

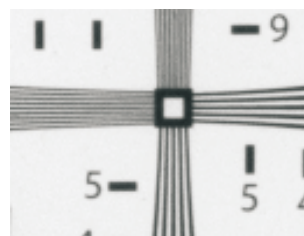
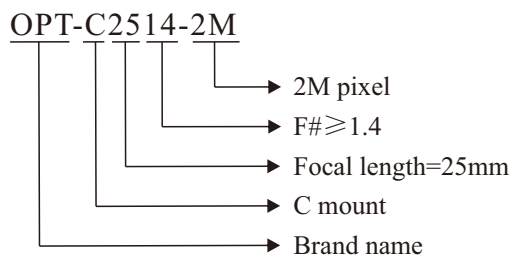
2MP Fixed Focal Length Lenses



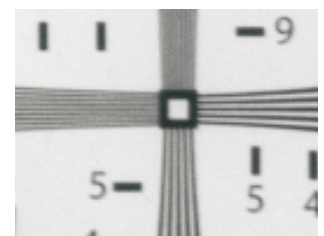
Product Features

- 1** Professional design and stable quality
Using high standard optical technology to realize perfect optical performance
 - 2** High resolution
Compatible to most 2MP industrial cameras, suitable for cameras with pixel size $\geq 5.5\mu\text{m}$, max compatible to 2/3" sensor^[1], resolution up to 100lp/mm
 - 3** High uniformity
Can obtain clear uniform images due to our anti-shading technologies
- [1]: OPT-C0420-2M & OPT-C0620-2M max compatible to 1/2" sensor

Selection Guide



Picture taken via OPT-C2514-2M

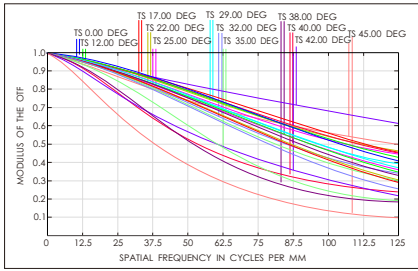


Picture taken via other lens

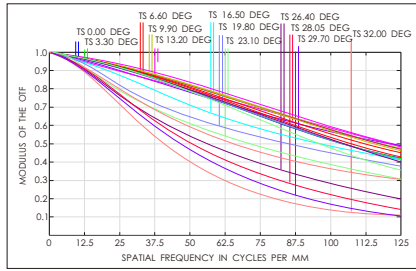
Application Examples

<p>Motor burr inspection</p> <p>OPT-C2514-2M Other lens</p>		<p>Detection for copper shit on PCB</p> <p>OPT-C2514-2M Other lens</p>		<p>Application cases in different industries</p> <p>PCB soldering inspection</p> <p>OCR for plastic parts</p> <p>Lenses on plate inspection</p> <p>Connector pins inspection</p>	
<p>Result: under the same condition, OPT-C2514-2M provides an image with sharper edge and higher resolution</p>					

