



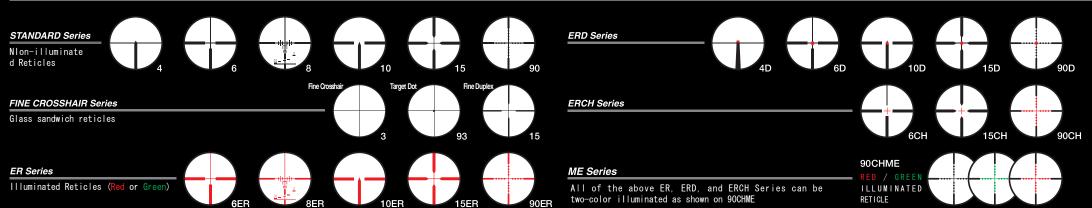
JAPAN OPTICS LTD.

Japan Optics Ltd. (JOL) was established in June, 2005 with most of members from Hakko whose quality has been widely recognized throughout the world over the past 40 years. It is our motto that we anticipate the market needs, and develop and manufacture the products without allowing other companies to follow. In addition to the standard line of products as shown on this catalog, we are prepared to make any custom made scope to your speci cations.

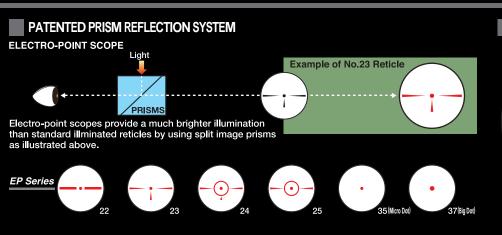


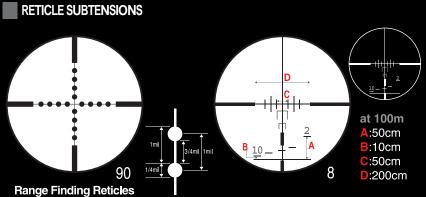
RETICLE

Besides the standard reticle patterns as shown below, any reticle pattern of your own design can be made at an additional cost













The accurate range finding, using the range finding reticles can be achieved by setting the red colored power on the Zoom Ring to the index dot as shown above.

MAIESTY (OL series) RIFLESCOPES



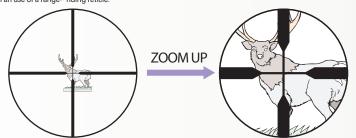


also available.

1st (front) Focal Plane Reticle Model

First Focal Plane Reticle

If the reticle is placed at the 1st (front) focal plane, as you increase the power, the target image will get larger, and so will the size of the reticle proportionally. Accordingly, you can measure the range to the target at any magnic cation with an use of a range, a plane reticle.



Features

- ϕ 30mm one-piece tube made of 6061-T6 aircraft grade aluminum.
- 1st (front) focal plane reticle.
- All lenses are fully multi-coated, providing over 95% light transmission.

 We proundly o er you our type "H" lens coating of which characteristics are as shown on page 17 of this catalog.
- Coil spring provides the shooting accuracy, and keeps a point of impact securely against the heavy recoil.
- Windage/Elevation adjustment turrets are of a low pro le, and waterproof without a dial cap.
- Illuminated reticle models, including two-color illumination (normally red & green) are available as an option.
- 100% waterproof tested
- Shockproof tested to 1,200G

SUPERB OPTICS

Lifetime Warranty



Technica	Spec	ificatio	ns								
MODEL	Power (X)	Objective Aperture (mm)	Tube Diameter (mm)	Field of View at 100m (m:high-low)	Exit Pupil (mm:high-low)	Eye Relief (mm:high-low)	Maximum Adjustment (MOA)	Adjustment per click (MOA)	Twilight Factor	No. of Lenses	Weight (grs)
OL-642	6	42	30	5.7	7.6	90	70	1/4	15.9	11	415
OL-856	8	56	30	4.7	7.0	100	60	1/4	21.2	11	590
OLZ-1424	1-4	24	30	8.4-19.3	6.6-22.8	89-159	120	1/2	4.9-9.8	11	484
OLZ-15642	1.5-6	42	30	4.8-14.0	6.7-26.1	87-122	70	1/4	7.9-15.9	11	585
OLZ-251050	2.5-10	50	30	2.9-11.2	5.3-19.0	95-125	70	1/4	11.2-22.4	11	655
OLZ-31250	3-12	50	30	2.8-10.8	4.2-16.7	83-103	70	1/4	12.2-24.5	11	660
OLZ-31256	3-12	56	30	2.9-11.1	4.6-16.9	84-106	70	1/4	13.0-25.9	11	720
OLZ-41656	4-16	56	30	2.0-8.2	3.6-14.0	86-105	60	1/4	15.0-29.9	10	736

