

## 带通&激光线滤光片，紫外/可见光，中心波长 340 - 694.3 nm

### 带通滤光片特性

- 中心波长：340 nm 至 694.3 nm
- 带通范围：1, 3, 10 或 40 nm
- Ø1/2 英寸或Ø1 英寸已安装滤光片
- 边缘刻线有助于长期稳定性
- 每个滤光片都提供典型的透射率曲线
- 激光线滤光片包括：常见的激光二极管、氩、氪、氩镉、氩氦和 Nd:YAG 激光线

本页介绍的带通滤光片和激光线滤光片的中心波长小于 700 nm。每种滤光片的透过率曲线请在页面下方的表格中查看。每个滤光片都安装在一个阳极氧化发黑的无螺纹铝环中，环外径为Ø1/2 英寸或Ø1 英寸，边缘最大厚度为 6.3 mm。请注意Ø1/2 英寸的滤光片在表格中以绿色背景显示。

QXKJ 的带通滤光片使用最简单的方法来透过特定波长范围的光，而阻挡其它不需要的的光。滤光片的设计本质上是通过真空沉积形成的薄膜法布里-珀罗干涉仪，它由均匀间隔层分隔的两个反射介质层堆叠组成。这些反射介质膜堆叠由反射率可超过 99.99% 的高、低折射率交替的材料组成。通过改变间隔层的厚度和/或反射层的数量，就可以改变滤光片的中心波长和带宽。

这种滤光片在通带区域内具有非常高的透过率，但是在通带区域两边被阻挡的光谱范围较窄。可以增加另外一个挡光元件来弥补这个缺点，根据对滤光片的要求，该元件可以是全介质型或金属介质型。虽然这个额外的挡光元件会滤除通带外的所有不需要的的光，但它也会减少滤光片的整体透过率。对波前有严格要求的成像等应用，请考虑使用优质带通滤光片。

每个滤光片都安装在经过氧化发黑处理的铝环中，用箭头标出了光透射方向。这个环使得拿取更容易，且通过限制散射增强了阻挡的光密度。这些滤光片可安装在我们多种滤光片安装座和转轮中。因为这些安装座没有螺纹，安装时需用卡环将滤光片安装在我们的内螺纹透镜套管或滤光片安装座中。我们建议不要将滤光片从安装座上取下，因为滤光片是由环氧树脂及安装环固定的多层玻璃组成的。这些玻璃层用于防止介质膜受空气影响；暴露在空气中会显著减小滤光片的透过率。

请注意，由于介质膜逐渐变质，我们的带通滤光片一般使用寿命是两年。老化的滤波片整体带通透过率将降低。

### 340 - 390 nm 带通滤波片

CWL <sup>a</sup>	FWHM <sup>b</sup>	T (Min) <sup>c</sup>	Blocking <sup>d</sup>	Laser Line	Size
340 ± 2 nm	10 ± 2 nm	25%	200 - 3000 nm	N/A	Ø1"
350 ± 2 nm	10 ± 2 nm	25%	200 - 3000 nm	N/A	Ø1"
355 ± 2 nm	10 ± 2 nm	25%	200 - 1150 nm	Nd:YAG	Ø1"
360 ± 2 nm	10 ± 2 nm	25%	200 - 3000 nm	N/A	Ø1"
370 ± 2 nm	10 ± 2 nm	25%	200 - 3000 nm	N/A	Ø1"
380 ± 2 nm	10 ± 2 nm	25%	200 - 3000 nm	N/A	Ø1"

CWL <sub>a</sub>	FWHM <sub>b</sub>	T (Min) <sub>c</sub>	Blocking <sub>d</sub>	Laser Line	Size
390 ± 2 nm	10 ± 2 nm	30%	200 - 3000 nm	N/A	Ø1"