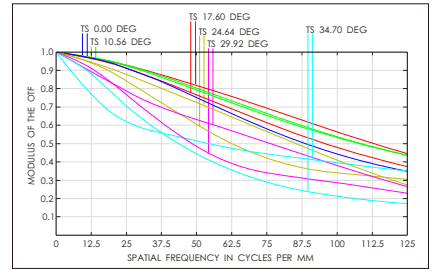
MTF Drawings



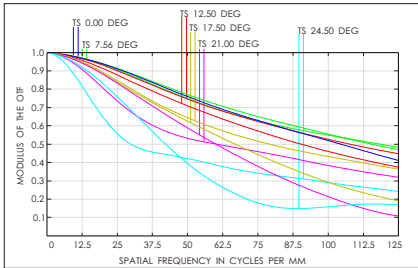
OPT-C0420-2M



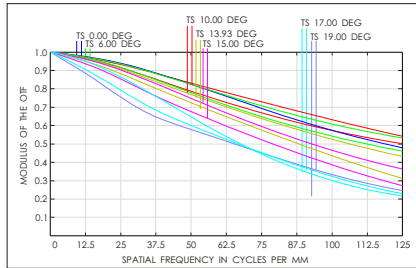
OPT-C0620-2M



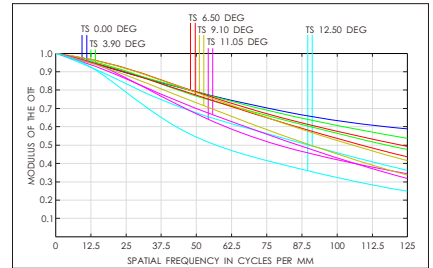
OPT-C0814-2M



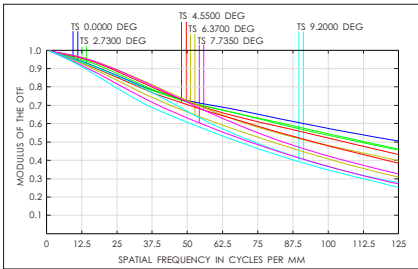
OPT-C1214-2M



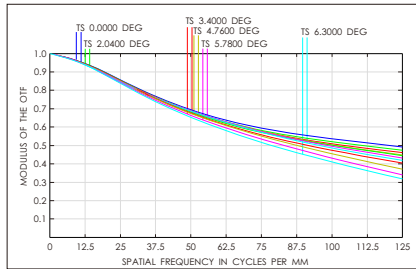
OPT-C1614-2M



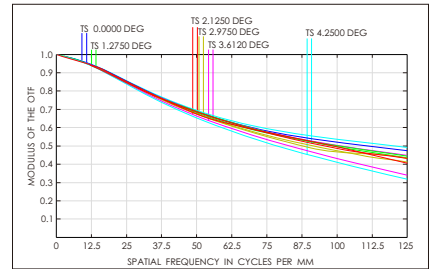
OPT-C2514-2M



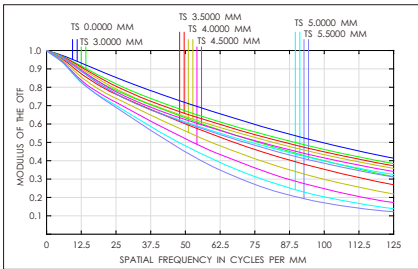
OPT-C3516-2M



OPT-C5024-2M



OPT-C7528-2M

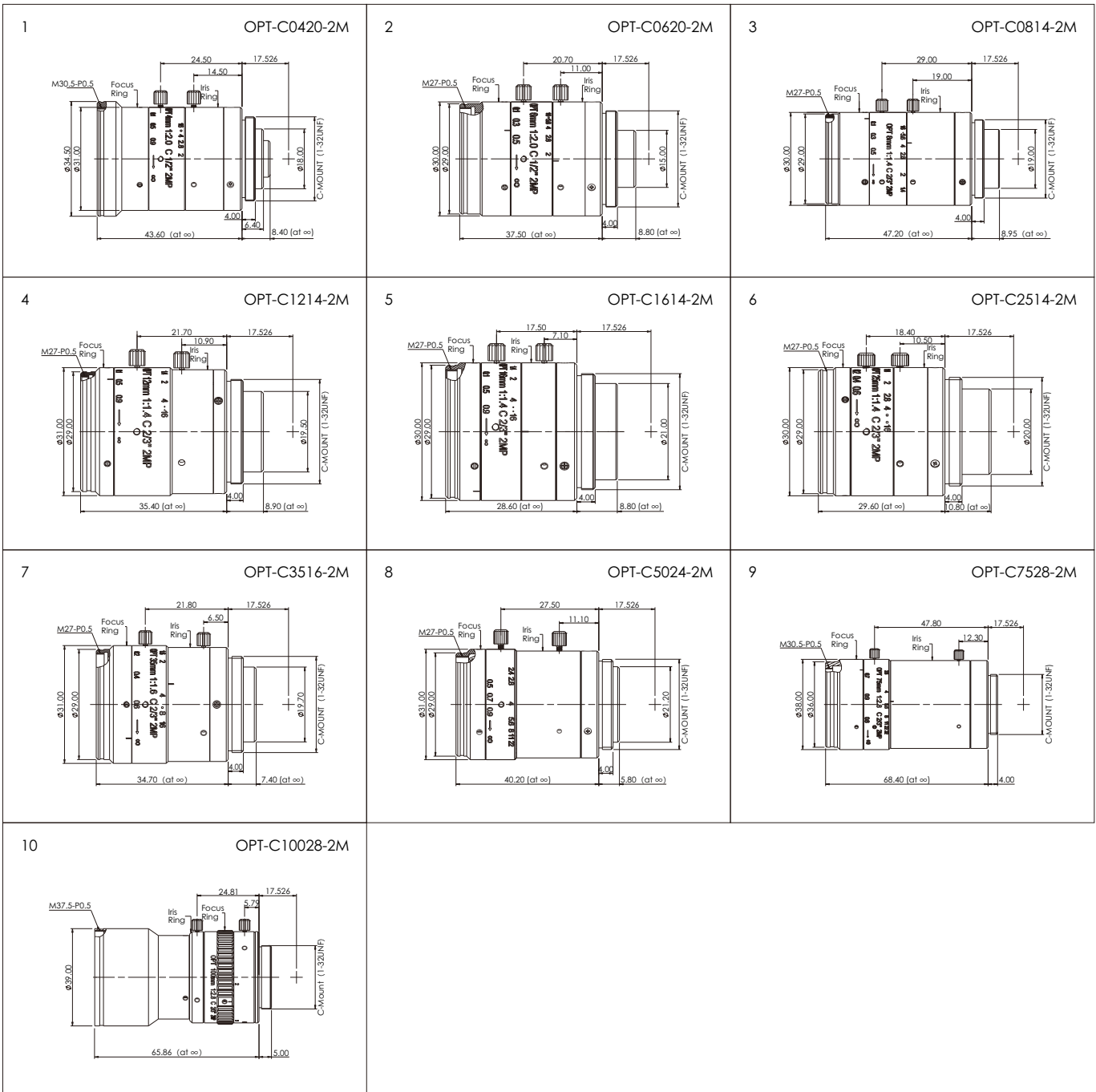


OPT-C10028-2M

Model Table

No.	Model	Focal length (mm)	Aperture range	WD (mm)	Filter thread (mm)	Distortion	Weight (kg)	Matching sensor format	FOV angle (horizontal - vertical - across)		
1	OPT-C0420-2M	4	2.0~16	100-∞	M30.5*P0.5	<1.6%	0.08	1/3"	62.2°	48.6°	74.0°
