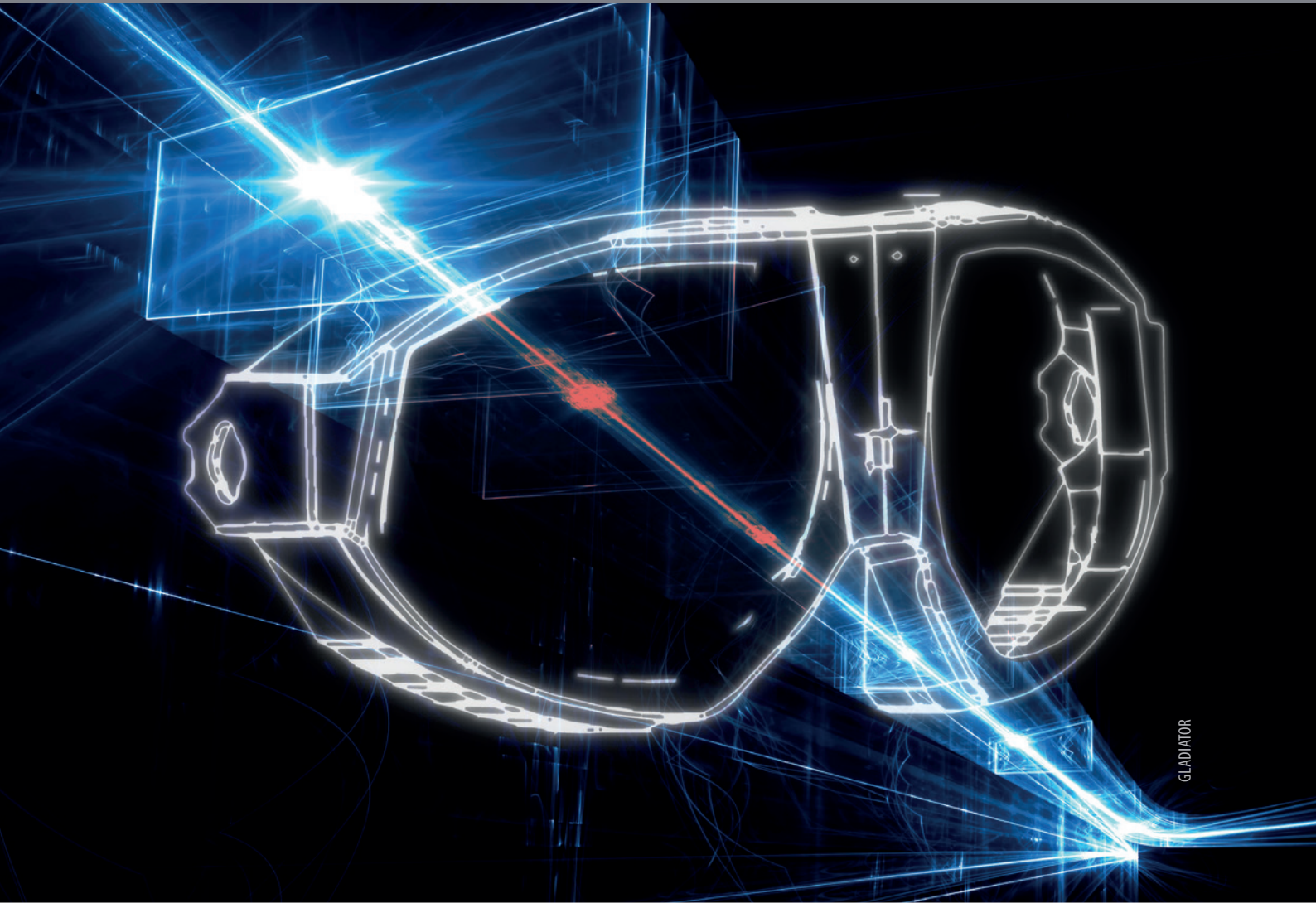


**PROTECT**<sup>®</sup>  
LASERSCHUTZ GMBH

Ihre Sicherheit. Unser Auftrag!  
Your Safety. Our Concern!



# 激光安全眼镜 工业与研发

Laser Safety Eyewear for  
Industry and R & D



## 最高技术标准的激光防护

PROTECT激光防护为研发应用提供专门定制的激光防护解决方案。庞大的产品组合涵盖了该领域的典型应用，例如UKP系统，例如UKP系统（例如Ti-Sa），OPA / OPO系统和超连续激光器。

PROTECT-Laserschutz的激光安全眼镜的特点是具有最高的激光防护等级，在从紫外线到VIS / NIR到IR的波长范围内具有最佳的VLT。我们的激光安全眼镜的特点是佩戴舒适度高，设计新颖。所有框架和镜片均已通过EN 207/208认证。

各种型号均提供诸如头带，提篮或校正衬套之类的选项。镜框上可以设计您公司的图标和颜色。

## Laser protection to the highest technical standard

PROTECT-Laserschutz offers specially adapted laser protection solutions for applications in research and development. The large product portfolio covers typical applications in this area, like UKP systems (for example Ti-Sa), OPA / OPO systems and supercontinuum lasers.

Laser safety eyewear from PROTECT-Laserschutz is characterized by technically highest possible laser protection levels, with an optimal VLT in the wavelength ranges, from UV to VIS / NIR to IR. Our laser safety eyewear is characterized by high wearing comfort and modern design. All frames and filters are certificated according to EN 207/208.

Options like headbands, carrying baskets or correction inserts are available on various models. Several frames can be customized with your company logo and color.

## 矿物质玻璃镜片的框架-也可提供经过认证的特殊塑料镜片 Frames for Mineral Glass Filters – also available with certified Special Plastic Filters



GLADIATOR <sup>1</sup>



RETRO



OPTIMATOR



SPECTOR <sup>1</sup>



STARLIGHT - EXTRA <sup>1\*</sup>



OVERSPEC II <sup>1</sup>

\* 镜片厚度最多只能达到3毫米  
\* Filter thickness only up to 3 mm possible

## 特殊塑料镜片的框架 | Frames for Special Plastic Filters



COMBOR



CONVEX



ONTOR <sup>1</sup>



OVERCOR



RONDOR



TERMINATOR



UNIVERSAL



ASTOR XL <sup>1</sup>

## 矿物玻璃镜片和介电层 | Mineral Glass Filters and Dielectric Coatings

Filter	特征	镜片防护等级 (EN 207, 208) <sup>2</sup>	OD Diagram	可用框架
0140	<b>过滤厚度:</b> 5.0 mm <sup>1</sup> <b>过滤色:</b> 浅灰 <b>材质:</b> 矿物玻璃 <b>VLT:</b> 70 % <sup>1</sup>	915 – 955 DIR LB5 (OD 5+) >955 – 1000 DIR LB6 (OD 6+) >1000 – 1025 DIR LB7 + M LB7Y (OD 7+) >1025 – 1400 D LB7 + IR LB8 + M LB8Y (OD 8+) >1400 – 2600 DI LB4 (OD 4+) >2600 – 2800 DI LB3 (OD 3+) >2800 – 3000 DI LB4 (OD 4+) >3000 – 4000 DI LB3 (OD 3+) >4000 – 9000 DI LB4 (OD 4+) >9000 – 11000 DI LB5 (OD 5+) PF CE		GLADIATOR <sup>3</sup> OVERSPEC II <sup>3</sup> RETRO SPECTOR <sup>3</sup>
	<b>Filter thickness:</b> 5.2 mm <sup>1</sup> <b>Filter color:</b> Orange <b>Material:</b> Mineral glass <b>VLT:</b> 40 % <sup>1</sup>	180 – 315 D LB10 + IR LB5 (OD 10+) >315 – 532 D LB7 + IR LB8 + M LB8Y (OD 8+) PF CE		GLADIATOR <sup>3</sup> OVERSPEC II <sup>3</sup> RETRO SPECTOR <sup>3</sup>
0153	<b>Filter thickness:</b> 3.9 mm <sup>1</sup> <b>Filter color:</b> Light gray <b>Material:</b> Mineral glass + Dielectric coating <b>VLT:</b> 58 % <sup>1</sup>	1025 – 1100 D LB8 + IR LB9 + M LB9Y (OD 9+) PF CE		GLADIATOR <sup>3</sup> OVERSPEC II <sup>3</sup> RETRO SPECTOR <sup>3</sup>
	<b>Filter thickness:</b> 5.4 mm <sup>1</sup> <b>Filter color:</b> Turquoise <b>Material:</b> Mineral glass <b>VLT:</b> 45 % <sup>1</sup>	625 – 645 DIRM LB2 (OD 2+) >645 – 660 DIRM LB3 (OD 3+) >660 – 675 DIRM LB4 (OD 4+) >675 – 690 DIRM LB5 (OD 5+) >690 – 700 DIRM LB6 (OD 6+) >700 – 750 DIR LB7 + M LB7Y (OD 7+) >750 – 1200 D LB7 + IR LB8 + M LB8Y (OD 8+) >1200 – 1240 DIR LB7 + M LB7Y (OD 7+) >1240 – 1285 DIRM LB6 (OD 6+) >1285 – 1340 DIRM LB5 (OD 5+) >1340 – 1400 DIRM LB4 (OD 4+) >1400 – 1480 DI LB3 (OD 3+) >1480 – 1590 DI LB2 (OD 2+) 9000 – 11000 DI LB5 (OD 5+) PF CE		GLADIATOR <sup>3</sup> OVERSPEC II <sup>3</sup> RETRO SPECTOR <sup>3</sup>
0159	<b>Filter thickness:</b> 3.7 mm <sup>1</sup> <b>Filter color:</b> Light gray <b>Material:</b> Mineral glass <b>VLT:</b> 90 % <sup>1</sup>	4750 – 11000 DI LB5 (OD 5+) PF CE		GLADIATOR <sup>3</sup> OVERSPEC II <sup>3</sup> RETRO SPECTOR <sup>3</sup>