Scope	Dim	ens	sior	ns ့						1
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MODEL	Α	В	С	D	Е	F	G	Н	J	K
0L-642	356	130	146	80	43	38	65	50	30	44
0L-856	356	130	146	80	43	38	65	64	30	44
0LZ-1424	263	0 Straight Tube	163	100	72	38	53	30	30	44
0LZ-15642	324	87	140	97	49	38	53	50	30	44
0LZ-251050	356	120	136	100	45	38	53	56	30	44
0LZ-31250	362	131	133	98	43	38	52	56	30	44
0LZ-31256	362	131	133	98	43	38	52	64	30	44
0LZ-41656	412	180	134	98	44	38	52	64	30	44

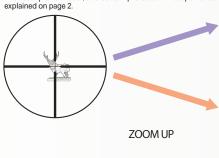




1st (front) focal plane and 2nd (rear) focal plane models

Front focal plane and Rear focal plane Reticles

Both 1st (front) focal plane and 2nd (rear) focal plane models are available for this series scopes. When a range- nding reticle is used, with the 1st focal plane model, you can accurately measure the range to the target at any power while with the 2nd focal plane model, at a certain pre-determined power as explained on page 2.



1st focal plane Reticle size gets larger proportionally.



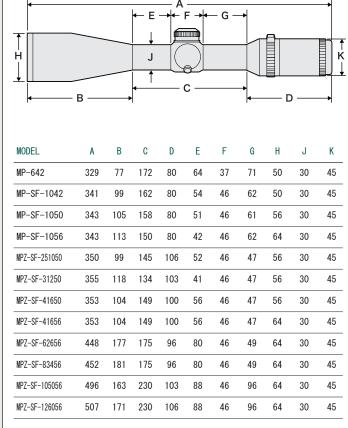
Features

- ϕ 30mm one-piece tube made of 6061-T6 aircraft grade aluminum.
- **2nd (rear) focal plane reticle.** 1st(front) focal plane model is also available as an option.
- All lenses are fully multi-coated, providing over 95% light transmission.

 We proundly o er you our type "H" lens coating of which characteristics are as shown on page 17.
- **Coil spring** provides the shooting accuracy, and keeps a point of impact securely against the heavy recoil.
- Side focus parallax adjustment knob is equipped as standard.
- Windage/Elevation adjustments turrets are of a tactical law enforcement type. BDC (5.56mm, 7.62mm or any other) turrets are available as an option.
- **Illuminated reticle models**, including two-color illumination (normally red & green) are available as an option.
- 100% waterproof tested
- Shockproof tested to 1,200G



MODEL	Power (X)	Objective Aperture (mm)	Tube Diameter (mm)	Field of View at 100m (m:high-low)	Exit Pupil (mm:high-low)	Eye Relief (mm:high-low)	Maximum Adjustment (MOA)	Adjustment per click (MOA)	t Twilight Facto	r No. of Lenses	Weight (grs)
MP-642	6	42	30	5.5	6.5	89	80	1/4	15.9	10	524
MP-SF-1042	10	42	30	3.2	4.1	88	80	1/4	20.5	10	526
MP-SF-1050	10	50	30	3.4	4.8	88	75	1/4	22.4	12	685
MP-SF-1056	10	56	30	3.2	5.5	88	70	1/8	23.7	12	728
MPZ-SF-251050	2.5-10	50	30	3.2-8.2	5.0-19.7	99-147	70	1/4	11.2-22.4	12	780
MPZ-SF-31250	3-12	50	30	2.7-6.4	4.1-15.2	87-112	70	1/4	12.2-24.5	12	771
MPZ-SF-41650	4-16	50	30	2.1-8.0	3.0-11.9	82-76	60	1/4	14.1-28.3	12	776
MPZ-SF-41656	4-16	56	30	2.1-8.0	3.4-14.5	82-76	60	1/4	15.0-29.9	12	811
MPZ-SF-62656	6-26	56	30	1.8-4.1	2.1-9.2	74-80	54	1/4	18.3-38.2	12	816
MPZ-SF-83456	8-36	56	30	1.2-4.4	1.7-6.9	77-80	50	1/4	21.2-43.6	12	848
MPZ-SF-105056	10-50	56	30	0.7-3.1	1.2-5.4	76-70	50	1/8	23.7-52.9	12	920
MPZ-SF-126056	12-60	56	30	0.6-2.5	1.0-4.5	77-70	46	1/10	25.9-58.0	12	917





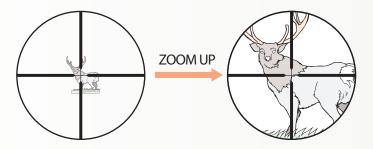


Non-illuminated reticle models are also available.