								1/2.5"	71.4°	56.3°	83.7°
								1/2"	76.2°	61.6°	89.0°
2	OPT-C0620-2M	6	2.0~16	100-∞	M27*P0.5	<1.2%	0.06	1/3"	42.4°	32.1°	51.5°
								1/2.5"	49.0°	37.4°	59.2°
								1/2"	52.8°	40.6°	64°
3	OPT-C0814-2M	8	1.4~16	100-∞	M27*P0.5	<0.8%	0.07	1/3"	33.8°	24.7°	41.0°
								1/2.5"	38.3°	29.0°	46.8°
								1/1.8"	47.5°	36.9°	57.8°
								2/3"	55.4°	47.1°	68.6°
4	OPT-C1214-2M	12	1.4~16	100-∞	M27*P0.5	<0.9%	0.06	1/3"	23.0°	17.3°	28.6°
								1/2.5"	27.4°	20.4°	33.7°
								1/1.8"	34.2°	26.2°	42.2°
								2/3"	40.1°	33.7°	50.7°
5	OPT-C1614-2M	16	1.4~16	100-∞	M27*P0.5	<0.8%	0.05	1/3"	17.6°	13.3°	21.9°
								1/2.5"	20.8°	15.7°	25.9°
								1/1.8"	26.2°	20.0°	32.5°
								2/3"	30.8°	25.8°	39.4°
6	OPT-C2514-2M	25	1.4~16	180-∞	M27*P0.5	<0.45%	0.05	1/3"	11.3°	7.7°	13.6°