<sup>1</sup> 实测值; 可能会有小的偏差 | <sup>1</sup> Measured value; small deviation possible; <sup>2</sup> 保护级别在框架中可能会略有不同 | <sup>2</sup> Protection levels can vary slightly in frames; <sup>3</sup> 适合作为护目镜 | <sup>3</sup> Suitable as over-glasses; *Abbildungen ähnlich* | pictures similar

# Mineralglasfilter und dielektrische Schichten | Mineral Glass Filters and Dielectric Coatings

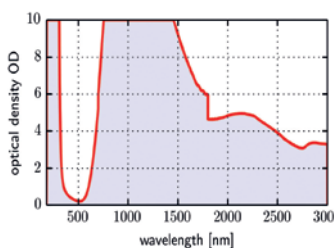




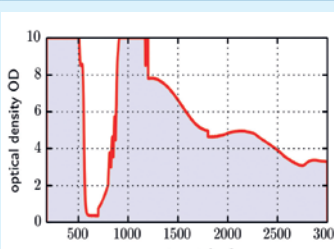


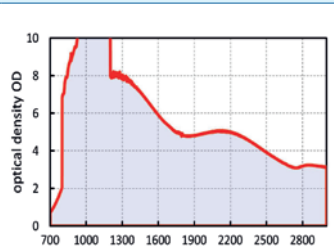



Filter	Characteristics	Protection Level of the Filter (EN 207, 208) <sup>2</sup>	OD Diagram	Available Frames	
0170	<b>Filter thickness:</b> 6.0 mm <sup>1</sup> <b>Filter color:</b> Blue-green <b>Material:</b> Mineral glass <b>VLT:</b> 15 % <sup>1</sup>	610 – 640 DIR LB2 (OD 2+) >640 – 670 DIR LB3 (OD 3+) >670 – 705 DIR LB4 (OD 4+) >705 – 745 DIR LB5 (OD 5+) >745 – 780 DIR LB6 (OD 6+) >780 – 840 DIR LB7 (OD 7+) >840 – 1200 D LB7 + IR LB8 (OD 8+) 900 – 1200 M LB8Y (OD 8+)		GLADIATOR <sup>3</sup> OVERSPEC II <sup>3</sup> RETRO SPECTOR <sup>3</sup>	
0216	<b>Filter thickness:</b> 5.0 mm <sup>1</sup> <b>Filter color:</b> Red <b>Material:</b> Mineral glass <b>VLT:</b> 7 % <sup>1</sup>	180 – 315 D LB10 + IR LB5 (OD 10+) >315 – 565 D LB6 + IR LB8 + M LB8Y (OD 8+) >565 – 585 D LB6 + IR LB7 + M LB7Y (OD 7+) >585 – 590 DIRM LB6 (OD 6+) >590 – 595 DIRM LB4 (OD 4+) >595 – 600 DIRM LB2 (OD 2+)		GLADIATOR <sup>3</sup> OVERSPEC II <sup>3</sup> RETRO SPECTOR <sup>3</sup>	
0226	<b>Filter thickness:</b> 5.6 mm <sup>1</sup> <b>Filter color:</b> Blue <b>Material:</b> Mineral glass <b>VLT:</b> 35 % <sup>1</sup>	610 – 628 DIRM LB2 (OD 2+) 629 – 643 DIRM LB3 (OD 3+) 644 – 656 DIRM LB4 (OD 4+) 657 – 668 DIRM LB5 (OD 5+) 669 – 679 DIRM LB6 (OD 6+) 680 – 689 DIRM LB7 (OD 7+) 690 – 699 DIR LB7 + M LB8Y (OD 8+) 700 – 1271 D LB7 + IR LB8 + M LB8Y (OD 8+) 1272 – 1308 DIR LB7 + M LB8Y (OD 8+) 1309 – 1346 DIRM LB7 (OD 7+) 1347 – 1391 DIRM LB6 (OD 6+) 1392 – 1399 DIRM LB5 (OD 5+) 1400 – 1444 DI LB5 + R LB4 (OD 5+) 1445 – 1506 DIR LB4 (OD 4+) 1507 – 1580 DIR LB3 (OD 3+) 1581 – 1690 DIR LB2 (OD 2+)		1691 – 1900 DIR LB1 (OD 1+) 2800 – 11000 DI LB4 (OD 4+) 1W 2*10E-4J 627 – 635 RB3 (OD 3+) PF CE	GLADIATOR <sup>3</sup> OVERSPEC II <sup>3</sup> RETRO SPECTOR <sup>3</sup>
0231	<b>Filter thickness:</b> 2 mm <sup>1</sup> <b>Filter color:</b> Blue <b>Material:</b> Mineral glass + Dielectric coating <b>VLT:</b> 48 % <sup>1</sup>	577 – 580 DIR LB4 (OD 4+) 580 – 585 DIR LB5 (OD 5+) >585 – 700 DIR LB6 (OD 6+) >700 – 704 DIR LB5 (OD 5+) PF CE		GLADIATOR <sup>3</sup> RETRO SPECTOR <sup>3</sup> STARLIGHT - Extra <sup>3</sup>	
0234	<b>Filter thickness:</b> 9 mm <sup>1</sup> <b>Filter color:</b> Turquoise <b>Material:</b> Mineral glass + Dielectric coating <b>VLT:</b> 25 % <sup>1</sup>	570 – 578 DIRM LB1 (OD 1+) >578 – 585 DIRM LB3 (OD 3+) >585 – 590 DIRM LB5 (OD 5+) >590 – 1000 DIRM LB6 (OD 6+) >1000 – 1030 DIRM LB7 (OD 7+) >1030 – 1400 D LB7 + IR LB8 + M LB8Y (OD 8+) >1400 – 11500 DI LB4 (OD 4+) >1400 – 2000 R LB3 (OD 3+) PF CE		GLADIATOR <sup>3</sup> SPECTOR <sup>3</sup>	

<sup>1</sup> 实测值; 可能有小的偏差 | <sup>1</sup> Measured value; small deviation possible; <sup>2</sup> 保护等级可能会略有不同 | <sup>2</sup> Protection levels can vary slightly in frames; <sup>3</sup> 适合作为护目镜 | <sup>3</sup> Suitable as over-glasses; 图片相似 | pictures similar

## 矿物玻璃镜片和介电层 | Mineral Glass Filters and Dielectric Coatings

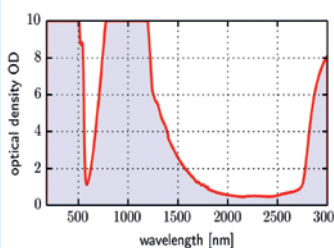


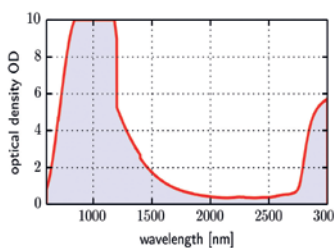



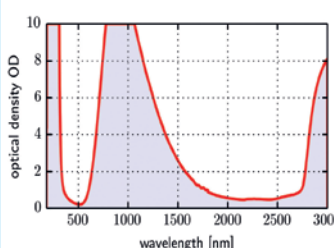

Filter	Characteristics	Protection Level of the Filter (EN 207, 208) <sup>2</sup>	OD Diagram	Available Frames	
0240	<b>Filter thickness:</b> 8.5 mm <sup>1</sup> <b>Filter color:</b> Amber <b>Material:</b> Mineral glass + Dielectric coating <b>VLT:</b> 30 % <sup>1</sup>	180–315 D LB10 + IR LB5 >315–532 D LB7 + IR LB8 + M LB8Y 800–820 DIR LB2 >820–840 DIR LB3 >840–860 DIR LB4 >860–900 DIR LB7 >900–1100 DR LB8 + I LB9 + M LB9Y >1100–1400 D LB7 + IR LB8 + M LB8Y >1400–3000 DIR LB4 4000–9000 DIR LB4 9000–11000 DI LB5 + R LB4 PF CE	(OD 10+) (OD 8+) (OD 2+) (OD 3+) (OD 4+) (OD 7+) (OD 9+) (OD 8+) (OD 4+) (OD 4+) (OD 5+)		GLADIATOR <sup>3</sup> SPECTOR <sup>3</sup>
0248	<b>Filter thickness:</b> 11 mm <sup>1</sup> <b>Filter color:</b> Multi-colored <b>Material:</b> Mineral glass + Dielectric coating <b>VLT:</b> 30 % <sup>1</sup>	180–315 D LB10 + IR LB5 + M LB6Y >315–465 D LB6 + IR LB7 + M LB7Y >465–470 D LB6 + IR LB7 + M LB7Y >470–475 DIRM LB6 >475–480 DIRM LB4 >480–484 DIRM LB3 >484–487 DIRM LB2 >487–494 DIRM LB1 608–620 DIRM LB1 >620–624 DIRM LB3 >624–629 DIRM LB4 >629–634 DIRM LB5 >634–640 DIRM LB6 >640–648 DIRM LB7	(OD 10+) (OD 7+) (OD 7+) (OD 6+) (OD 4+) (OD 3+) (OD 2+) (OD 1+) (OD 1+) (OD 3+) (OD 4+) (OD 5+) (OD 6+) (OD 7+)		GLADIATOR <sup>3</sup>
0261	<b>Filter thickness:</b> 4.4 mm <sup>1</sup> <b>Filter color:</b> Orange <b>Material:</b> Mineral glass <b>VLT:</b> 40 % <sup>1</sup>	180–315 D LB10 + IR LB5 + M LB6Y >315–518 D LB6 + I LB8 + R LB9 + M LB7Y >518–532 D LB6 + IR LB8 + M LB7Y PF CE	(OD 10+) (OD 9+) (OD 8+)		GLADIATOR <sup>3</sup> OVERSPEC II <sup>3</sup> RETRO SPECTOR <sup>3</sup> UNIVERSAL-kaschiert
0262	<b>Filter thickness:</b> 8.3 mm <sup>1</sup> <b>Filter color:</b> Red <b>Material:</b> Mineral glass <b>VLT:</b> 25 % <sup>1</sup>	180–315 D LB10 + IR LB5 + M LB6Y >315–518 D LB7 + I LB8 + R LB9 + M LB8Y >518–532 D LB7 + IR LB8 + M LB8Y 800–808 DIRM LB2 >808–843 DIRM LB3 >843–881 DIRM LB4 882–907 DIRM LB5 >907–1000 DIRM LB6 >1000–1005 DIRM LB7 >1005–1060 D LB7 + IRM LB8 >1060–1400 D LB7 + IRM LB9 >1400–9000 DI LB4 + R LB3Y 9000–11000 DI LB5 + R LB3Y PF CE	(OD 10+) (OD 9+) (OD 8+) (OD 2+) (OD 3+) (OD 4+) (OD 5+) (OD 6+) (OD 7+) (OD 8+) (OD 9+) (OD 4+) (OD 5+)		GLADIATOR <sup>3</sup> SPECTOR <sup>3</sup>