A. 中心波长 B.半高宽 C.峰值透过率 D.< 0.01% (< -40 dB)

### 400 - 490 nm 带通滤波片

CWL <sub>a</sub>	FWHM <sub>b</sub>	T (Min) <sub>c</sub>	Blocking <sub>d</sub>	Laser Line	Size
400 ± 2 nm	10 ± 2 nm	37%	200 - 3000 nm	N/A	Ø1"
400 ± 8 nm	40 ± 8 nm	45%	200 - 1150 nm	N/A	Ø1"
405 ± 2 nm	10 ± 2 nm	37%	200 - 3000 nm	N/A	Ø1"
410 ± 2 nm	10 ± 2 nm	40%	200 - 3000 nm	N/A	Ø1"
420 ± 2 nm	10 ± 2 nm	45%	200 - 3000 nm	N/A	Ø1"
430 ± 2 nm	10 ± 2 nm	45%	200 - 3000 nm	N/A	Ø1"
440 ± 2 nm	10 ± 2 nm	45%	200 - 3000 nm	N/A	Ø1"
441.6 ± 2 nm	10 ± 2 nm	60%	200 - 1150 nm	HeCd	Ø1"
450 ± 2 nm	10 ± 2 nm	45%	200 - 3000 nm	N/A	Ø1"
450 ± 8 nm	40 ± 8 nm	45%	200 - 1150 nm	N/A	Ø1"
457.9 ± 2 nm	10 ± 2 nm	65%	200 - 1150 nm	Argon	Ø1"
460 ± 2 nm	10 ± 2 nm	65%	200 - 1150 nm	Argon	Ø1"
460 ± 2 nm	10 ± 2 nm	45%	200 - 3000 nm	N/A	Ø1"
470 ± 2 nm	10 ± 2 nm	45%	200 - 3000 nm	N/A	Ø1"
480 ± 2 nm	10 ± 2 nm	45%	200 - 3000 nm	N/A	Ø1"
488 ± 0.2 nm	1 ± 0.2 nm	40%	200 - 1150 nm	Argon	Ø1"
488 ± 0.6 nm	3 ± 0.6 nm	45%	200 - 1150 nm	Argon	Ø1"
488 ± 2 nm	10 ± 2 nm	65%	200 - 1100 nm	Argon	Ø1/2"
488 ± 2 nm	10 ± 2 nm	65%	200 - 1150 nm	Argon	Ø1"
490 ± 2 nm	10 ± 2 nm	45%	200 - 3000 nm	N/A	Ø1"

### 500 - 590 nm 带通滤波片

CWL <sub>a</sub>	FWHM <sub>b</sub>	T (Min) <sub>c</sub>	Blocking <sub>d</sub>	Laser Line	Size
500 ± 2 nm	10 ± 2 nm	50%	200 - 1200 nm	N/A	Ø1"

CWL <sub>a</sub>	FWHM <sub>b</sub>	T (Min) <sub>c</sub>	Blocking <sub>d</sub>	Laser Line	Size
500 ± 8 nm	40 ± 8 nm	70%	200 - 1150 nm	N/A	Ø1"
508.5 ± 2 nm	10 ± 2 nm	65%	200 - 1150 nm	Argon	Ø1"
510 ± 2 nm	10 ± 2 nm	50%	200 - 3000 nm	N/A	Ø1"
514.5 ± 0.2 nm	1 ± 0.2 nm	45%	200 - 1100 nm	Argon	Ø1/2"
514.5 ± 0.2 nm	1 ± 0.2 nm	45%	200 - 1150 nm	Argon	Ø1"
514.5 ± 0.6 nm	3 ± 0.6 nm	55%	200 - 1150 nm	Argon	Ø1"
514.5 ± 2 nm	10 ± 2 nm	65%	200 - 1150 nm	Argon	Ø1"
520 ± 2 nm	10 ± 2 nm	50%	200 - 3000 nm	N/A	Ø1"
530 ± 2 nm	10 ± 2 nm	50%	200 - 3000 nm	N/A	Ø1"
532 ± 0.2 nm	1 ± 0.2 nm	40%	200 - 1100 nm	Nd:YAG	Ø1/2"
532 ± 0.2 nm	1 ± 0.2 nm	40%	200 - 1150 nm	Nd:YAG	Ø1"
532 ± 0.6 nm	3 ± 0.6 nm	60%	200 - 1150 nm	Nd:YAG	Ø1"
532 ± 2 nm	10 ± 2 nm	70%	200 - 1100 nm	Nd:YAG	Ø1/2"
532 ± 2 nm	10 ± 2 nm	70%	200 - 1150 nm	Nd:YAG	Ø1"
540 ± 2 nm	10 ± 2 nm	50%	200 - 3000 nm	N/A	Ø1"
543.5 ± 2 nm	10 ± 2 nm	70%	200 - 1150 nm	HeNe	Ø1"
550 ± 2 nm	10 ± 2 nm	50%	200 - 1200 nm	N/A	Ø1"
550 ± 8 nm	40 ± 8 nm	70%	200 - 1150 nm	N/A	Ø1"
560 ± 2 nm	10 ± 2 nm	50%	200 - 3000 nm	N/A	Ø1"
570 ± 2 nm	10 ± 2 nm	50%	200 - 3000 nm	N/A	Ø1"
580 ± 2 nm	10 ± 2 nm	50%	200 - 3000 nm	N/A	Ø1"
590 ± 2 nm	10 ± 2 nm	50%	200 - 3000 nm	N/A	Ø1"

### 600 - 694.3 nm 带通滤光片

CWL <sub>a</sub>	FWHM <sub>b</sub>	T (Min) <sub>c</sub>	Blocking <sub>d</sub>	Laser Line	Size
600 ± 2 nm	10 ± 2 nm	50%	200 - 1200 nm	N/A	Ø1"
600 ± 8 nm	40 ± 8 nm	70%	200 - 1150 nm	N/A	Ø1"
610 ± 2 nm	10 ± 2 nm	50%	200 - 3000 nm	N/A	Ø1"
620 ± 2 nm	10 ± 2 nm	50%	200 - 3000 nm	N/A	Ø1"
630 ± 2 nm	10 ± 2 nm	50%	200 - 3000 nm	N/A	Ø1"
632.8 ± 0.2 nm	1 ± 0.2 nm	50%	200 - 1100 nm	HeNe	Ø1/2"
632.8 ± 0.2 nm	1 ± 0.2 nm	50%	200 - 1150 nm	HeNe	Ø1"