								1/2.5"	13.4°	10.1°	16.8°
								1/1.8"	16.8°	12.8°	21.0°
								2/3"	20.0°	16.8°	25.9°
7	OPT-C3516-2M	35	1.6~16	250-∞	M27*P0.5	<0.25%	0.05	1/3"	7.3°	6.0°	9.4°
								1/2.5"	9.6°	7.2°	11.9°
								1/1.8"	12.0°	9.0°	15.0°
								2/3"	14.1°	11.8°	18.3°
8	OPT-C5024-2M	50	2.4~22	500-∞	M27*P0.5	<0.1%	0.06	1/3"	5.4°	3.9°	6.6°
								1/2.5"	6.3°	4.7°	7.9°
								1/1.8"	7.9°	6.0°	9.9°
								2/3"	9.6°	8.0°	12.5°
9	OPT-C7528-2M	75	2.8~32	700-∞	M30.5*P0.5	<0.02%	0.16	1/3"	3.2°	2.4°	3.9°
								1/2.5"	3.9°	2.9°	4.8°
								1/1.8"	4.7°	3.6°	5.9°
								2/3"	5.7°	4.9°	7.5°
10	OPT-C10028-2M	100	2.8~32	2700-∞	M37.5*P0.5	<0.05%	0.13	1/3"	2.0°	1.5°	2.5°
								1/2.5"	2.4°	1.8°	3.0°
								1/1.8"	3.0°	2.3°	3.7°
								2/3"	3.7°	2.8°	4.6°