# Mineralglasfilter und dielektrische Schichten | Mineral Glass Filters and Dielectric Coatings

Filter	Characteristics	Protection Level of the Filter (EN 207, 208) <sup>2</sup>	OD Diagram	Available Frames	
0263	<b>Filter thickness:</b> 4.8 mm <sup>1</sup>	610 – 641 >641 – 666 >666 – 685 >685 – 703 >703 – 720 >720 – 735 >735 – 899	DIRM LB1 DIRM LB2 DIRM LB3 DIRM LB4 DIRM LB5 DIRM LB6 DIRM LB7	(OD 1+) (OD 2+) (OD 3+) (OD 4+) (OD 5+) (OD 6+) (OD 7+)	  GLADIATOR <sup>3</sup>  OVERSPEC <sup>3</sup>  RETRO  SPECTOR <sup>3</sup>
	<b>Filter color:</b> Blue	900 – 1100 1101 – 1400 >1400 – 2500 >2500 – 2777 >2777 – 3000 >3000 – 9000 >9000 – 11000	D LB7 + IRM LB9 DIRM LB6 DI LB4 + R LB3Y DI LB3 + R LB3Y DI LB4 + R LB3Y DI LB5 + R LB3Y DI LB5 + R LB3Y	(OD 9+) (OD 6+) (OD 4+) (OD 3+) (OD 4+) (OD 5+) (OD 5+)	
	<b>Material:</b> Mineral glass				
	<b>VLT:</b> 40 % <sup>1</sup>				
0264	<b>Filter thickness:</b> 7.9 mm <sup>1</sup>	180 – 315 >315 – 532 >532 – 535 >535 – 538 >538 – 540 >541 – 550 >550 – 553 >553 – 555 >555 – 558 >558 – 564 743 – 815 >815 – 848 >848 – 869 >869 – 892 >892 – 899 900 – 905 >905 – 943 >943 – 1084 >1084 – 1094	D LB10 + IR LB5 + M LB6Y D LB7 + I LB8 + R LB9 + M LB8Y DIRM LB7 DIRM LB6 DIRM LB5 DIRM LB4 DIRM LB3 DIRM LB2 DIRM LB1 DIRM LB1 DIRM LB2 DIRM LB3 DIRM LB4 DIRM LB5 DIRM LB7 DIRM LB8 D LB8 + IR LB9 + M LB10 DIRM LB8	(OD 10+) (OD 9+) (OD 8+) (OD 7+) (OD 6+) (OD 5+) (OD 4+) (OD 3+) (OD 2+) (OD 1+) (OD 1+) (OD 2+) (OD 3+) (OD 4+) (OD 5+) (OD 7+) (OD 8+) (OD 10+) (OD 8+)	  GLADIATOR <sup>3</sup>  SPECTOR <sup>3</sup>
	<b>Filter color:</b> Red				
	<b>Material:</b> Mineral glass + Dielectric coating				
	<b>VLT:</b> 30 % <sup>1</sup>				
0265	<b>Filter thickness:</b> 4.0 mm <sup>1</sup>	745 – 817 >817 – 845 >845 – 889 >889 – 899 >899 – 924 >924 – 939 >939 – 1085 >1085 – 1100 >1100 – 1185 >1185 – 1400 >1400 – 2292 >2292 – 2592 >2592 – 2725 >2725 – 3893	DIRM LB1 DIRM LB2 DIRM LB4 DIRM LB5 DIRM LB7 DIRM LB8 D LB8 + IR LB9 + M LB9 DIRM LB8 DIRM LB7 DIRM LB6 DI LB4 + R LB3Y DI LB3 + R LB3Y DIR LB2 DI LB3 + R LB3Y	(OD 1+) (OD 2+) (OD 4+) (OD 5+) (OD 7+) (OD 8+) (OD 9+) (OD 8+) (OD 7+) (OD 6+) (OD 4+) (OD 3+) (OD 2+) (OD 3+)	  GLADIATOR <sup>3</sup>  RETRO  SPECTOR <sup>3</sup>
	<b>Filter color:</b> Light gray				
	<b>Material:</b> Mineral glass + Dielectric coating				
	<b>VLT:</b> 60 % <sup>1</sup>				

<sup>1</sup> 实测值; 可能有小的偏差 | <sup>1</sup> Measured value; small deviation possible; <sup>2</sup> 保护等级可能会略有不同 | <sup>2</sup> Protection levels can vary slightly in frames; <sup>3</sup> 适合作为护目镜 | <sup>3</sup> Suitable as over-glasses; 图片相似 | pictures similar

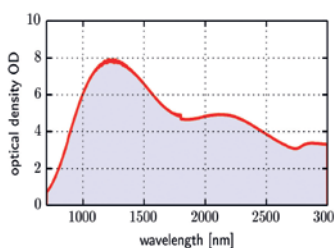





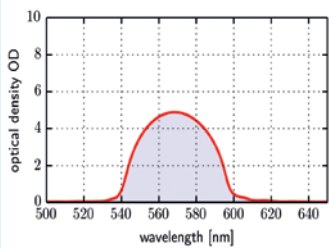

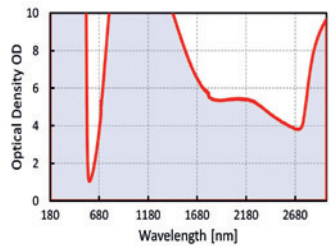

## 矿物玻璃镜片和介电层 | Mineral Glass Filters and Dielectric Coatings

Filter	Characteristics	Protection Level of the Filter (EN 207, 208) <sup>2</sup>	OD Diagram	Available Frames	
0266	<b>Filter</b>	180 – 315	D LB10 + IR LB5 + M LB6Y (OD 10+)		 
	<b>thickness:</b>	>315 – 520	D LB7 + I LB8 + R LB9 + M LB8Y (OD 9+)		
	<b>Filter color:</b>	>520 – 532	D LB7 + IR LB8 + M LB8Y (OD 8+)		
	Light brown	>532 – 550	DIRM LB5 (OD 5+)		
	<b>Material:</b>	>550 – 553	DIRM LB4 (OD 4+)		
	Mineral glass + Dielectric coating	>553 – 556	DIRM LB3 (OD 3+)		
	<b>VLT: 15 %<sup>1</sup></b>	>556 – 560	DIRM LB2 (OD 2+)		
		>560 – 565	DIRM LB1 (OD 1+)		
		615 – 647	DIRM LB1 (OD 1+)		
		>647 – 672	DIRM LB2 (OD 2+)		
		>672 – 693	DIRM LB3 (OD 3+)		
		>693 – 711	DIRM LB4 (OD 4+)		
		>711 – 731	DIRM LB5 (OD 5+)		
		>731 – 752	DIRM LB6 (OD 6+)		
		>752 – 772	DIRM LB7 (OD 7+)		
		>772 – 794	DIRM LB8 (OD 8+)		
	>794 – 1168	D LB8 + IR LB9 + M LB9Y (OD 9+)			
	>1168 – 1180	DIRM LB8 (OD 8+)			
		>1180 – 1195	DIRM LB7 (OD 7+)		
		>1195 – 1200	DIRM LB6 (OD 6+)		
		>1200 – 1218	DIRM LB6 (OD 6+)		
		>1218 – 1270	DIRM LB5 (OD 5+)		
		>1270 – 1326	DIRM LB4 (OD 4+)		
		>1326 – 1400	DIRM LB3 (OD 3+)		
		2850 – 9000	DI LB4 + R LB3Y (OD 4+)		
		>9000 – 11000	DI LB5 (OD 5+)		
			PF CE		
0267	<b>Filter</b>	614 – 648	DIRM LB1 (OD 1+)		  
	<b>thickness:</b>	>648 – 673	DIRM LB2 (OD 2+)		
	<b>Filter color:</b>	>673 – 696	DIRM LB3 (OD 3+)		
	Turquoise	>696 – 715	DIRM LB4 (OD 4+)		
	<b>Material:</b>	>715 – 735	DIRM LB5 (OD 5+)		
	Mineral glass + Dielectric coating	>735 – 750	DIRM LB6 (OD 6+)		
	<b>VLT: 50 %<sup>1</sup></b>	>750 – 773	DIRM LB7 (OD 7+)		
		>773 – 801	DIRM LB8 (OD 8+)		
		>801 – 1090	D LB8 + IR LB9 + M LB9Y (OD 9+)		
		>1090 – 1104	DIRM LB8 (OD 8+)		
		>1104 – 1134	DIRM LB7 (OD 7+)		
		>1134 – 1169	DIRM LB6 (OD 6+)		
		>1169 – 1200	DIRM LB5 (OD 5+)		
		1201 – 1225	DIRM LB5 (OD 5+)		
		1226 – 1276	DIRM LB4 (OD 4+)		
		1277 – 1360	DIRM LB3 (OD 3+)		
	1361 – 1400	DIRM LB2 (OD 2+)			
	2850 – 9000	DI LB4 + R LB3Y (OD 4+)			
	9000 – 11000	D LB4 + I LB5 + R LB3Y (OD 5+)			
		0.01 W 2x10E-6J	614 – 638 RB1		
		0.1 W 2xE-5J	644 – 665 RB2		
		1 W 5xE-4J	667 – 681 RB3		
		10 W 5xE-3J	689 – 693 RB4		
			PF CE		
0268	<b>Filter</b>	615 – 647	DIRM LB1 (OD 1+)		
	<b>thickness:</b>	>647 – 672	DIRM LB2 (OD 2+)		
	<b>Filter color:</b>	>672 – 693	DIRM LB3 (OD 3+)		
	Blue	>693 – 712	DIRM LB4 (OD 4+)		
	<b>Material:</b>	>712 – 732	DIRM LB5 (OD 5+)		
	Mineral glass	>732 – 752	DIRM LB6 (OD 6+)		
	<b>VLT: 52 %<sup>1</sup></b>	>752 – 773	DIRM LB7 (OD 7+)		
		>773 – 796	D LB7 + IRM LB8 (OD 8+)		
		>796 – 1025	D LB7 + IRM LB9 (OD 9+)		
		>1025 – 1074	D LB7 + IRM LB8 (OD 8+)		
		>1074 – 1124	DIRM LB6 (OD 6+)		
		>1124 – 1200	DIRM LB5 (OD 5+)		
		1201 – 1312	DIRM LB4 (OD 4+)		
		1313 – 1392	DIRM LB3 (OD 3+)		
		1393 – 1400	DIRM LB2 (OD 2+)		
		2900 – 9000	DI LB4 + R LB3Y (OD 4+)		
	>9000 – 11000	D LB4 + I LB5 + R LB3Y (OD 5+)			
			PF CE		