CWLa	FWHMb	T (Min)c	Blockingd	Laser Line	Size
632.8 ± 0.6 nm	3 ± 0.6 nm	65%	200 - 1100 nm	HeNe	Ø1/2"
632.8 ± 0.6 nm	3 ± 0.6 nm	65%	200 - 1150 nm	HeNe	Ø1"
632.8 ± 2 nm	10 ± 2 nm	70%	200 - 1100 nm	HeNe	Ø1/2"
632.8 ± 2 nm	10 ± 2 nm	70%	200 - 1150 nm	HeNe	Ø1"
635 ± 2 nm	10 ± 2 nm	70%	200 - 1100 nm	Diode	Ø1/2"
635 ± 2 nm	10 ± 2 nm	70%	200 - 1150 nm	Diode	Ø1"
640 ± 2 nm	10 ± 2 nm	50%	200 - 1200 nm	N/A	Ø1"
647.1 ± 2 nm	10 ± 2 nm	70%	200 - 1150 nm	Krypton	Ø1"
650 ± 2 nm	10 ± 2 nm	50%	200 - 1200 nm	N/A	Ø1"
650 ± 8 nm	40 ± 8 nm	70%	200 - 1150 nm	N/A	Ø1"
660 ± 2 nm	10 ± 2 nm	50%	200 - 1200 nm	N/A	Ø1"
670 ± 2 nm	10 ± 2 nm	50%	200 - 1200 nm	N/A	Ø1"
670 ± 2 nm	10 ± 2 nm	70%	200 - 1150 nm	Diode	Ø1"
680 ± 2 nm	10 ± 2 nm	50%	200 - 1200 nm	N/A	Ø1"
690 ± 2 nm	10 ± 2 nm	50%	200 - 1200 nm	N/A	Ø1"
694.3 ± 2 nm	10 ± 2 nm	70%	200 - 1150 nm	Ruby	Ø1"

### 带通滤光片套件

带通滤光片套件中包含十个常用的Ø1 英寸已安装滤波片。滤波片外壳上标有中心波长、带通范围内的半高宽 (FWHM)、批号、和一个表示传输方向的箭头。滤波片有序存放在带有泡沫内衬的储物箱中，可以防止受到物理损伤。下表列出了各套件中包含的滤光片型号(和规格)。

Item #	Filter Included	Center		Filter Included	Center	
		Wavelength	FWHM		Wavelength	FWHM
VIS-10	350-10	350 ± 2 nm	10 ± 2 nm	400-10	400 ± 2 nm	10 ± 2 nm
	450-10	450 ± 2 nm	10 ± 2 nm	500-10	500 ± 2 nm	10 ± 2 nm
	550-10	550 ± 2 nm	10 ± 2 nm	600-10	600 ± 2 nm	10 ± 2 nm
	650-10	650 ± 2 nm	10 ± 2 nm	700-10	700 ± 2 nm	10 ± 2 nm
	750-10	750 ± 2 nm	10 ± 2 nm	800-10	800 ± 2 nm	10 ± 2 nm
VIS-40	400-40	400 ± 8 nm	40 ± 8 nm	450-40	450 ± 8 nm	40 ± 8 nm

Item #	Filter Included	Center		Filter Included	Center	
		Wavelength	FWHM		Wavelength	FWHM
	<b>500-40</b>	500 ± 8 nm	40 ± 8 nm	<b>550-40</b>	550 ± 8 nm	40 ± 8 nm
	<b>600-40</b>	600 ± 8 nm	40 ± 8 nm	<b>650-40</b>	650 ± 8 nm	40 ± 8 nm
	<b>700-40</b>	700 ± 8 nm	40 ± 8 nm	<b>750-40</b>	750 ± 8 nm	40 ± 8 nm
	<b>800-40</b>	800 ± 8 nm	40 ± 8 nm	<b>850-40</b>	850 ± 8 nm	40 ± 8 nm
IR-10	<b>850-10</b>	850 ± 2 nm	10 ± 2 nm	<b>900-10</b>	900 ± 2 nm	10 ± 2 nm
	<b>1000-10</b>	1000 ± 2 nm	10 ± 2 nm	<b>1100-10</b>	1100 ± 2 nm	10 ± 2 nm
	<b>1200-10</b>	1200 ± 2 nm	10 ± 2 nm	<b>1300-12</b>	1300 ± 2.4 nm	12 ± 2.4 nm
	<b>1400-12</b>	1400 ± 2.4 nm	12 ± 2.4 nm	<b>1500-12</b>	1500 ± 2.4 nm	12 ± 2.4 nm
	<b>1550-12</b>	1550 ± 2.4 nm	12 ± 2.4 nm	<b>1600-12</b>	1600 ± 2.4 nm	12 ± 2.4 nm