

Fluorescence filter

applied in RT-PCR testing
Novel coronavirus pneumonia

Fluorescence quantitative RT-PCR Analyzer

Key equipment for nucleic acid testing

Use Real-Time PCR to identify Novel Coronavirus is the main method for diagnosis.

• Test Method

1. Select the specific fluorescence excitation spectrum and excite the irradiation sample.
2. The nucleic acids is emitted light emission fluorescence, fluorescence reaction.
3. By measuring the fluorescence spectra of the real time change signal amplification, finally confirm whether contain virus.
4. Some are detected by double fluorescent rt-pcr kit, and nucleic acid samples for matching.

• Fluorescence Filter

Important Optical component in Real-time PCR detector



Fluorescence quantitative
RT-PCR Analyzer



Fluorescence Filter

Fluorescence filter

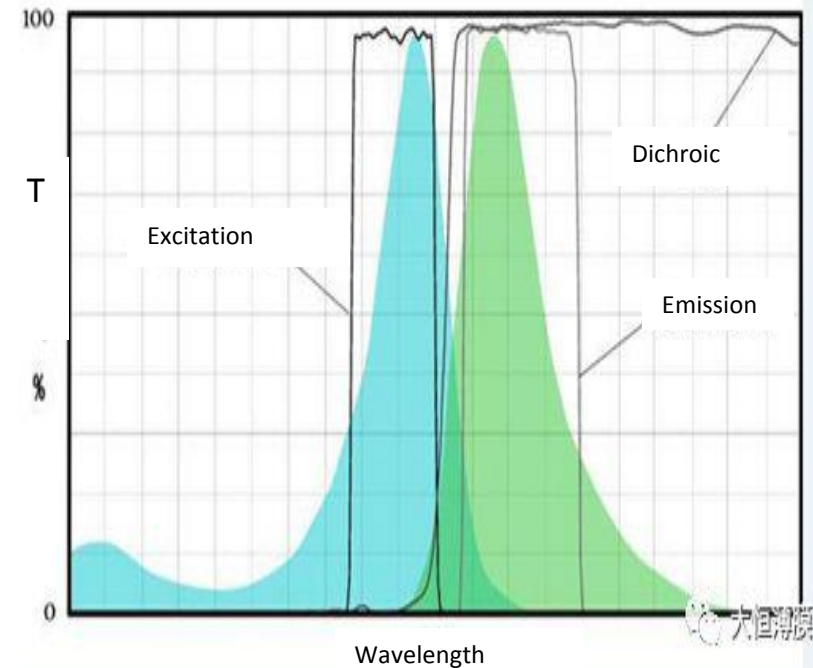
Producing by high-tech optical thin film technology

- **Testing Process**

1. Weak fluorescence signal filtering (High SNR filter)
2. High filter performance index requirements (4 and 6 filters working)
3. Wavelength positioning Accuracy: $\pm 2\text{nm}$
Noise Reduction: $< 1.0\text{E}-8$
Channel crosstalk: $< 1.0\text{E}-6$
(Production: Complex and difficult)
4. Plasma physics magnetron sputtering
physical vapor deposition reaction

- **Benefits**

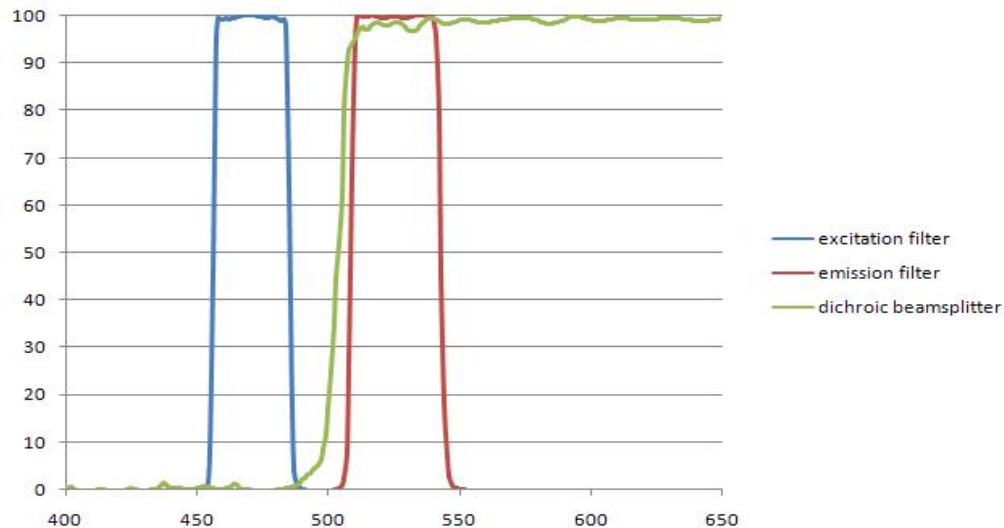
1. 500 coating layers
2. Nanoscale
3. Optical film



Fluorescence filter

the center component of PCR detector

1. Including Excitation, Emission, Dichroic filter
2. Suitable for kinds of fluorophore
3. Deep Blocking >OD6
4. High Transmission >95%
5. Sharp Slope



Typical fluorescence filters



can be customized

Channel	type	central wavelength	Applicable fluorescent beam
CH1	EX470	470	FAM, SYBR Green I, SYTO 9, EvaGreen, LC Green
	DM500	500	
	EM520	520	
CH2	EX530	530	HEX, VIC, TET, JOE
	DM550	550	
	EM560	560	
CH3	EX580	580	ROX, Texas Red
	DM600	600	
	EM620	620	
CH4	EX630	630	CY5
	DM650	650	
	EM660	660	
CH5	EX680	680	Alexa Fluor 680, CY5.5, Quasar705
	DM710	710	
	EM725	725	

SOLUTION
TO
OPTICS

Note: EX means Excitation filter
EM means Emission filter
DM means Dichroic filter