<sup>1</sup> 实测值; 可能会有小的偏差 | <sup>1</sup> Measured value; small deviation possible; <sup>2</sup> 保护级别在框架中可能会略有不同 | <sup>2</sup> Protection levels can vary slightly in frames; <sup>3</sup> 适合作为护目镜 | <sup>3</sup> Suitable as over-glasses; **Abbildungen ähnlich** | pictures similar

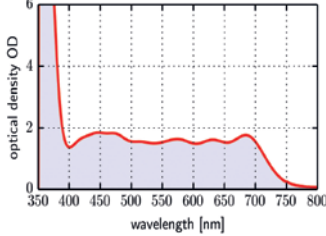





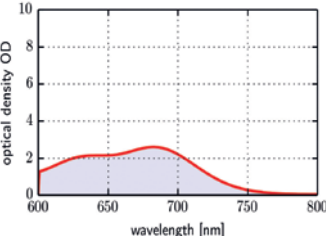





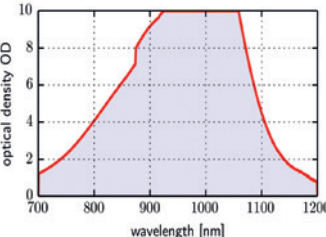


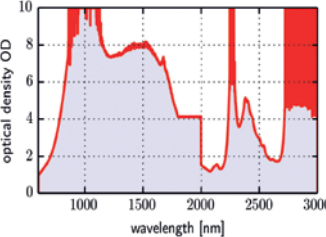








# Mineralglasfilter und dielektrische Schichten | Mineral Glass Filters and Dielectric Coatings

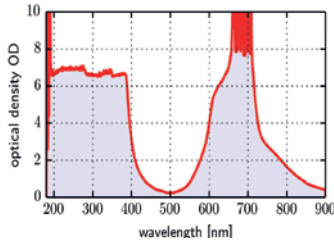

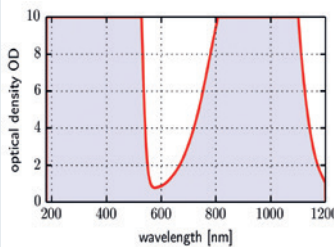

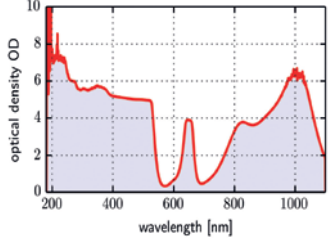

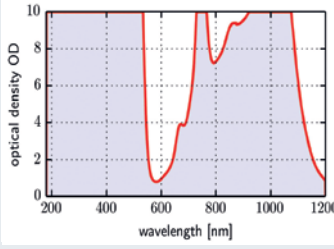
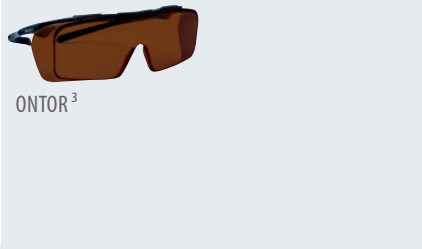
Filter	Characteristics	Protection Level of the Filter (EN 207, 208) <sup>2</sup>	OD Diagram	Available Frames	
0269	<b>Filter</b>	752 – 821	DIRM LB1 (OD 1+)		 GLADIATOR <sup>3</sup>  OVERSPEC II <sup>3</sup>  RETRO  SPECTOR <sup>3</sup>  STARLIGHT – Extra <sup>3</sup>
	<b>thickness:</b>	>821 – 877	DIRM LB2 (OD 2+)		
		>877 – 925	DIRM LB3 (OD 3+)		
	<b>Filter color:</b>	>925 – 955	DIRM LB4 (OD 4+)		
		>955 – 1046	DIRM LB5 (OD 5+)		
		>1046 – 1370	DI LB6 + RM LB6Y (OD 6+)		
	<b>Material:</b>	>1370 – 1400	DIRM LB5 (OD 5+)		
		>1400 – 2384	DI LB4 + R LB3Y (OD 4+)		
	<b>VLT: 76 %<sup>1</sup></b>	>2384 – 2661	DI LB3 + R LB3Y (OD 3+)		
		>2661 – 3000	DIR LB2 (OD 2+)		
		>3000 – 3299	DI LB3 + R LB3Y (OD 3+)		
		>3299 – 3861	DIR LB2 (OD 2+)		
		>3861 – 9000	DI LB3 + R LB3Y (OD 3+)		
		>9000 – 11000	DI LB4 + I LB5 + R LB3Y (OD 5+)		
		PF CE			
0270	<b>Filter</b>	559 – <562	DI LB1 (OD 1+)		 STARLIGHT <sup>3</sup>
	<b>thickness:</b>	562 – <566	DI LB2 (OD 2+)		
		566 – <572	DI LB3 (OD 3+)		
	<b>Filter color:</b>	572 – 583	DI LB4 (OD 4+)		
		>583 – 590	DI LB3 (OD 3+)		
	<b>Material:</b>	>590 – 594	DI LB2 (OD 2+)		
	>594 – 597	DI LB1 (OD 1+)			
	Mineral glass + Dielectric coating	PF CE			
<b>VLT: 50 %<sup>1</sup></b>					
0330	<b>Filter</b>	180 – 315	D LB10 + IR LB5 + M LB6Y (OD 10+)		 GLADIATOR <sup>3</sup>
	<b>thickness:</b>	>315 – 532	D LB7 + IR LB8 + M LB8Y (OD 8+)		
		>532 – 553	DIRM LB4 (OD 4+)		
	<b>Filter color:</b>	>553 – 555	DIRM LB3 (OD 3+)		
		>555 – 558	DIRM LB2 (OD 2+)		
		>558 – 564	DIRM LB1 (OD 1+)		
	<b>Material:</b>	615 – 647	DIRM LB1 (OD 1+)		
		>647 – 672	DIRM LB2 (OD 2+)		
		>672 – 693	DIRM LB3 (OD 3+)		
		>693 – 712	DIRM LB4 (OD 4+)		
	<b>VLT: 11 %<sup>1</sup></b>	>712 – 732	DIRM LB5 (OD 5+)		
		>732 – 752	DIRM LB6 (OD 6+)		
		>752 – 773	DIR LB7 + M LB7Y (OD 7+)		
		>773 – 796	D LB7 + IR LB8 + M LB7Y (OD 8+)		
		>796 – 905	D LB7 + IR LB9 + M LB7Y (OD 9+)		
		>905 – 1025	D LB8 + IR LB9 + M LB8Y (OD 9+)		
		>1025 – 1084	D LB8 + IR LB9 + M LB9Y (OD 9+)		
		>1084 – 1094	DIRM LB8 (OD 8+)		
		>1094 – 1100	DIRM LB7 (OD 7+)		
		>1100 – 1400	DIRM LB6 (OD 6+)		
		>1400 – 1807	DI LB4 (OD 4+)		
		>1807 – 2587	DI LB3 (OD 3+)		
		>2587 – 2713	DI LB2 (OD 2+)		
		>2713 – 2772	DI LB3 (OD 3+)		
		>2772 – 9000	DI LB4 (OD 4+)		
		>9000 – 11000	DI LB5 (OD 5+)		
		PF CE			

<sup>1</sup> 实测值; 可能有小的偏差 | <sup>1</sup> Measured value; small deviation possible; <sup>2</sup> 保护等级可能会略有不同 | <sup>2</sup> Protection levels can vary slightly in frames; <sup>3</sup> 适合作为护目镜 | <sup>3</sup> Suitable as over-glasses; 图片相似 | pictures similar