Dimensional Drawings [mm]



Selection Guide of Extension Tube for 2MP Lenses

Extension tube	Model	OPT-C0420-2M		OPT-C0620-2M		OPT-C0814-2M		OPT-C1214-2M		OPT-C1614-2M	
	WD of lens	0.1m~∞		0.1m~∞		0.1m~∞		0.1m~∞		0.1mm~∞	
0mm	WD(mm)	100		100		100		100		100	
	1/3"	128.0×96.0		80.7×60.5		61.4×46.0		45.1×33.8		32.4×24.3	
	1/2.5"	153.6×113.4		96.8×72.1		73.7×54.9		54.1×40.3		38.8×28.9	
	1/1.8"	-		-		91.8×68.0		67.4×49.9		48.4×35.9	
	2/3"	-		-		112.5×84.4		82.6×62.0		59.3×44.5	
	Mag.	0.0375x		0.0595x		0.0782x		0.1065x		0.1483x	
0.5mm	WD(mm)	9	21	26	41	41	56	62	76	75	85
	1/3"	24.0×18.0	38.4×28.8	28.5×21.4	40.7×30.5	30.1×22.5	39.3×29.5	29.8×22.4	35.3×26.5	25.4×19.0	28.2×21.1
	1/2.5"	28.8×21.4	46.0×34.3	34.3×25.5	48.8×36.4	36.1×26.9	47.2×35.1	35.8×26.7	42.4×31.6	30.4×22.7	33.8×25.2
	1/1.8"	-	-	-	-	45.0×33.3	58.8×43.6	44.6×33.1	52.8×39.2	37.9×28.1	42.1×31.2
	2/3"	-	-	-	-	55.1×41.3	72.1×54.1	54.7×41.0	64.8×48.6	46.5×34.9	51.7×38.7
	Mag.	0.2x	0.125x	0.1678x	0.1178x	0.1595x	0.122x	0.1607x	0.1357x	0.1889x	0.1702x
1mm	WD(mm)	-	-	14	20	27	34	47	55	63	70
	1/3"	-	-	19.1×14.3	23.8×17.8	21.6×16.2	26.0×19.5	23.7×17.7	27×20.3	21.8×16.3	23.8×17.8
	1/2.5"	-	-	22.9×17.0	28.6×21.3	25.9×19.3	31.2×23.2	28.4×21.2	32.4×24.1	26.1×19.4	28.5×21.2
	1/1.8"	-	-	-	-	32.3×23.9	38.9×28.8	35.4×26.2	40.4×29.9	32.5×24.1	35.6×26.4
	2/3"	-	-	-	-	39.6×29.7	47.7×35.7	43.4×32.6	49.6×37.2	39.9×29.9	43.6×32.7
	Mag.	-	-	0.2512x	0.2012x	0.222x	0.1845x	0.2023x	0.1773x	0.2202x	0.2014x
1.5mm	WD(mm)	-	-	-	-	19	23	37	42	54	59
	1/3"	-	-	-	-	16.8×12.6	19.4×14.5	19.6×14.7	21.9×16.4	19.0×14.3	20.6×15.4
	1/2.5"	-	-	-	-	20.2×15.0	23.3×17.3	23.6×17.5	26.3×17.5	22.9×17	24.7×18.4
	1/1.8"	-	-	-	-	25.2×18.6	29.0×21.5	29.4×21.7	29.4×21.7	28.5×21.1	30.8×22.9
	2/3"	-	-	-	-	30.9×23.2	35.6×26.7	36.0×27.0	36.0×27.0	35.0×26.2	37.8×28.3
	Mag.	-	-	-	-	0.2845x	0.247x	0.244x	0.244x	0.2514x	0.2327x
2mm	WD(mm)	-	-	-	-	-	-	-	-	47	51
	1/3"	-	-	-	-	-	-	-	-	16.9×12.7	18.1×13.6
	1/2.5"	-	-	-	-	-	-	-	-	20.3×15.1	21.8×16.2
	1/1.8"	-	-	-	-	-	-	-	-	25.3×18.8	27.1×20.1
	2/3"	-	-	-	-	-	-	-	-	31.1×23.3	33.3×25.0
	Mag.	-	-	-	-	-	-	-	-	0.2827x	0.2639x
5mm	WD(mm)	-	-	-	-	-	-	-	-	25	26
	1/3"	-	-	-	-	-	-	-	-	10.2×7.6	10.6×7.9
	1/2.5"	-	-	-	-	-	-	-	-	12.2×9.1	12.7×9.5
	1/1.8"	-	-	-	-	-	-	-	-	15.2×11.3	15.8×11.7
	2/3"	-	-	-	-	-	-	-	-	18.7×14.0	19.4×14.6
	Mag.	-	-	-	-	-	-	-	-	0.4702x	0.4514x