2nd (rear) Focal Plane Reticle Model

Second Focal Plane Reticle

If the reticle is placed at the 2nd (rear) focal plane, as you increase the power, the target image will get larger, but the size of the reticle will remain the same throughout the magnication.



Features

- ϕ 1" (B1 series) or ϕ 30mm (B3 series) one-piece tube made of 6061-T6 aircraft grade aluminum.
- 2nd (rear) focal plane reticle.
- All lenses are fully multi-coated, providing over 95% light transmission.

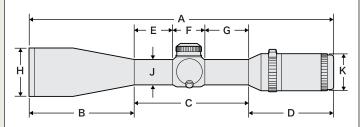
 We proundly o er you our type "H" lens coating of which characteristics are as shown on page 17.
- **Coil spring** provides the shooting accuracy, and keeps a point of impact securely against the heavy recoil.
- A.O. (Adjustment Objective) is available as an option.
- Windage/Elevation adjustment turrets are of a nger adjustable type, and waterproof without a dial cap.
- Illuminated reticle models, including two-color illumination (normally red & green) are available as an option.
- 100% waterproof tested
- Shockproof tested to 1,200G



Technical Specification

MODEL	Power (X)	Objective Aperture (mm)	Tube Diameter (mm)	Field of View at 100m (m:high-low)	Exit Pupil (mm:high-low)	Eye Relief (mm:high-low)	Maximum Adjustment (MOA)	Adjustme. per click (MOA)	wilight Factor	No. of Lenses	Weight (grs)
B1-656	6	56	25.4	7.0	8.3	80	60	1/4	18.3	11	568
B1-856	8	56	25.4	5.1	7.0	85	70	1/4	21.2	11	655
B1Z-1422	1-4	22	25.4	5.4-20.4	5.5-22.0	119-172	80	1/2	4.7-9.4	11	409
B1Z-15632	1.5-6	32	25.4	4.3-6.1	5.8-22.9	123-158	60	1/4	6.9-13.9	11	500
B1Z-251042	2.5-10	42	25.4	2.9-11.1	4.3-17.0	98-123	60	1/4	10.2-20.5	11	560
B1Z-31250	3-12	50	25.4	2.9-10.5	4.2-16.8	84-106	50	1/4	12.2-24.5	11	600
B1Z-41656	4-16	56	25.4	2.0-8.2	3.4-13.4	85-103	60	1/4	15.0-29.9	10	700
B1Z-AO-41656	4-16	56	25.4	2.0-8.2	3.4-13.4	85-103	60	1/4	15.0-29.9	10	790
B3-1524	1.5	24	30	24.0	16.0	100	100	1/2	6.0	11	350
B3-442	4	42	30	9.2	10.5	93	80	1/4	13.0	11	415
B3-642	6	42	30	5.7	7.6	90	70	1/4	15.9	11	415
B3-856	8	56	30	4.1	7.0	90	60	1/4	21.2	11	700
B3Z-1424	1-4	24	30	8.7-22.8	6.2-21.1	88-144	100	1/2	4.9-9.8	11	460
B3Z-15642	1.5-6	42	30	4.4-17.3	7.0-14.0	91-118	60	1/4	7.9-15.9	11	485
B3Z-251042	2.5-10	42	30	8.7-22.8	6.2-21.1	88-144	60	1/4	10.2-20.5	11	495
B3Z-251050	2.5-10	50	30	3.2-11.9	5.2-18.7	99-126	60	1/4	11.2-22.4	11	747
B3Z-31250	3-12	50	30	2.9-10.5	4.2-16.8	86-107	50	1/4	12.2-24.5	11	714
B3Z-31256	3-12	56	30	2.9-10.5	4.7-18.7	86-107	60	1/4	13.0-25.9	11	774
B3Z-41650	4-16	50	30	2.5-8.3	3.1-12.5	85-110	60	1/4	14.1-28.3	10	580
B3Z-41656	4-16	56	30	2.0-8.2	3.4-13.4	85-103	60	1/4	15.0-29.9	10	752

