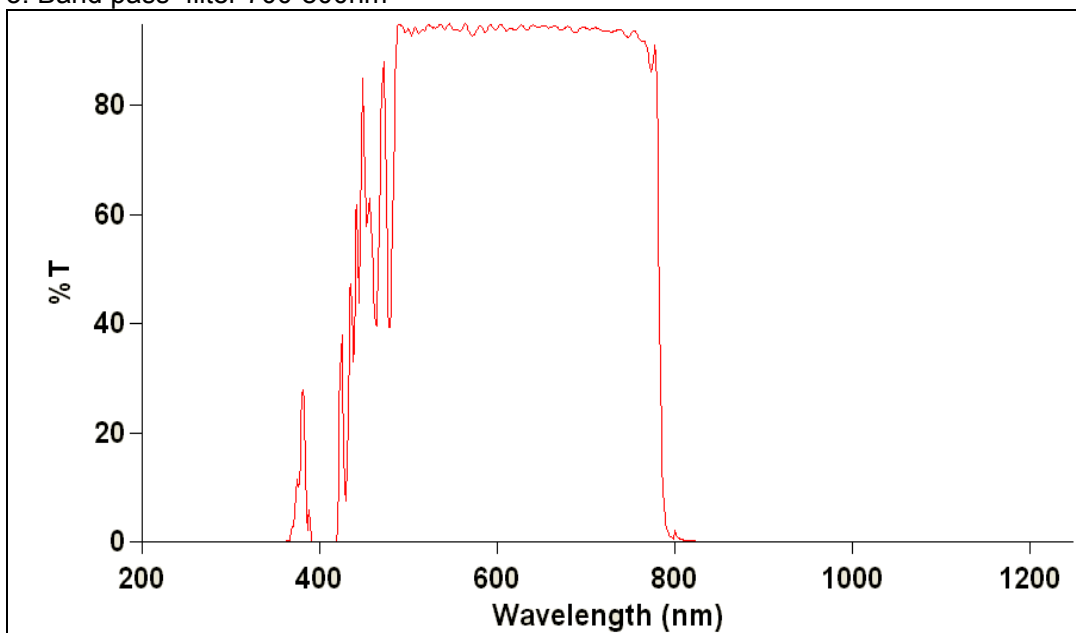
HB495 colour glass + SP610 filter

2. Band pass filter 600-700nm



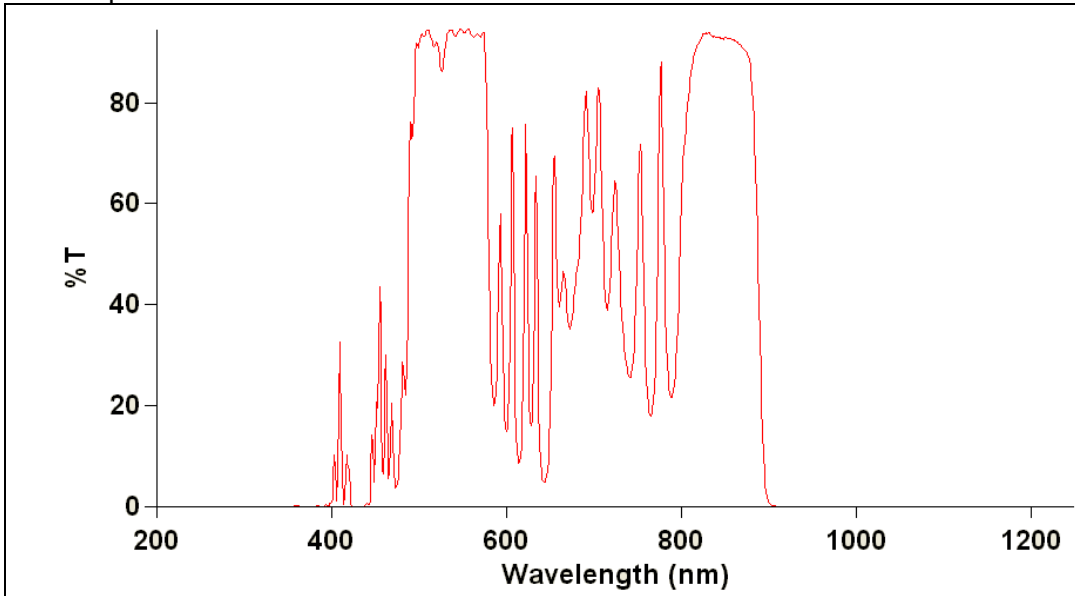
HB600 colour glass + SP700 filter

3. Band pass filter 700-800nm



HB700 colour glass + SP800 filter

4. Band pass filter 800-900nm



HWB800 colour glass + SP900 filter

Remark:

- Colour glass is wide-band filter.
- The thickness of glass is 2mm and the thickness of filter is 1.1mm. They are cemented with each other and thus the total thickness is about 3.1mm.