Extension tube	Model	OPT-C2514-2M		OPT-C3516-2M		OPT-C5024-2M		OPT-C7528-2M		OPT-C10028-2M	
	WD of lens	0.18m~∞		0.25m~∞		0.5m~∞		0.7m~∞		2.7m~∞	
0mm	WD(mm)	180		250		500		700		2700	
	1/3"	35.2×26.4		34.7×26		46.8×35.1		40.8×30.6		124.7×93.5	
	1/2.5"	42.2×31.4		41.7×31		56.2×41.9		49×36.5		149.6×111.4	
	1/1.8"	52.6×39		51.9×38.5		70×51.9		61×45.2		186.4×138.2	
	2/3"	64.5×48.4		63.7×47.8		85.9×64.4		74.8×56.1		228.6×171.4	
	Mag.	0.1365x		0.1382x		0.1025x		0.1176x		0.0385x	
0.5mm	WD(mm)	152	164	223	236	448	472	658	677	2322	2481
	1/3"	29.5×22.1	31.8×23.9	30.6×22.9	32.3×24.2	41.5×31.1	43.8×32.8	38.0×28.5	39.2×29.4	106.6×80.0	114.2×85.7
	1/2.5"	35.4×26.4	38.2×28.5	36.7×27.3	38.8×28.9	49.8×37.1	52.6×39.1	45.6×33.9	47.1×35.0	128.0×95.3	137.1×102.1
	1/1.8"	44.1×32.7	47.6×35.3	45.7×33.9	48.4×35.8	62.1×46.0	65.5×48.5	56.8×42.1	58.6×43.5	159.4×118.2	170.8×126.6
	2/3"	54.1×40.6	58.4×43.8	56.1×42.0	59.3×44.5	76.1×57.1	80.3×60.2	69.6×52.2	71.9×53.9	195.6×146.6	209.5×157.1
	Mag.	0.1625x	0.1505x	0.1568x	0.1482x	0.1155x	0.1095x	0.1263x	0.1223x	0.045x	0.042x
1mm	WD(mm)	135	145	205	215	413	433	628	646	2100	2228
	1/3"	26.3×19.7	28.1×21.1	28.0×21.0	29.5×22.1	38.2×28.6	40.1×30.1	36.1×27.0	37.2×27.9	96.0×72.0	102.1×76.5
	1/2.5"	31.5×23.5	33.7×25.1	33.6×25.0	35.4×26.4	45.8×34.1	48.2×35.8	43.3×32.2	44.6×33.2	115.2×85.8	122.5×91.2
	1/1.8"	39.3×29.1	42.0×31.1	41.9×31.0	44.1×32.7	57.1×42.3	60.0×44.5	53.9×40.0	55.6×41.2	143.5×106.3	152.6×113.1
	2/3"	48.2×36.1	51.6×38.7	51.4×38.5	54.1×40.6	70.1×52.5	73.6×55.2	66.1×49.6	68.2×51.1	176.0×132.0	187.2×140.4
	Mag.	0.1825x	0.1705x	0.1711x	0.1625x	0.1255x	0.1195x	0.1329x	0.1289x	0.05x	0.047x
1.5mm	WD(mm)	122	130	189	198	384	401	601	617	1918	2023
	1/3"	23.7×17.7	25.1×18.8	25.8×19.4	27.1×20.3	35.4×26.5	37×27.7	34.3×25.7	35.3×26.5	87.2×65.4	92.3×69.2
	1/2.5"	28.4×21.1	30.2×22.5	31.0×23.1	32.5×24.2	42.5×31.6	44.4×33.1	41.2×30.7	42.4×31.6	104.7×78.0	110.7×82.5
	1/1.8"	35.4×26.2	37.6×27.9	38.7×28.6	40.5×30.0	52.9×39.2	55.4×41.0	51.4×38.1	52.9×39.2	130.4×96.7	138.0×102.2
	2/3"	43.4×32.5	46.1×34.6	47.4×35.6	49.7×37.3	64.9×48.7	67.9×50.9	63.0×47.2	64.8×48.6	160.0×120.0	169.2×126.9
	Mag.	0.2025x	0.1905x	0.1853x	0.1768x	0.1355x	0.1195x	0.1396x	0.1356x	0.055x	0.052x