## 特殊塑料镜片 | Special Plastic Filters

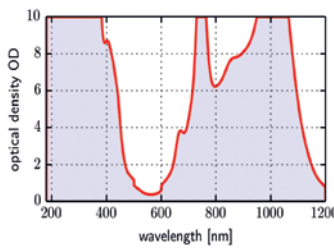


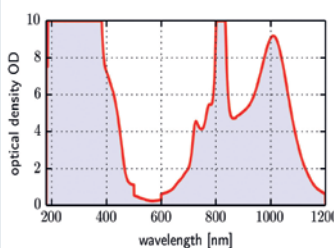






Filter	Characteristics	Protection Level of the Filter (EN 207, 208) <sup>2</sup>	OD Diagram	Available Frames
0156	<b>Filter thickness:</b> 1.5 mm <sup>1</sup> <b>Filter color:</b> Gray <b>Material:</b> Special plastic <b>VLT:</b> 3.5% <sup>1</sup>	0.01 W 2*E-6J 400 – 700 RB1 PF CE	(OD 1+) 	 GLADIATOR <sup>3</sup>  OVERSPEC II <sup>3</sup>  SPECTOR <sup>3</sup>  STARLIGHT <sup>3</sup>  UNIVERSAL
0195	<b>Filter thickness:</b> 3.0 mm <sup>1</sup> <b>Filter color:</b> Green <b>Material:</b> Special plastic <b>VLT:</b> 25% <sup>1</sup>	600 – 630 D LB1 > 630 – 700 D LB2 > 700 – 720 D LB1 0.1 W 2*E-5J 630 – 700 RB2 PF S CE	(OD 1+) (OD 2+) (OD 1+) (OD 2+) 	 GLADIATOR <sup>3</sup>  OVERSPEC II <sup>3</sup>  SPECTOR <sup>3</sup>  STARLIGHT <sup>3</sup>  UNIVERSAL
0201	<b>Filter thickness:</b> 5.5 mm <sup>1</sup> <b>Filter color:</b> Green <b>Material:</b> Special plastic <b>VLT:</b> 60% <sup>1</sup>	740 – 755 DIR LB1 + M LB1Y > 755 – 785 DIR LB2 + M LB2Y > 785 – 807 DIR LB3 + M LB3Y > 807 – 830 DIR LB4 + M LB4Y > 830 – 860 DIR LB5 + M LB5Y > 860 – 880 DIR LB6 + M LB5Y > 880 – 900 D LB6 + IR LB7 + M LB5Y > 900 – 1065 DR LB7 + I LB8 + M LB8Y > 1065 – 1070 DIR LB6 + M LB6Y > 1070 – 1080 DIR LB4 + M LB4Y > 1080 – 1100 DIR LB3 + M LB3Y PF S CE	(OD 1+) (OD 2+) (OD 3+) (OD 4+) (OD 5+) (OD 6+) (OD 7+) (OD 8+) (OD 6+) (OD 4+) (OD 3+)	  GLADIATOR <sup>3</sup>  SPECTOR <sup>3</sup>
0206	<b>Filter thickness:</b> 3.5 mm <sup>1</sup> <b>Filter color:</b> Green <b>Material:</b> Special plastic <b>VLT:</b> 20% <sup>1</sup>	315 – 450 D LB5 + IR LB6 > 450 – 465 DIR LB5 > 465 – 475 DIR LB4 > 475 – 480 DIR LB3 > 480 – 490 DIR LB2 > 490 – 500 DIR LB1 620 – 720 DIR LB1 > 720 – 760 DIR LB2 > 760 – 795 DIR LB3 > 795 – 820 DIR LB4 > 820 – 840 DIR LB5 > 840 – 860 DIR LB6 > 860 – 900 D LB6 + IR LB7 > 900 – 1100 D LB6 + IR LB8 > 1100 – 1125 D LB6 + IR LB7 > 1125 – 1165 DIR LB6 > 1165 – 1400 DIR LB5	(OD 6+) (OD 5+) (OD 4+) (OD 3+) (OD 2+) (OD 1+) (OD 1+) (OD 2+) (OD 3+) (OD 4+) (OD 5+) (OD 6+) (OD 7+) (OD 8+) (OD 7+) (OD 6+) (OD 6+) (OD 5+) (OD 5+) > 1400 – 1800 DI LB3 + M LB1 (OD 3+) 2250 – 2450 DI LB3 + M LB1 (OD 3+) 2750 – 3000 DI LB3 + M LB1 (OD 3+) PF CE	  GLADIATOR <sup>3</sup>  OVERSPEC II <sup>3</sup>  RETRO  SPECTOR <sup>3</sup>  STARLIGHT – Extra <sup>3</sup>  UNIVERSAL also coated available

# Kunststofffilter | Special Plastic Filters

Filter	Characteristics	Protection Level of the Filter (EN 207, 208) <sup>2</sup>	OD Diagram	Available Frames			
0235	<b>Filter thickness:</b> 2.0 mm <sup>1</sup>	180–315 > 315–385 560–580 > 580–595 > 595–605 > 605–615 > 615–640 > 640–660 > 660–705 > 705–710 > 710–715 > 715–720 > 720–730	D LB7 + IR LB4 DIR LB6 DIR LB1 DIR LB2 DIR LB3 DIR LB4 DIR LB5 DIR LB6 D LB6 + IR LB7 DIR LB6 DIR LB5 DIR LB4 DIR LB3	(OD 7+) (OD 6+) (OD 1+) (OD 2+) (OD 3+) (OD 4+) (OD 5+) (OD 6+) (OD 7+) (OD 6+) (OD 5+) (OD 4+) (OD 3+)	 		
	<b>Filter color:</b> Blue-green						
	<b>Material:</b> Special plastic						
	<b>VLT:</b> 20 % <sup>1</sup>						
				> 730–770 DIR LB2 (OD 2+) > 770–820 DIR LB1 (OD 1+) PF CE			
	0244	<b>Filter thickness:</b> 2.0 mm <sup>1</sup>	180 – 315 > 315 – 532 > 532 – 534 535 > 535 – 538 > 538 – 544 > 544 – 546 > 546 – 554 647 – 691 > 691 – 721 > 721 – 744 > 744 – 765 > 765 – 786 > 786 – <800 800 – 1068 900 – 1020 > 1020 – 1068 > 1068 – 1106	D LB10 + IR LB5 + M LB6Y D LB6 + IR LB8 + M LB7Y DIRM LB6 DIRM LB5 DIRM LB4 DIRM LB3 DIRM LB2 DIRM LB1 DIRM LB1 DIRM LB2 DIRM LB3 DIRM LB4 DIRM LB5 DIRM LB6 DM LB6 + IR LB7 D LB6 + IR LB8 + M LB7Y D LB6 + IR LB9 + M LB7Y DIRM LB6		(OD 10+) (OD 8+) (OD 6+) (OD 5+) (OD 4+) (OD 3+) (OD 2+) (OD 1+) (OD 1+) (OD 2+) (OD 3+) (OD 4+) (OD 5+) (OD 6+) (OD 7+) (OD 8+) (OD 9+) (OD 6+)	 
		<b>Filter color:</b> Brown					
		<b>Material:</b> Special plastic					
		<b>VLT:</b> 10 % <sup>1</sup>					
						> 1106 – 1114 DIRM LB5 (OD 5+) > 1114 – 1124 DIRM LB4 (OD 4+) > 1124 – 1137 DIRM LB3 (OD 3+) > 1137 – 1153 DIRM LB2 (OD 2+) > 1153 – 1184 DIRM LB1 (OD 1+) 9000 – 11000 DI LB3 (OD 3+) PF CE	
0249		<b>Filter thickness:</b> 2.0 mm <sup>1</sup>	180 – 315 > 315 – 532 > 532 – 535 > 535 – 542 > 542 – 552 605 – 629 > 629 – 635 > 635 – 660 800 – 928 > 928 – 1038 > 1038 – 1070	D LB8 + IR LB4 DIR LB4 + M LB4Y DIRM LB3 DIRM LB2 DIRM LB1 DIRM LB1 DIRM LB2 DIRM LB3 DIRM LB3 DIR LB3 + M LB4Y DIRM LB3	(OD 8+) (OD 4+) (OD 3+) (OD 2+) (OD 1+) (OD 1+) (OD 2+) (OD 3+) (OD 3+) (OD 4+) (OD 3+)	 	
		<b>Filter color:</b> Light-brown					
		<b>Material:</b> Special plastic					
		<b>VLT:</b> 18 % <sup>1</sup>					
					10 W 2x10E-3J 532 RB4 0.1 W 2x10E-5J 630 – 635 RB2 1 W 2x10E-4J 636 – 662 RB3 0.1 W 2x10E-5J 663 – 666 RB2 PF S CE		
	0273	<b>Filter thickness:</b> 2.0 mm <sup>1</sup>	180 – 315 > 315 – 532 533 – 538 539 – 542 543 – 545 546 – 550 551 – 558 622 – 648 649 – 660 661 – 696 697 – 711 712 – 719 720 – 722 723 – 734 735 – 770 771 – 815 816 – 825 826 – 839 840 – 1080 950 – 1065	D LB10 + IR LB5 + M LB6Y D LB6 + IR LB8 + M LB9 DIRM LB5 DIRM LB4 DIRM LB3 DIRM LB2 DIRM LB1 DIRM LB1 DIRM LB2 DIRM LB3 DIRM LB4 DIRM LB5 DIRM LB6 D LB6 + IR LB7 + M LB7Y D LB6 + IR LB8 + M LB7Y DIRM LB6 D LB6 + IRM LB7 D LB6 + IRM LB8 D LB6 + IRM LB8 D LB6 + IRM LB9	(OD 10+) (OD 9+) (OD 5+) (OD 4+) (OD 3+) (OD 2+) (OD 1+) (OD 1+) (OD 2+) (OD 3+) (OD 4+) (OD 5+) (OD 6+) (OD 7+) (OD 8+) (OD 6+) (OD 7+) (OD 8+) (OD 8+) (OD 8+) (OD 9+)		 
		<b>Filter color:</b> brown					
		<b>Material:</b> Special plastic					
		<b>VLT:</b> 15 % <sup>1</sup>					
					1099 – 1109 DIRM LB4 (OD 4+) 1110 – 1123 DIRM LB3 (OD 3+) 1124 – 1141 DIRM LB2 (OD 2+) 1142 – 1170 DIRM LB1 (OD 1+) 4785 – 5040 DI LB4 + R LB3Y (OD 4+) 5041 – 5150 DI LB3 + R LB3Y (OD 3+) 5151 – 11500 DI LB4 + R LB3Y (OD 4+) PF CE		

<sup>1</sup> Gemessener Wert; kleine Abweichungen möglich | <sup>1</sup> Measured value; small deviation possible; <sup>2</sup> Schutzstufen können in Gestellen leicht variieren | <sup>2</sup> Protection levels can vary slightly in frames; <sup>3</sup> Als Überbrille geeignet | <sup>3</sup> Suitable as over-glasses; Abbildungen ähnlich | pictures similar