Scope Dimensions



MODEL	Α	В	С	D	Е	F	G	Н	J	K
B1-856	355	126	145	84	45	37	63	64	25. 4	45
B1Z-1422	247	0 (Straight Tube	150	97	65	36	49	25. 4	25. 4	45
B1Z-15632	330	76	144	110	55	36	53	39	25. 4	45
B1Z-251042	352	93	153	106	64	36	53	50	25. 4	45
B1Z-31250	360	116	147	97	58	36	53	56	25. 4	45
B1Z-41656	403	141	156	106	70	38	48	64	25. 4	45
B3-442	339	87	170	82	64	36	70	50	30	45
B3-642	339	87	170	82	64	36	70	50	30	45
B3-856	355	126	145	84	45	37	63	64	30	45
B3Z-1424	255	0 (Straight Tube	158	97	68	37	53	30	30	45
B3Z-15642	313	82	139	92	49	37	53	50	30	45
B3Z-251042	352	93	153	106	64	36	53	50	30	45
B3Z-251050	361	121	129	111	44	37	48	56	30	45
B3Z-31250	360	116	147	97	58	36	53	56	30	45
B3Z-31256	360	116	147	97	58	36	53	64	30	45
B3Z-41650	402	128	174	100	84	37	53	56	30	45
B3Z-41656	402	128	174	100	84	37	53	64	30	45



Features

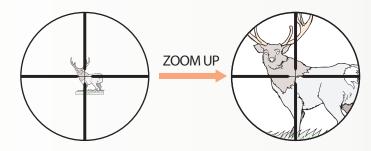
- ϕ 1" and ϕ 30mm tube models are available. Both tubes are of one-piece construction made of 6061-T6 aircraft grade aluminum.
- 2nd (rear) focal plane reticle.
- All lenses are fully multi-coated, providing over 95% light transmission. We proundly o er you our type "H" lens coating of which characteristics are as shown on page 17.
- **Coil spring** provides the shooting accuracy, and keeps a point of impact securely against the heavy recoil.
- A.O. (Adjustment Objective) is equipped as standard.
- Windage/Elevation adjustment turrets are of a target knob type, and waterproof without a dial cap.
- Illuminated reticle models, including two-color illumination (normally red & green) are available as an option.
- 100% waterproof tested
- Shockproof tested to 1,200G