Extension tube	Model	OPT-C2514-2M		OPT-C3516-2M		OPT-C5024-2M		OPT-C7528-2M		OPT-C10028-2M	
	WD of lens	0.18m~∞		0.25m~∞		0.5m~∞		0.7m~∞		2.7m~∞	
2mm	WD(mm)	111	117	175	183	359	373	577	591	1767	1854
	1/3"	21.6×16.1	22.8×17.1	24.0×18.0	25.1×18.8	32.9×24.7	34.4×25.8	32.8×24.6	33.7×25.3	80.0×60.0	84.2×63.1
	1/2.5"	25.8×19.2	27.3×20.3	28.8×21.4	30.1×22.4	39.5×29.4	41.2×30.7	39.3×29.3	40.4×30.1	96×71.5	101.0×75.2
	1/1.8"	32.2×23.9	34.0×25.2	35.9×26.6	37.5×27.8	49.3×36.5	51.4×38.1	49.0×36.3	50.4×37.3	119.6×88.6	125.8×93.3
	2/3"	39.5×29.6	41.8×31.3	44.0×33.0	46.0×34.5	60.4×45.3	63.0×47.3	60.1×45.1	61.8×46.3	146.6×110	154.3×115.7
	Mag.	0.2225x	0.2105x	0.1996x	0.1911x	0.1455x	0.1395x	0.1463x	0.1423x	0.06x	0.057x
5mm	WD(mm)	71	74	123	126	258	266	467	475	1211	1249
	1/3"	14.0×10.5	14.5×10.8	16.8×12.6	17.3×13.0	23.3×17.5	24.0×18.0	25.7×19.3	26.3×19.7	53.3×40.0	55.1×41.3
	1/2.5"	16.8×12.5	17.4×12.9	20.1×15.0	20.8×15.5	28.0×20.8	28.8×21.5	30.9×23.0	31.6×23.5	64.0×47.6	66.2×49.3
	1/1.8"	20.9×15.5	21.7×16.0	25.1×18.6	25.9×19.2	34.9×25.8	35.9×26.6	38.5×28.5	39.3×29.1	79.7×59.1	82.4×61.1
	2/3"	25.6×19.2	26.6×19.9	30.8×23.1	31.7×23.8	42.8×32.1	44.1×33.0	47.2×35.4	48.2×36.2	97.7×73.3	101.1×75.8
	Mag.	0.3425x	0.3305x	0.2853x	0.2768x	0.2055x	0.1995x	0.1863x	0.1823x	0.09x	0.087x
10mm	WD(mm)	44	45	82	83	179	182	361	365	814	830
	1/3"	8.8×6.6	9.0×6.7	11.2×8.4	11.4×8.5	15.7×11.7	16.0×12.0	18.9×14.2	19.2×14.4	34.2×25.7	35.0×26.2
	1/2.5"	10.6×7.9	10.8×8.0	13.4×10.0	13.7×10.2	18.8×14.0	19.2×14.3	22.7×16.9	23.1×17.2	41.1×30.6	42.0×31.3
	1/1.8"	13.2×9.8	13.5×10.0	16.7×12.4	17.1×12.6	23.4×17.4	23.9×17.7	28.3×21.0	28.8×21.3	51.2×37.9	52.3×38.8
	2/3"	16.2×12.1	16.5×12.4	20.5×15.4	20.9×15.7	28.8×21.6	29.3×22	34.7×26.0	35.3×26.5	62.8×47.1	64.2×48.1
	Mag.	0.5425x	0.5305x	0.4282x	0.4196x	0.3055x	0.2995x	0.2529x	0.2489x	0.14x	0.137x
15mm	WD(mm)	-	-	-	-	138	140	299	302	626	635
	1/3"	-	-	-	-	11.8×8.8	12.0×9.0	15.0×11.2	15.2×11.4	25.2×18.9	25.6×19.2
	1/2.5"	-	-	-	-	14.2×10.5	14.4×10.7	18.0×13.4	18.2×13.5	30.3×22.5	30.8×22.9
	1/1.8"	-	-	-	-	17.6×13.1	17.9×13.3	22.4×16.6	22.7×16.8	37.7×27.9	38.3×28.4
	2/3"	-	-	-	-	21.7×16.2	22.0×16.5	27.5×20.6	27.8×20.9	46.3×34.7	47.0×35.2
	Mag.	-	-	-	-	0.4055x	0.3995x	0.3196x	0.3156x	0.19x	0.187x
20mm	WD(mm)	-	-	-	-	114	115	258	260	517	522
