

Andover 中性密度滤光片



品牌：Andover

上海尖丰光电技术有限公司代理美国 Andover 厂家提供的中性密度滤光片可应用于宽带谱源的衰减器,也在光线平衡的反射镜中得到了很广泛的应用,还可以用作中性分光器。金属镀膜的中性滤光片可以通过在底层上镀金属膜来获得光学密度。吸收中性滤光片用 Schott NG 玻璃制作,由于玻璃的吸收率高,才使得我们得到理想中的衰减率。

一、中性密度滤光片

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1、金属镀膜型中性密度滤光片

金属镀膜型中性密度滤光片技术参数描述：

Thickness:	$1.5 \pm 0.5\text{mm}$
Dimensional Tolerances:	$+0/-0.2\text{mm}$



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Clear Aperture:	90% of outside dimension
Surface Quality:	80/50 per MIL-0-13830B
Coating Adherence:	Per MIL-M-13508C
Humidity:	Per MIL-STD-810F
Max. Operating Temperature:	+100°C
Substrate Materials:	Glass (350–2000nm region) or fused silica (250–2000nm region)
Optical Quality:	Glass: Flatness of 3–5 waves per inch and parallelism of 3 arc minutes or better. Fused Silica: Flatness of $\lambda/4$ per inch and parallelism of 30 arc seconds or better.
Mechanical:	Unmounted
Optional:	Mounted in threaded ring - see pg 60 for thread sizes

金属镀膜型中性密度滤光片技术参数描述：

Metallic Neutral Density Transmittance Specifications					
		Transmission Deviation From Normal			
Optical Density (OD)	Nominal Transmittance (%)	250nm to 350nm	350nm to 700nm	700nm to 800nm	800nm to 2000nm
0.10	79.49	± 8%	± 2%	± 2%	± 8%
0.15	70.79	± 7%	± 2%	± 2%	± 7%
0.20	63.10	± 6%	± 2%	± 2%	± 6%
0.30	50.12	± 5%	± 2%	± 2%	± 5%
0.40	39.81	± 4%	± 1.5%	± 1.5%	± 4%
0.50	31.62	± 4%	± 1.5%	± 1.5%	± 4%
0.60	25.12	± 4%	± 1.5%	± 1.5%	± 4%
0.70	19.95	± 4%	± 1.5%	± 1.5%	± 4%
0.80	15.85	± 4%	± 1.5%	± 1.5%	± 4%
0.90	12.59	± 3.5%	± 1.0%	± 1.0%	± 3.5%
1.00	10.00	± 3.5%	± 1.0%	± 1.0%	± 3.5%
1.30	05.01	± 3.0%	± 1.0%	± 1.0%	± 3.0%



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1.50	03.16	$\pm 1.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 1.5\%$
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金属镀膜型中性密度滤光片选型表：

UV-VIS-NIR ND filters (UV-VIS-ND 中性密度滤光片，熔融石英，250-2000nm)

Optical Density O.D.	Nominal Transmittance (%)	12.5mmØ	25mmØ	50mmØ	50mm x 50mm
0.10	79.43	010FN46-12.5	010FN46-25	010FN46-50	010FN46-50S
0.15	70.79	015FN46-12.5	015FN46-25	015FN46-50	015FN46-50S
0.20	63.10	020FN46-12.5	020FN46-25	020FN46-50	020FN46-50S
0.30	50.12	030FN46-12.5	030FN46-25	030FN46-50	030FN46-50S
0.40	39.81	040FN46-12.5	040FN46-25	040FN46-50	040FN46-50S
0.50	31.62	050FN46-12.5	050FN46-25	050FN46-50	050FN46-50S
0.60	25.12	060FN46-12.5	060FN46-25	060FN46-50	060FN46-50S
0.70	19.95	070FN46-12.5	070FN46-25	070FN46-50	070FN46-50S
0.80	15.85	080FN46-12.5	080FN46-25	080FN46-50	080FN46-50S
0.90	12.59	090FN46-12.5	090FN46-25	090FN46-50	090FN46-50S
1.00	10.00	100FN46-12.5	100FN46-25	100FN46-50	100FN46-50S
1.30	5.01	130FN46-12.5	130FN46-25	130FN46-50	130FN46-50S
1.50	3.16	150FN46-12.5	150FN46-25	150FN46-50	150FN46-50S
2.00	1.00	200FN46-12.5	200FN46-25	200FN46-50	200FN46-50S
2.50	0.32	250FN46-12.5	250FN46-25	250FN46-50	250FN46-50S
3.00	0.10	300FN46-12.5	300FN46-25	300FN46-50	300FN46-50S
4.00	0.01	400FN46-12.5	400FN46-25	400FN46-50	400FN46-50S

VIS-NIR ND filters (VIS-NIR 中性密度滤光片，玻璃基底，350-2000nm)

Optical Density O.D.	Nominal Transmission(%)	12.5mmØ	25mmØ	50mmØ	50mm x 50mm



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0.10	79.43	010FN52-12.5	010FN52-25	010FN52-50	010FN52-50S
0.15	70.79	015FN52-12.5	015FN52-25	015FN52-50	015FN52-50S
0.20	63.10	020FN52-12.5	020FN52-25	020FN52-50	020FN52-50S
0.30	50.12	030FN52-12.5	030FN52-25	030FN52-50	030FN52-50S
0.40	39.81	040FN52-12.5	040FN52-25	040FN52-50	040FN52-50S
0.50	31.62	050FN52-12.5	050FN52-25	050FN52-50	050FN52-50S
0.60	25.12	060FN52-12.5	060FN52-25	060FN52-50	060FN52-50S
0.70	19.95	070FN52-12.5	070FN52-25	070FN52-50	070FN52-50S
0.80	15.85	080FN52-12.5	080FN52-25	080FN52-50	080FN52-50S
0.90	12.59	090FN52-12.5	090FN52-25	090FN52-50	090FN52-50S
1.00	10.00	100FN52-12.5	100FN52-25	100FN52-50	100FN52-50S
1.30	5.01	130FN52-12.5	130FN52-25	130FN52-50	130FN52-50S
1.50	3.16	150FN52-12.5	150FN52-25	150FN52-50	150FN52-50S
2.00	1.00	200FN52-12.5	200FN52-25	200FN52-50	200FN52-50S
2.50	0.32	250FN52-12.5	250FN52-25	250FN52-50	250FN52-50S
3.00	0.10	300FN52-12.5	300FN52-25	300FN52-50	300FN52-50S
4.00	0.01	400FN52-12.5	400FN52-25	400FN52-50	400FN52-50S

2、吸收型中性密度滤光片

吸收型中性密度滤光片技术参数：

General Specifications	
Thickness:	4.0mm (maximum)
Dimensional Tolerances:	±0.5mm
Clear Aperture:	90% of diameter
Surface Quality:	60/40 Per MIL-0-13830B



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Max. operating temperature:	+100°C
Substrate Material:	Schott® absorption glass
Optical Quality:	Flatness of 3 to 5 waves per inch and parallelism of 3 arc minutes or better
Anti-Reflection Coatings	< or = .5% avg. per surface from 400nm to 700nm
Mechanical:	Not mounted in metal holder