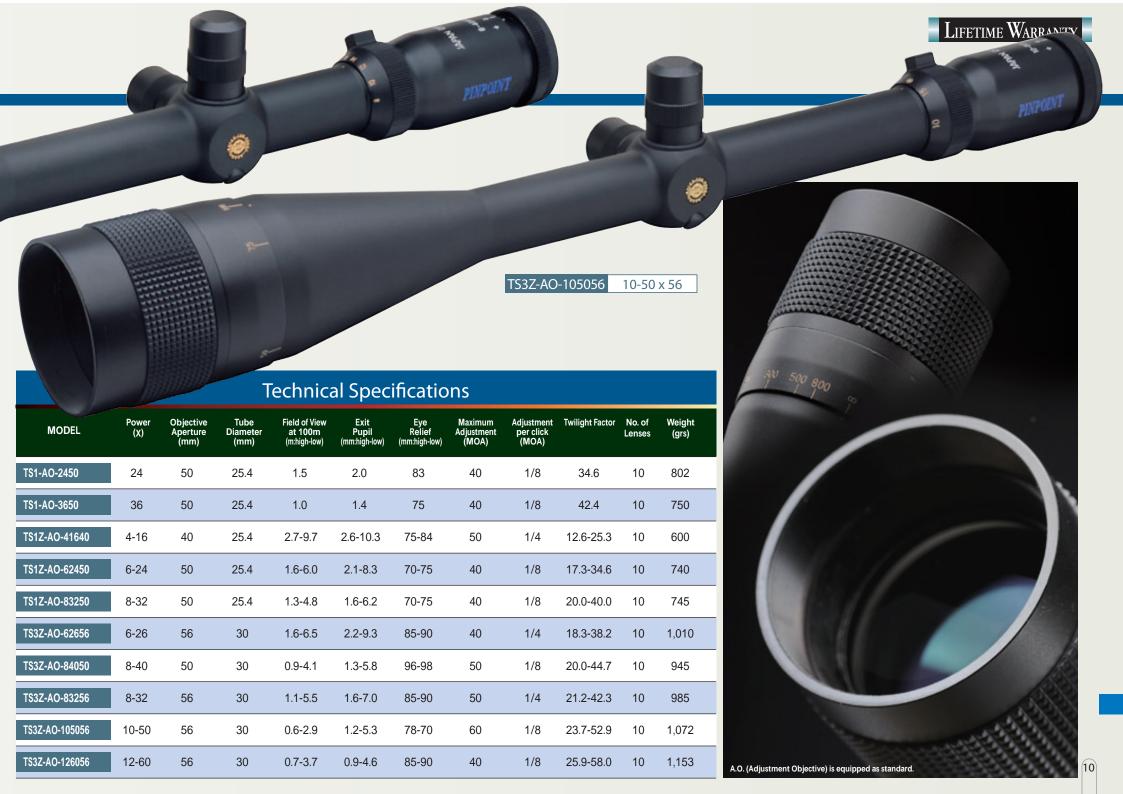


2nd (rear) Focal Plane Reticle Mode

Second Focal Plane Reticle

If the reticle is placed at the 2nd (rear) focal plane, as you increase the power, the target image will get larger, but the size of the reticle will remain the same throughout the magnication.





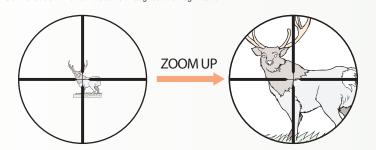
Golden Eagle (BH series) RIFLESCOPES



2nd (rear) Focal Plane Reticle Model

Second Focal Plane Reticle

If the reticle is placed at the 2nd (rear) focal plane, as you increase the power, the target image will get larger, but the size of the reticle will remain the same throughout the magnication.



- 2nd (rear) focal plane reticle.
- The zoom ring and eyepiece tube are integrated, which provides the smooth scope body line, and easy power change manipulation
- All lenses are fully multi-coated, providing over 95% light transmission.

 We proundly o er you our type "H" lens coating of which characteristics are as shown on page 17.
- **Coil spring** provides the shooting accuracy, and keeps a point of impact securely against the heavy recoil.
- Windage/Elevation adjustment turrets are of a nger adjustable type.
- 100% waterproof tested
- Shockproof tested to 1,200G









SSC-L-IL-421 BEP-L-IL-420 4 x 20

4 x 20

4 x 21

BEP-F-IL-420 4 x 20







Features

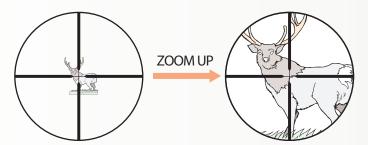
ATG Built-in Mount

Adjustable Dovetail width - 6 to 15mm

2nd (rear) Focal Plane Reticle Model

Second Focal Plane Reticle

If the reticle is placed at the 2nd (rear) focal plane, as you increase the power, the target image will get larger, but the size of the reticle will remain the same throughout the magnication.



- **Body** is made of 6061-T6 aircraft grade aluminum.
- 2nd (rear) focal plane reticle.

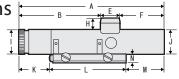
BEP-ATG-IL-420

- Built-in mount (lever mount for the carry handle or at top mount for the picatiny base or ATG mount) is equipped as standard.
- All lenses are fully multi-coated, providing over 95% light transmission.
- CO,SSC, and BEP series scope are equiped with BDC turret for the elevation, and standard turret for the windage adjustments respectively.
- 100% waterproof tested
- Shockproof tested to 1,200G

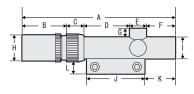


			echnic	al Spec							
MODEL	Power (X)	Objective Aperture (mm)	Tube Diameter (mm)	Field of View at 100m (m:high-low)	Exit Pupil (mm:high-low)	Eye Relief (mm:high-low)	Aujustment (MOA)	Adjustment per click (MOA)	Twilight Factor	No. of Lenses	Weight (grs)
CO and CO-IL Serie	es										
CO-L-421	4	21	35	7.6	5.5	74	100	1/4	9.2	10	491
CO-L-IL-421	4	21	35	7.6	5.5	74	100	1/4	9.2	10	491
CO-F-421	4	21	35	7.6	5.5	74	100	1/4	9.2	10	495
CO-F-IL-421	4	21	35	7.6	5.5	74	100	1/4	9.2	10	495
SSC Series											
SSZ-ATG-AO-15416	1.5-4	16	25.4	7.0-16.9	3.9-9.5	70-96	100	1/4	4.9-8.0	9	224
SSZ-ATG-15416	1.5-4	16	25.4	7.0-16.9	3.9-9.5	70-96	100	1/4	4.9-8.0	9	212
SSC-L-IL-321	3	21	35	11.7	7	89	100	1/2	7.9	10	431
SSC-L-IL-421	4	21	35	9.7	5.2	76	100	1/2	9.2	10	431
BEP Series											
BEP-F-IL-420	4	20	35	8.4	5.1	76.5	100	1/4	8.9	10	470
BEP-L-IL-420	4	20	35	8.4	5.1	76.5	100	1/4	8.9	10	470
BEP-ATG-IL-420	4	20	35	8.4	5.1	76.5	100	1/4	8.9	10	470
LES Series Long Ey	e Relief So	copes									
LES-428	4	28	25.4	2.3	6.9	340	60	1/4	10.6	9	302
LESZ-25728	2.5-7	28	25.4	1.5-3.2	4.1-11.8	300-370	60	1/4	8.4-14.0	9	322