	1/3"	-	-	-	-	9.4×7.1	9.6×7.2	12.4×9.3	12.5×9.4	20.0×15.0	20.2×15.1
	1/2.5"	-	-	-	-	11.3×8.4	11.5×8.5	14.9×11.1	15.0×11.2	24.0×17.8	24.3×18.1
	1/1.8"	-	-	-	-	14.1×10.5	14.3×10.6	18.5×13.7	18.7×13.9	29.9×22.1	30.2×22.4
	2/3"	-	-	-	-	17.4×13.0	17.6×13.2	22.7×17.0	23.0×17.2	36.6×27.5	37.1×27.8
	Mag.	-	-	-	-	0.5055x	0.4995x	0.3863x	0.3823x	0.24x	0.237x
25mm	WD(mm)	-	-	-	-	-	98	230	231	445	448
	1/3"	-	-	-	-	-	8.0×6.0	10.5×7.9	10.6×8.0	16.5×12.4	16.7×12.5
	1/2.5"	-	-	-	-	-	9.6×7.1	12.7×9.4	12.8×9.5	19.8×14.7	20.0×14.9
	1/1.8"	-	-	-	-	-	11.9×8.8	15.8×11.7	15.9×11.8	21.1×15.6	21.2×15.7
	2/3"	-	-	-	-	-	14.6×11.0	19.4×14.5	19.6×14.7	30.3×22.7	30.6×22.9
	Mag.	-	-	-	-	-	0.5995x	0.4529x	0.4489x	0.29x	0.287x
30mm	WD(mm)	-	-	-	-	-	86	208	209	394	397
	1/3"	-	-	-	-	-	6.8×5.1	9.2×6.9	9.3×6.9	14.1×10.5	14.2×10.6
	1/2.5"	-	-	-	-	-	8.2×6.1	11.0×8.2	11.1×8.3	16.9×12.6	17.0×12.7
	1/1.8"	-	-	-	-	-	10.2×7.6	13.8×10.2	13.9×10.3	24.7×18.3	25.0×18.5
	2/3"	-	-	-	-	-	12.6×9.4	16.9×12.7	17.0×12.8	25.8×19.4	26.1×19.5
	Mag.	-	-	-	-	-	0.6995x	0.5196x	0.5156x	0.34x	0.337x
35mm	WD(mm)	-	-	-	-	77	78	192	193	356	358
	1/3"	-	-	-	-	5.9×4.4	6.0×4.5	8.1×6.1	8.2×6.1	12.3×9.2	12.4×9.3
	1/2.5"	-	-	-	-	7.1×5.3	7.2×5.3	9.8×7.3	9.8×7.3	14.7×11.0	14.8×11.0
	1/1.8"	-	-	-	-	8.9×6.6	9.0×6.7	12.2×9.0	12.3×9.1	18.4×13.6	18.5×13.7
	2/3"	-	-	-	-	10.9×8.1	11.0×8.2	15.0×11.2	15.1×11.3	22.5×16.9	22.7×17.0
	Mag.	-	-	-	-	0.8055x	0.7995x	0.5863x	0.5823x	0.39x	0.387x
40mm	WD(mm)	-	-	-	-	-	-	179	180	327	329
	1/3"	-	-	-	-	-	-	7.3×5.5	7.3×5.5	10.9×8.1	10.9×8.2
	1/2.5"	-	-	-	-	-	-	8.8×6.5	8.8×6.6	13.0×9.7	13.1×9.8
	1/1.8"	-	-	-	-	-	-	10.9×8.1	11.0×8.1	16.3×12	16.4×12.1
	2/3"	-	-	-	-	-	-	13.4×10.1	13.5×10.1	20.0×15	20.1×15.1
	Mag.	-	-	-	-	-	-	0.6529x	0.6489x	0.44x	0.437x
45mm	WD(mm)	-	-	-	-	-	-	168	169	304	305
	1/3"	-	-	-	-	-	-	6.6×5.0	6.7×5.0	9.7×7.3	9.8×7.3
	1/2.5"	-	-	-	-	-	-	8.0×5.9	8.0×5.9	11.7×8.7	11.8×8.8
	1/1.8"	-	-	-	-	-	-	9.9×7.3	10.0×7.4	14.6×10.8	14.7×10.9
	2/3"	-	-	-	-	-	-	12.2×9.1	12.2×9.2	17.9×13.4	18.0×13.5
	Mag.	-	-	-	-	-	-	0.7196x	0.7156x	0.49x	0.487x
50mm	WD(mm)	-	-	-	-	-	-	-	-	285	286
	1/3"	-	-	-	-	-	-	-	-	8.8×6.6	8.9×6.7
	1/2.5"	-	-	-	-	-	-	-	-	10.6×7.9	10.7×7.9
	1/1.8"	-	-	-	-	-	-	-	-	13.2×9.8	13.3×9.9
	2/3"	-	-	-	-	-	-	-	-	16.2×12.2	16.3×12.2
	Mag.	-	-	-	-	-	-	-	-	0.54x	0.537x