## 特殊塑料镜片 | Special Plastic Filters

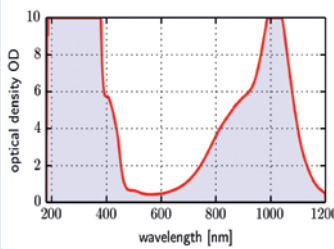

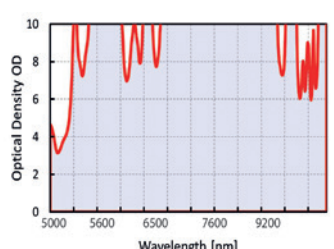

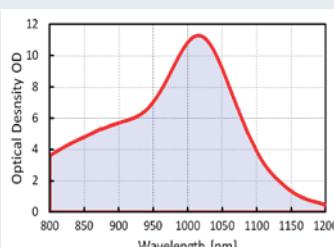




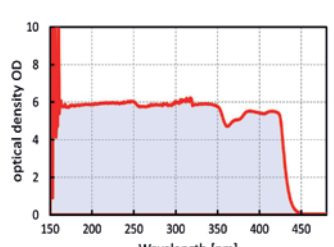

Filter	Characteristics	Protection Level of the Filter (EN 207, 208) <sup>2</sup>	OD Diagram	Available Frames	
0275	<b>Filter</b>	180 – 315	D LB10 + IR LB5 + M LB6Y (OD 10+)		 ONTOR <sup>3</sup>  TERMINATOR
	<b>thickness:</b>	> 315 – 380	D LB6 + IR LB8 + M LB7 (OD 8+)		
		> 380 – 436	DIRM LB6 (OD 6+)		
	<b>Filter color:</b>	437 – 448	DIRM LB4 (OD 4+)		
		449 – 462	DIRM LB2 (OD 2+)		
		463 – 489	DIRM LB1 (OD 1+)		
	<b>Material:</b>	624 – 650	DIRM LB1 (OD 1+)		
		651 – 699	DIRM LB2 (OD 2+)		
	<b>VLT: 30 %<sup>1</sup></b>	700 – 719	DIRM LB4 (OD 4+)		
		720 – 722	DIRM LB6 (OD 6+)		
		723 – 729	D LB6 + IRM LB8 (OD 8+)		
		730 – 765	D LB6 + IRM LB9 (OD 9+)		
		> 765 – 769	D LB6 + IRM LB8 (OD 8+)		
		> 769 – 820	DIRM LB5 (OD 5+)		
		> 820 – 920	DIRM LB6 (OD 6+)		
		> 920 – 1065	D LB6 + IRM LB9 (OD 9+)		
		910 – 1075	D LB6 + IRM LB8 (OD 8+)		
		1076 – 1085	DIRM LB6 (OD 6+)		
		1086 – 1106	DIRM LB4 (OD 4+)		
		1107 – 1138	DIRM LB2 (OD 2+)		
	1139 – 1167	DIRM LB1 (OD 1+)			
	5165 – 11500	DI LB4 + R LB3Y (OD 4+)			
	PF CE				
0276	<b>Filter</b>	180 – 315	D LB10 + IR LB5 + M LB6Y (OD 10+)		 ONTOR <sup>3</sup>  TERMINATOR
	<b>thickness:</b>	> 380 – 420	D LB5 + IRM LB6 (OD 6+)		
		> 420 – 429	DIRM LB5 (OD 5+)		
	<b>Filter color:</b>	> 429 – 441	DIRM LB4 (OD 4+)		
		> 441 – 450	DIRM LB3 (OD 3+)		
		> 450 – 458	DIRM LB2 (OD 2+)		
	<b>Material:</b>	> 458 – 460	DIRM LB1 (OD 1+)		
		663 – 705	DIRM LB1 (OD 1+)		
	<b>VLT: 46 %<sup>1</sup></b>	> 705 – 715	DIRM LB2 (OD 2+)		
		> 715 – 721	DIRM LB3 (OD 3+)		
		> 721 – 741	DIRM LB4 (OD 4+)		
		> 741 – 753	DIRM LB3 (OD 3+)		
		> 753 – 769	DIRM LB4 (OD 4+)		
		> 769 – 793	DIRM LB5 (OD 5+)		
		> 793 – 799	D LB5 + IRM LB6 (OD 6+)		
		800 – 835	D LB5 + IR LB7Y + M LB8Y (OD 8+)		
		> 835 – 840	D LB5 + IR LB7Y + M LB7 (OD 7+)		
		> 840 – 842	D LB5 + IRM LB6 (OD 6+)		
		> 842 – 849	DIRM LB5 (OD 5+)		
		> 849 – 910	DIRM LB4 (OD 4+)		
	> 910 – 949	DIRM LB5 (OD 5+)			
	950 – 1064	D LB5 + IRM LB6 (OD 6+)			
	970 – 1050	D LB5 + IR LB7Y + M LB7 (OD 7+)			
	> 1064 – 1066	DIRM LB5 (OD 5+)			
	> 1066 – 1077	DIRM LB4 (OD 4+)			
	> 1077 – 1091	DIRM LB3 (OD 3+)			
	> 1091 – 1110	DIRM LB2 (OD 2+)			
	> 1110 – 1141	DIRM LB1 (OD 1+)			
	> 5165 – 11500	DI LB4 + R LB3Y (OD 4+)			
	PF CE				
0277	<b>Filter</b>	180 – 315	D LB10 + IR LB5 + M LB6Y (OD 10+)		 COMBOR  ONTOR <sup>3</sup>  TERMINATOR  OPTIMATOR
	<b>thickness:</b>	> 315 – 532	D LB6 + IRM LB8 (OD 8+)		
		> 532 – 534	D LB6 + IRM LB7 (OD 7+)		
		> 534 – 536	DIRM LB6 (OD 6+)		
	<b>Filter color:</b>	> 536 – 538	DIRM LB5 (OD 5+)		
		> 538 – 540	DIRM LB4 (OD 4+)		
	<b>Material:</b>	> 540 – 542	DIRM LB3 (OD 3+)		
		> 542 – 544	DIRM LB2 (OD 2+)		
	<b>VLT: 42 %<sup>1</sup></b>	> 544 – 548	DIRM LB1 (OD 1+)		
		> 4000 – 4760	DIR LB2 (OD 2+)		
		> 4760 – 5170	DI LB3 + R LB3Y (OD 3+)		
		> 5170 – 11500	DI LB4 + R LB3Y (OD 4+)		
	PF CE				

# Kunststofffilter | Special Plastic Filters

Filter	Characteristics	Protection Level of the Filter (EN 207, 208) <sup>2</sup>	OD Diagram	Available Frames	
0278	<b>Filter thickness:</b> 2.0 mm <sup>1</sup>	180 – 315	D LB10 + IR LB5 + M LB6Y (OD 10+)		 COMBOR ONTOR <sup>3</sup>
	<b>Filter color:</b> Orange	>315 – 532	D LB6 + IR LB8 + M LB10 (OD 10+)		
	<b>Material:</b> Special plastic	533 – 534	D LB6 + IR LB7 (OD 7+)		
	<b>VLT:</b> 30 % <sup>1</sup>	>534 – 536	DIR LB6 (OD 6+)		
		>536 – 538	DIR LB5 (OD 5+)		
		>538 – 541	DIR LB4 (OD 4+)		
		>541 – 544	DIR LB3 (OD 3+)		
		>544 – 548	DIR LB2 (OD 2+)		
		>548 – 554	DIR LB1 (OD 1+)		
		682 – 727	DIR LB1 (OD 1+)		
		>727 – 759	DIR LB2 (OD 2+)		
		>759 – 785	DIR LB3 (OD 3+)		
		>785 – 799	DIR LB4 (OD 4+)		
		800 – 819	DIR LB4 (OD 4+)		
		>819 – 851	DIR LB5 (OD 5+)		
		>851 – 882	D LB6 + IRM LB7 (OD 7+)		
		>882 – 924	D LB6 + IRM LB8 (OD 8+)		
		>924 – 1070	D LB6 + IRM LB9 (OD 9+)		
		950 – 1065	D LB6 + IR LB9 + M LB10 (OD 10+)		
		>1071 – 1078	D LB6 + IRM LB8 (OD 8+)		
		PF CE			
		>1078 – 1080 D LB6 + IRM LB7 (OD 7+)			
		>1080 – 1082 DIR LB6 (OD 6+)			
		>1082 – 1085 DIR LB5 (OD 5+)			
		>1085 – 1101 DIR LB4 (OD 4+)			
		>1101 – 1117 DIR LB3 (OD 3+)			
		>1117 – 1133 DIR LB2 (OD 2+)			
		>1133 – 1164 DIR LB1 (OD 1+)			
		>5140 – 11500 DI LB4 + R LB3Y (OD 4+)			
		PF CE			
0279	<b>Filter thickness:</b> 2.0 mm <sup>1</sup>	180 – 315	D LB10 + IR LB5 + M LB6Y (OD 10+)		 ONTOR <sup>3</sup>
	<b>Filter color:</b> Purple	>315 – 380	DI LB6 + RM LB6Y (OD 6+)		
	<b>Material:</b> Special plastic	955 – 966	DIRM LB3 (OD 3+)		
	<b>VLT:</b> 40 % <sup>1</sup>	967 – 1070	DIRM LB5 (OD 5+)		
		980 – 1064	DI LB6 + RM LB6Y (OD 6+)		
	5160 – 11500	DI LB4 + R LB3Y (OD 4+)			
		PF CE			
0280	<b>Filter thickness:</b> 2.0 mm <sup>1</sup>	2750 – 3000	DI LB3 + R LB3Y (OD 3+)		 ONTOR <sup>3</sup>
	<b>Filter color:</b> Clear	5588 – 11500	DI LB3 + R LB3Y (OD 3+)		
	<b>Material:</b> Special plastic	PF CE			
	<b>VLT:</b> 93 % <sup>1</sup>				
0281	<b>Filter thickness:</b> 2.0 mm <sup>1</sup>	180 – 315	D LB10 + IR LB5 + M LB6Y (OD 10+)		 ONTOR <sup>3</sup>
	<b>Filter color:</b> Gray	>315 – 370	DIR LB6 + M LB6Y (OD 6+)		
	<b>Material:</b> Special plastic	371 – 373	DIRM LB5 (OD 5+)		
	<b>VLT:</b> 56 % <sup>1</sup>	374 – 376	DIRM LB4 (OD 4+)		
		377 – 378	DIRM LB3 (OD 3+)		
		379 – 382	DIRM LB2 (OD 2+)		
		383 – 387	DIRM LB1 (OD 1+)		
		>1400 – 1502	DIR LB1 (OD 1+)		
		1503 – 1651	DIR LB2 (OD 2+)		
		1652 – 1890	DI LB3 + R LB3Y (OD 3+)		
		1891 – 3000	DI LB4 + R LB3Y (OD 4+)		
		3001 – 4758	DI LB3 + R LB3Y (OD 3+)		
		4759 – 11000	DI LB4 + R LB3Y (OD 4+)		
			PF CE		