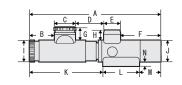
Scope Dimensions :



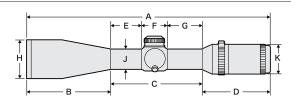
MODEL	Α	В	Е	F	Н	I	J	K	L	M	N	
CO-L-IL-421	184	114	27	43	15	36	35	44	55	35	15	
CO-F-IL-421	184	114	27	43	15	36	35	44	105	35	17	



MODEL	Α	В	С	D	E	F	G	Н	I	J	K	L
SSZ-ATG-A0-15416	148	41	17	42	16	33	9	28	29	55	33	10
SSZ-ATG-15416	148	42	17	42	16	30	9	28	25	55	31	10



MODEL	Α	В	С	D	E	F	G	Н	ı	J	K	L	M	N
BEP-F-IL-420	187	31	29	48	27	52	19	15	37	35	106	105	26	17
BEP-L-IL-420	187	31	29	48	27	52	19	15	37	35	106	55	26	15
BEP-ATG-IL-420	187	31	29	48	27	52	19	15	37	35	106	55	26	10



MODEL	Α	В	С	D	Е	F	G	Н	J	K
LES-428	240	51	126	63	43	36	47	36	25. 4	39
LESZ-25728	242	50	112	80	43	36	33	36	25. 4	39

AR Series SCOPES

AR Series Scopes: Variable power scopes for M-16/AR-15 rifles.









Features

- Designed to t on M-16/AR-15 ri es.
- One-piece tube construction made of 6061-T6 aircraft grade aluminum.
- 2nd (rear) focal plane reticle.
- **Built-in mount** (lever mount for the carry handle or at top mount for the picatiny base) is equipped as standard.
- All lenses are fully multi-coated, providing over 95% light transmission.
- 100% waterproof tested
- Shockproof tested to 1,200G

ACCESSORIES



ALL LENSES ARE FULLY MULTI-COATED, PROVIDING OVER 95% LIGHT TRANSMISSION. 100% WATER PROOF TESTED.

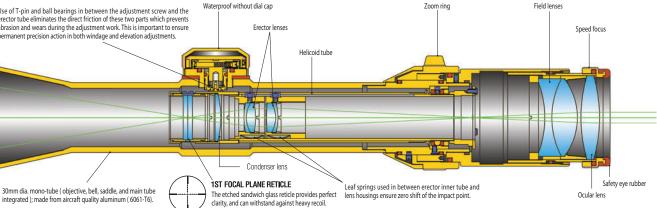
SHOCKPROOF TESTED TO 1.200G.

1st (front) Focal Plane Reticle Model Sectional Illustration of Majesty Models

First Focal Plane Reticle

The reticle is placed at the 1st (front) focal place as shown below and thus, the size of reticle increases in magni cation along with the target image, so you can accurately measure the range at any magnication setting with an use of range- nding reticles.

Use of T-pin and ball bearings in between the adjustment screw and the erector tube eliminates the direct friction of these two parts which prevents abrasion and wears during the adjustment work. This is important to ensure permanent precision action in both windage and elevation adjustments.



The innovative design of a reversed T-pin and 10 ball-bearings fitted between the adjustment screw and the erector tube

2nd (rear) Focal Plane Reticle Model Sectional Illustration of Superb Models

Objective lenses

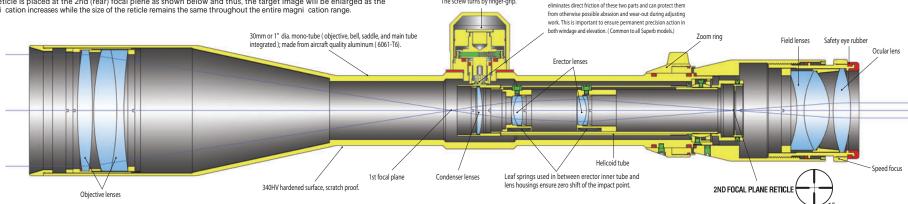
SUPERB **PINPOINT**

Golden Eagle

Second Focal Plane Reticle

The reticle is placed at the 2nd (rear) focal plene as shown below and thus, the target image will be enlarged as the magni cation increases while the size of the reticle remains the same throughout the entire magni cation range.

340HV hardened surface, scratch proof.



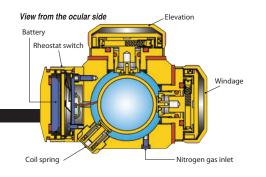
The screw turns by finger-grip.

Erector Tube Coil Spring & Illuminated Reticle

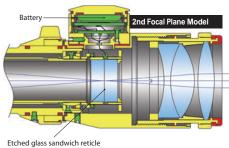
Erector Tube Coil Spring

Sturdy and durable coil spring is used for both elevation and windage adjustments, which works accurately and keeps a point of impact securely against heavy recoil.

1st Focal Plane Model



Illuminated Reticle



Battery Life

Shown below is the calculated battery life in hours at each position of rheostat switch when used continuously. If you keep the switch on and off in your actual use, the battery can be used for a year.

Battery Life in case	e ot co	ntinuo	us use	9				
Rheostat switch	1	2	3	4	5	6	7	8

	(Unit:	hours)
9	10	11
32	26	16

Two-color illumination 320 130 60 32 16	position											
		800	500	320	200	130	90	60	45	32	26	16
(Battery: CR2032)	Two-color illumination (Battery: CR2032)	320	130	60	32	16	-	-	-	-	-	

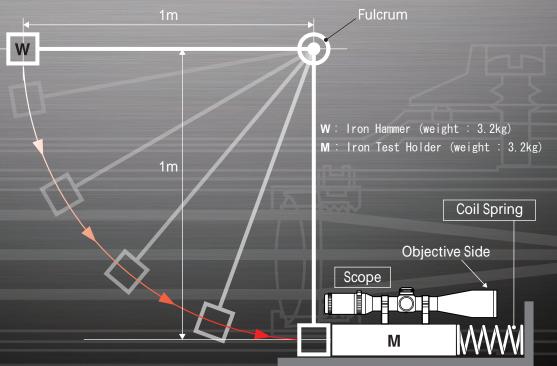
Note: Rheostat switch positions 1, 2, 3, 4, 5 on two-color illumination correspond to those positions 3, 5, 7, 9, 11 on single-color illumination.



TECHNICAL DATA

SHOCK PROOF TEST

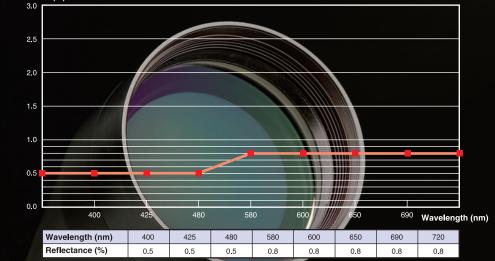
- 1. Mount the sample scope on the iron test holder.
- **2.** Swing the hammer up to a horizonel position and release it.
- **3.** The value of impact energy reaches as high as 1,200G at the moment of the pendulum hammer striking the sample scope.
- **4.** Repeat this impact testing 5 times and examine the scope



TURRET STYLE CROSS-REFERENCE TABLE											
MODEL	TUBE DIAMETER	BODY CONSTRUCTION	W / E TURRET TYPE	PARALLAX ADJUSTMENT	FOCAL PLANE	LENS COATING	ILLUMINATION				
MAJESTY " OL "	30mm	1 piece	6	not available	FRONT	Н	available				
TACTICAL " MP "	30mm	1 piece	000.	SIDE FOCUS (equipped)	REAR	н	available				
SUPERB " B1 "	1"	1 piece		A.O. (available)	REAR	н	available				
SUPERB " B3 "	30mm	1 piece		A.O. (available)	REAR	н	available				
PINPOINT " TS "	1" / 30mm	1 piece	20	A.O. (equipped)	REAR	н	available				
"BH"	1"	1 piece		not available	REAR	н	not available				

NOTE: Turret type is interchangeble. For example, a Majesty type low turret can be installed on Superb scopes, or a Superb type high turret can be installed on Majesty scopes.