<sup>1</sup> Gemessener Wert; kleine Abweichungen möglich | <sup>1</sup> Measured value; small deviation possible; <sup>2</sup> Schutzstufen können in Gestellen leicht variieren | <sup>2</sup> Protection levels can vary slightly in frames; <sup>3</sup> Als Überbrille geeignet | <sup>3</sup> Suitable as over-glasses; Abbildungen ähnlich | pictures similar

## 特殊塑料镜片 | Special Plastic Filters




Filter	Characteristics	Protection Level of the Filter (EN 207, 208) <sup>2</sup>	OD Diagram	Available Frames		
0282	<b>Filter</b>	180 – 315	D LB10 + IR LB5 + M LB6Y (OD 10+)		 ONTOR <sup>3</sup>	
	<b>thickness:</b>	> 315 – 380	D LB6 + I LB7 + RM LB8 (OD 8+)			
		> 380 – 420	D LB5 + IRM LB6 (OD 6+)			
	<b>Filter color:</b>	421 – 438	DIRM LB4 (OD 4+)			
		439 – 451	DIRM LB2 (OD 2+)			
		452 – 461	DIRM LB1 (OD 1+)			
	<b>Material:</b>	695 – 740	DIRM LB1 (OD 1+)			
		741 – 804	DIRM LB2 (OD 2+)			
	<b>VLT:</b> 63 % <sup>1</sup>	805 – 840	DIRM LB4 (OD 4+)			
		> 840 – 890	DIRM LB5 (OD 5+)			
		> 890 – 940	DIRM LB6 (OD 6+)			
		> 940 – 1070	D LB6 + I LB7 + RM LB8 (OD 8+)			
		970 – 1065	D LB6 + I LB7 + R LB8 + M LB9 (OD 9+)			
		1071 – 1080	DIRM LB6 (OD 6+)			
		1081 – 1100	DIRM LB4 (OD 4+)			
		1101 – 1132	DIRM LB2 (OD 2+)			
	1133 – 1160	DIRM LB1 (OD 1+)				
	5170 – 11500	DI LB4 + R LB3Y (OD 4+)				
	PF CE					
0283	<b>Filter</b>	180 – 315	D LB10 + IR LB5 + M LB6Y (OD 10+)		 ONTOR <sup>3</sup>	
	<b>thickness:</b>	> 315 – 370	D LB6 + I LB7 + R LB8 + M LB7Y (OD 8+)			
	<b>Filter color:</b>	371 – 380	DIRM LB5 (OD 5+)			
		5145 – 11500	DI LB4 + R LB3Y (OD 4+)			
	Clear	PF CE				
	<b>Material:</b>	Special plastic				
	<b>VLT:</b> 90 % <sup>1</sup>					
0315	<b>Filter</b>	950 – < 970	DIR LB6 (OD 6+)		 COMBOR	
	<b>thickness:</b>	970 – 1064	D LB6 + IR LB7 (OD 7+)			 ONTOR <sup>3</sup>
		PF S CE				
	<b>Filter color:</b>	Green				 TERMINATOR
	<b>Material:</b>	Special plastic		 OPTIMATOR		
	<b>VLT:</b> 60 % <sup>1</sup>					
0327	<b>Filter</b>	180 – 315	D LB10 + IR LB4 + M LB5Y (OD 10+)		 ASTOR – XL <sup>3</sup>	
	<b>thickness:</b>	> 315 – 370	D LB6 + IR LB7 + M LB7Y (OD 7+)			
		> 370 – 380	DIR LB5 + M LB5Y (OD 5+)			
	<b>Filter color:</b>	Yellow				
	<b>Material:</b>	Special plastic				
	<b>VLT:</b> 85 % <sup>1</sup>					

# Kunststofffilter | Special Plastic Filters

Filter	Characteristics	Protection Level of the Filter (EN 207, 208) <sup>2</sup>	OD Diagram	Available Frames
0337	<b>Filter</b> <b>thickness:</b> 2.0 mm <sup>1</sup> <b>Filter color:</b> Purple <b>Material:</b> Special plastic <b>VLT:</b> appr. 10 % <sup>1</sup>	530 – 535 DIR LB2 (OD 2+) >535 – 565 DIR LB3 (OD 3+) >565 – 569 DIR LB4 (OD 4+) >569 – 572 D LB4 + IR LB5 (OD 5+) >572 – 580 D LB4 + IR LB6 (OD 6+) >580 – 600 D LB4 + IR LB7 (OD 7+) PF CE		 ONTOR <sup>3</sup>
0338	<b>Filter</b> <b>thickness:</b> 2.0 mm <sup>1</sup> <b>Filter color:</b> Green <b>Material:</b> Special plastic <b>VLT:</b> appr. 41 % <sup>1</sup>	610 – 625 DIRM LB1 (OD 1+) >625 – 629 DIRM LB2 (OD 2+) >629 – 635 DIRM LB3 (OD 3+) >635 – 640 DIRM LB4 (OD 4+) >640 – 643 DIRM LB6 (OD 6+) >643 – 658 D LB6 + IRM LB7 (OD 7+) >658 – 664 DIRM LB4 (OD 4+) >664 – 668 DIRM LB3 (OD 3+) >668 – 672 DIRM LB2 (OD 2+) >672 – 755 DIRM LB1 (OD 1+) >755 – 785 DIRM LB2 (OD 2+) >785 – 815 DIRM LB3 (OD 3+) >815 – 860 DIRM LB4 (OD 4+) >860 – 910 DIRM LB5 (OD 5+) >910 – 930 DIRM LB6 (OD 6+) >930 – 950 D LB6 + IRM LB7 (OD 7+) >950 – 1040 D LB6 + IM LB8 + R LB7 (OD 8+) >1041 – 1065 D LB6 + IRM LB7 (OD 7+) >1065 – 1073 DIRM LB6 (OD 6+) >1073 – 1083 DIRM LB5 (OD 5+) >1083 – 1095 DIRM LB4 (OD 4+) >1096 – 1100 DIRM LB3 (OD 3+) PF S CE		 ONTOR <sup>3</sup>
0340	<b>Filter</b> <b>thickness:</b> 2.0 mm <sup>1</sup> <b>Filter color:</b> Blue <b>Material:</b> Special plastic <b>VLT:</b> appr. 40 % <sup>1</sup>	585 – 605 DIR LB1 (OD 1+) >605 – 616 DIR LB2 (OD 2+) >616 – 621 DIR LB3 (OD 3+) >621 – 624 DIR LB4 (OD 4+) >624 – 666 D LB4 + IR LB5 (OD 5+) >666 – 680 DIR LB4 (OD 4+) >680 – 720 D LB4 + IR LB5 (OD 5+) PF CE		 ONTOR <sup>3</sup>
0342	<b>Filter</b> <b>thickness:</b> 2.0 mm <sup>1</sup> <b>Filter color:</b> Grey <b>Material:</b> Special plastic <b>VLT:</b> appr. 25 % <sup>1</sup>	180 – 315 D LB10 + IR LB5 + M LB6Y (OD 10+) 800 – 1000 DIR LB1 (OD 1+) >1000 – 1300 DIR LB2 (OD 2+) >1300 – 1400 DIR LB3 (OD 3+) >1400 – 1430 DIR LB3 (OD 3+) >1430 – 1530 DI LB4 + R LB3Y (OD 4+) >1530 – 3000 DI LB4 + R LB3Y (OD 4+) >3000 – 11500 DI LB4 + R LB3Y (OD 4+) PF S CE		 ONTOR <sup>3</sup>

<sup>1</sup> Gemessener Wert; kleine Abweichungen möglich | <sup>1</sup> Measured value; small deviation possible; <sup>2</sup> Schutzstufen können in Gestellen leicht variieren | <sup>2</sup> Protection levels can vary slightly in frames; <sup>3</sup> Als Überbrille geeignet | <sup>3</sup> Suitable as over-glasses; Abbildungen ähnlich | pictures similar