"H" LENS COATING CHARACTERISTICS (Single Lens) Reflectance (%) 3.0

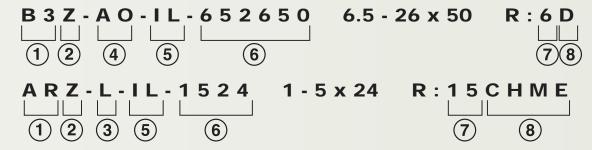


MODEL NUMBER DESIGNATIONS

Abbreviations

Z = Zoom AO = Adjustable Objective <math>SF = Side Focus IL = IIIuminated F = Flat Top Mount L = Lever Mount R = Reticle ATG = Adjustable To Groove

Examples



1 Models

OL (Majesty)

MP (Tactical)

B1 (Superb)

B3 (Superb)

TS (Pinpoint)

BH (Golden Eagle)

AR (Super Accura)

SS (Super Accura)

BN (Hakko Sports)

WIN (Winner)

(2) Fixed / Variable Power

None: Fixed Power

Z:Zoom

3 Mounting

None: without Mount

L: with built-in Lever Mount
F: with built-in Flat Top Mount

ATG: with built-in ATG Mount

4 Parallax Adjustment

None: Fixed at 100M

AO: with Adjustable Objective

SF: with Side Focus

5 Illumination

None: without Illumination

IL: with Illumination

6 Magni cation

Last 2 digits represent the Objective Diameter.

Example :

6 4 0 : 6 x 40

3 9 <u>4 0</u> : 3 - 9 x 40___

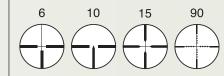
3 1 2 5 0 : 3 - 12 x 50

1 5 6 3 8 : 1.5 - 6 x 38

6 5 2 6 5 0 : 6.5 - 26 x 50

7 Reticle Pattern

Example:



8 Illumination Pattern

None: without Illumination

D: Only center dot portion is lighted.

CH: Only center crosshair portion is lighted.

ER: The entire portion of the reticle is lighted.

Example:

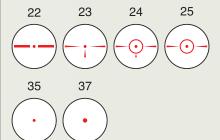




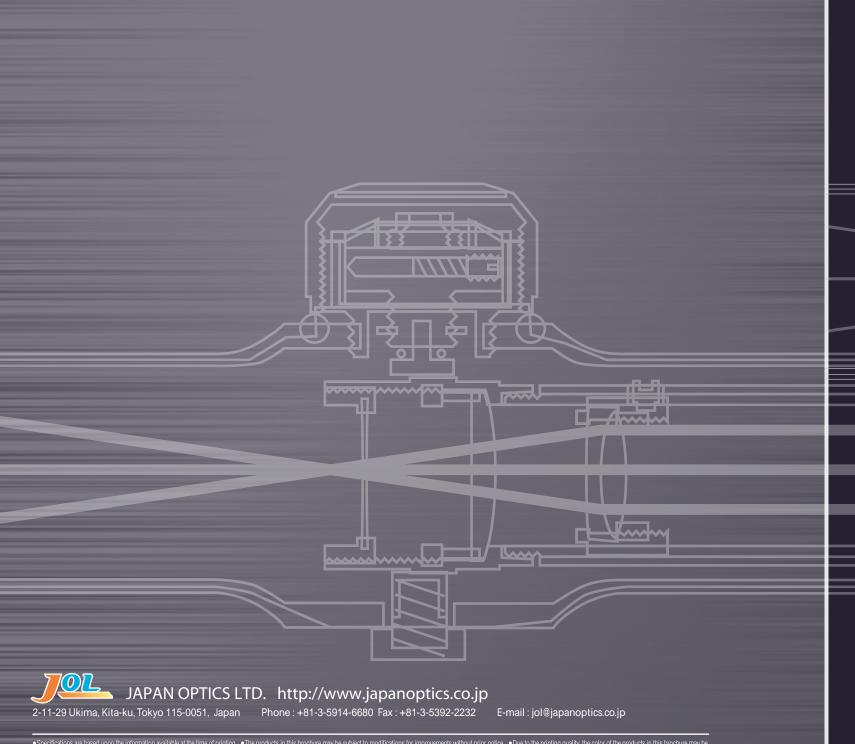


ME: 2 - color (red & green) illuminated reticle.

EP: Electro - point reticle, brighter and sharper than the regular illuminated reticles owing to the use of prisms. However, the reticle patterns are limited to the following styles due to the prism con guration.







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