## 特殊塑料镜片 | Special Plastic Filters

Filter	Characteristics	Protection Level of the Filter (EN 207, 208) <sup>2</sup>	OD Diagram	Available Frames	
0345	<b>Filter</b>	180 – 315	D LB10 + IR LB5 + M LB6Y	OD 10+	 ONTOR <sup>3</sup>
	<b>thickness:</b>	> 315 – 465	D LB6 + IRM LB8	OD 8+	
	<b>2.0 mm<sup>1</sup></b>	> 465 – 472	D LB6 + IRM LB8	OD 8+	
	<b>Filter color:</b>	> 472 – 480	DIRM LB6	OD 6+	
	<b>dark green</b>	> 480 – 484	DIRM LB5	OD 5+	
	<b>Material:</b>	> 484 – 488	DIRM LB4	OD 4+	
	<b>Special plastic</b>	> 488 – 494	DIRM LB3	OD 3+	
	<b>VLT: 8%<sup>1</sup></b>	> 494 – 500	DIRM LB2	OD 2+	
		> 500 – 512	DIRM LB1	OD 1+	
		650 – 730	DIRM LB1	OD 1+	
		> 730 – 775	DIRM LB2	OD 2+	
		> 775 – 805	DIRM LB3	OD 3+	
		> 805 – 835	DIRM LB4	OD 4+	
		> 835 – 865	DIRM LB5	OD 5+	
		> 865 – 890	DIRM LB6	OD 6+	
		> 890 – 960	D LB6 + IRM LB7	OD 7+	
		> 960 – 1050	D LB6 + IRM LB8	OD 8+	
		> 1050 – 1100	D LB6 + IRM LB7	OD 7+	
		> 1100 – 1400	DIRM LB6	OD 6+	
		> 1400 – 1760	DI LB4 + R LB3Y	OD 4+	
		> 1760 – 1830	DI LB3 + R LB3Y	OD 3+	
	> 1830 – 1910	DI LB2 + R LB2Y	OD 2+		
	> 1910 – 2050	DI LB1 + R LB1Y	OD 1+		
	5200 – 11500	DI LB4 + R LB3Y	OD 4+		
	PF CE				
0368	<b>Filter</b>	180 – 315	D LB10 + IR LB5 + M LB6Y	OD 10+	 ONTOR <sup>3</sup>
	<b>thickness:</b>	> 315 – 460	D LB6 + I LB7 + R LB8 + M LB7Y	OD 8+	
	<b>2.0 mm<sup>1</sup></b>	> 460 – 465	D LB6 + I LB7 + R LB8 + M LB7Y	OD 8+	
	<b>Filter color:</b>	> 465 – 470	D LB6 + IR LB7 + M LB7Y	OD 7+	
	<b>yellow</b>	> 470 – 475	DIRM LB5	OD 5+	
	<b>Material:</b>	> 475 – 480	DIRM LB4	OD 4+	
	<b>Special plastic</b>	> 480 – 485	DIRM LB3	OD 3+	
	<b>VLT: 68%<sup>1</sup></b>	> 485 – 490	DIRM LB2	OD 2+	
		> 490 – 498	DIRM LB1	OD 1+	
		PF CE			
0377	<b>Filter</b>	180 – 315	D LB10 + IR LB5 + M LB6Y	OD 10+	 ONTOR <sup>3</sup>
	<b>thickness:</b>	315 – 380	D LB6 + I LB7 + R LB8 + M LB7Y	OD 8+	
	<b>2.0 mm<sup>1</sup></b>	380 – 390	DIRM LB5	OD 5+	
	<b>Filter color:</b>	390 – 398	DIRM LB4	OD 4+	
	<b>red</b>	398 – 412	DIRM LB3	OD 3+	
	<b>Material:</b>	412 – 427	DIRM LB4	OD 4+	
	<b>Special plastic</b>	427 – 440	DIRM LB5	OD 5+	
	<b>VLT: 6%<sup>1</sup></b>	440 – 465	DIRM LB6	OD 6+	
		465 – 488	DIM LB6 + R LB7	OD 7+	
		488 – 540	DIRM LB6	OD 6+	
		540 – 552	DIRM LB5	OD 5+	
		552 – 590	DIRM LB3	OD 3+	
		590 – 596	DIRM LB2	OD 2+	
		596 – 605	DIRM LB1	OD 1+	
		PF CE			



## 稳定的铝制储物盒 | Stable storage boxes made of aluminium



订单号。| Order No.: 900-VERP-ALU-S / 900-VERP-ALU

用于安全存放激光护目镜。可靠地防止机械影响和灰尘。

For safe storage of your laser safety goggles. Protects reliably against mechanical influences and dust.

有两种尺寸:

尺寸 **S** (B x H x T) 16 x 4,5 x 7,5 cm:

适用于RETRO, TERMINATOR等眼镜

尺寸 **XL** (B x H x T) 20 x 6,5 x 8,5 cm:

适用于GLADIATOR, SPECTOR等超大眼镜

**Available in two sizes:**

**Size S** (W x H x D) 16 x 4,5 x 7,5 cm:

für for eyewear like RETRO, TERMINATOR

**Size XL** (W x H x D) 20 x 6,5 x 8,5 cm: for

over-glasses like GLADIATOR, SPECTOR

## 大护目镜收纳盒 | Storage box for large spectacles



Bestell-Nr. | Order No.: 900-VERP-HART-XL-50

**功能:**

- 坚固的盒子可安全存放眼镜
- 有两种不同尺寸
- 都衬有天鹅绒
- 带拉链

**Features:**

- our solid box attends to secure storage of your large spectacles
- available in two sizes
- both with soft insert
- with zipper

## 校正插入 | Correction inserts



Beispiel für RETRO | Example for RETRO

Bestell-Nr. | Order No.: 590-KOR-RETR-CLIPIN

我们为TERMINATOR, TERMINATOR Plus和RETRO镜架提供校正衬套。插件可以立即安装。校正插入物必须由眼镜师调整

We offer correction inserts for our frames TERMINATOR, TERMINATOR Plus and RETRO. The inserts can be attached in no time at all. The correction insert must be adjusted by an optician.

**交货期:**

盲玻璃, 也可根据要求提供校正值

**Delivery:**

blind glazed, on demand also shippable with correction glasses

## GLADIATOR的头带和橡胶唇 | Headband & rubber lip for GLADIATOR



Bestell-Nr. | Order No.: 900-GLAD-SET

使用GLADIATOR型号时, 头带和蓝色橡胶唇均可轻松更换. 并且更换时易于处理。

In the GLADIATOR model, both the headgear and the blue rubber lip can be easily replaced. Easy handling when replacing.

## 不同框架的头部支撑架 | Head support system for different frames



Bestell-Nr. | Order No.: 900-GLAD-HEAD

黑色头架是可选的，可以使用常规头带。它为片状滤波片提供了舒适的佩戴舒适性，并且可以单独调节。

**适用于框架：**  
GLADIATOR, UNIVERSAL, CONVEX

The black head holder is optional for the regular headband can be used. It provides pleasant wearing comfort for sheet filters and is individually adjustable.

**Available for the frames:**  
GLADIATOR, UNIVERSAL, CONVEX

## 清洁站 | Cleaning station



Bestell-Nr. | Order No.: 900-ZUBE-R01

可提供立即进行专业清洁激光防护眼镜所需的一切。

**清洁站包含：**

- 可上锁的墙壁外壳
- (高45厘米x宽29厘米x深9厘米)
- 大约 0.5升清洁液+2包无硅纸，每包约700张
- 1个喷雾泵

Everything you need for the professional cleaning of your laser protection glasses immediately at hand.

**The cleaning station consists of:**

- Lockable wall housing (45 cm x 29 cm x 9 cm)
- Approx. 0.5 l cleaning liquid + 2 packs of silicone free paper apiece approx. 700 sheets
- 1 spraying pump

## 眼镜绳 | Spectacle cord



Bestell-Nr. | Order No.: 900-ZUBE-R04

可调节的眼镜线适用所有玻璃和塑料激光安全眼镜的固定安装。只需将弹性环推过杆的两端并锁定在那里。

材质：纺织  
标准颜色：黑色

The adjustable spectacle cord is suitable for the secure fit of all glass and plastic laser safety spectacles. The elastic loops are simply pushed over the temple ends and locked there.

**Material:** Textile  
**Standard color:** black

## 清洁喷雾 | Cleaning Liquid



Bestell-Nr. | Order No.: 900-ZUBE-R023

我们的清洁喷雾剂可用于专业清洁所有矿物玻璃和塑料滤波片。它可防止滤波片起雾，具有抗静电作用，不含硅酮，不含酒精且不含推进剂气体。

容量：约30毫升

Our cleaning spray can be used for professional cleaning of all mineral glass and plastic filters. It prevents fogging of the filter, is antistatic, silicone-free, alcohol-free and without propellant gases.

**Volume:** approx. 30 ml

## 眼镜清洁布 (10件) | Eyewear cleaning cloths (10 pieces)



Bestell-Nr. | Order No.: 900-ZUBE-R03-10

我们的黑色超细纤维眼镜清洁布可用于清洁所有矿物玻璃和塑料镜片。根据需求也可用您的公司的图标对清洁布进行个性化设置

尺寸: 15 x 18 cm

Our eyeglass cleaning cloths made of black microfibre fabric can be used to clean all mineral glass and plastic filters. On request, the cloths can also be personalised with your company logo.

Size: 15 x 18 cm

## 超细纤维袋 | Microfiber pouch



Bestell-Nr. | Order No.: 900-VERP-MICRO-01 (schwarz | black)  
900-VERP-MICRO-02 (weiß | white)

用于安全、无尘地存放太阳眼镜。可以用拉绳安全地封口。颜色: 黑色, 白色

尺寸 19 x 10,5 cm

For safe and dust-free storage of your spectacles. Securely lockable by the tieback. Colors: black, white

Size: 19 x 10,5 cm

## 定制解决方案 | Customized solutions



我们坚固的塑料储物盒, 眼镜清洁布和激光安全眼镜本身都可以使用您的公司徽标进行个性化设置。我们很乐意为您提供个别建议。

Both our sturdy plastic storage boxes, our eyeglass cleaning cloths as well as the laser safety glasses themselves can be personalised with your company logo. We will gladly consult you individually.

根据OStrV, TROS的激光防护研讨会获得认可

成功完成考试后, 您便可以执行激光防护人员的职责。如果公司使用3级4级激光器, 则根据OStrV光辐射条例依法确定必须任命具有适当专业知识的激光保护人员。需要完整的技术, 科学, 医学或美容专业培训, 以及至少两年的公司专业经验。(TROS激光辐射部分通则2015 (版本))

讲授了物理参数和属性, 人员危险因素, 激光安全和防护, 激光防护人员的任务以及法律基础和技术规则。该课程是与工业或医学相关的应用程序进行的。可以单独安排。

## Laser safety seminar according to OStrV, TROS, approved

Successful completion of the examination entitles you to assume the function of laser safety officer. If companies operate class 3 or 4 lasers, the OStrV optical radiation ordinance stipulates that a laser safety officer with the appropriate specialist knowledge must be appointed.

A completed technical, scientific, medical or cosmetic vocational training and at least two years of professional experience in the company are required. (TROS laser radiation part general chapter 2015 (version))

Physical quantities and properties, risk factors for humans, laser safety and protection, the tasks of the laser safety officer, as well as legal basics and rules of technology are taught.

The course is application-related for industry or medicine.

Appointments can be arranged individually.



您的安全。我们的使命！  
您的安全。我们的关注！



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