CELESTRON®

Binocular Product Guide

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Binocular Series Descriptions

For binocular product warranty information, please visit us at: www.celestron.com

About Celestron

Based in Torrance, California, Celestron has been a global leader in the design, engineering, manufacturing, and marketing of high quality optical products including a wide variety of computerized and non-computerized telescopes, spotting scopes, binoculars, and microscopes for close to 40 years. Celestron is a leader in the sale of performance telescopes worldwide and has very strong brand-name recognition among serious amateur astronomers for superior optics, outstanding design, and innovative technology. Celestron sells its products worldwide through a variety of specialty retail outlets. In June 2002, Celestron became a privately held company when three long-time senior managers purchased the company.

Celestron has earned a well-deserved reputation for providing affordable optical excellence. In keeping with this reputation, we offer only binoculars manufactured to meet our rigorous standards. Celestron optical instruments deliver excellent resolution and contrast. Our binoculars combine the highest quality precision optics and most modern, user-oriented design features to produce visual instruments that perform exquisitely. Celestron's instruments offer versatility in viewing any subject of interest to you, be it a sporting event, wildlife, scenic views in nature — even the far reaches of the night sky. In all of these products, our mission is to provide the highest quality optical products at a competitive price.

Joseph A. Lupica Jr., President and CEO; Alan Hale, Chairman of the Board; Richard Hedrick, Senior Vice President and Chief Technology Officer

Considerations In Choosing Binoculars

Which Binocular Is Right For You?

Celestron offers binoculars suited to a wide variety of uses: astronomy, birding, boating, camping, concerts, hunting, nature study, sporting events, surveillance, theater/opera, travel, and more. Whatever your optical needs might be, Celestron has a binocular that's right for you.

Celestron's line of binoculars includes a complete range of sizes from the compact and lightweight UpClose series, all the way up to the impressive 100mm SkyMaster series.

It's not possible to label individual binoculars as the best for any particular use or situation due to variables such as usage conditions, individual preference, how and where the instrument will be used, and the range of different viewing circumstances in which the instrument will be used. Only you can determine what will be the best, most versatile and satisfactory optical instrument for you, and you shouldn't be discouraged from any choice you make, because you know your own needs and interests. We encourage you to look through this catalog at the different models, then ask your Celestron dealer for a demonstration. Whichever Celestron product you choose, rest assured that you'll receive excellent value for your investment.

The brilliance and sharpness of the image you see through a particular binocular is determined by a number of different factors. Magnification, optical coatings, and lens diameter are just a few of the factors influencing how a binocular performs. *However, the single most important criteria in performance will always be the quality of the optics.* Celestron delivers optical excellence through careful consideration of quality in the glass and lens coatings used, precision manufacturing processes, and uncompromising quality control. The following section lists factors to keep in mind when choosing a binocular.

PARTS OF A BINOCULAR

Considerations In Choosing Binoculars

Magnification

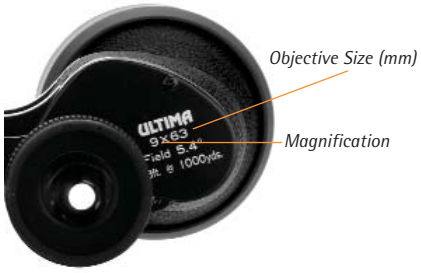
Magnification is the degree to which the object being viewed is enlarged. For example, with a 7x 42 binocular, the number 7 represents the "binocular power". A 7 power binocular magnifies an image to seven times the size it would be when viewed by the normal, unaided human eye. The level of power affects the brightness of an image, so the lower the power of a binocular, the brighter the image will be. In general, increasing power will reduce both field of view and eye relief, which are also discussed here.

1x Unaided Eye *7x* *8x* *10x* *15x* *20x*

Diameter (Objective)

The objective lenses of binoculars are the front lenses that the light passes through. The diameter of one of these lenses, given in millimeters, will be the second number describing a particular binocular. Hence, a 7 x 42 binocular has an objective lens diameter of 42mm. The diameter of the lens determines the light gathering ability of the instrument, with the greater light gathering ability of a larger lens translating into greater detail and image brightness. This is especially useful in low light conditions and at night.

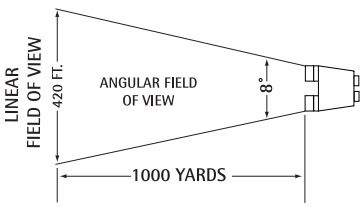
Doubling the size of the objective lenses quadruples the light gathering ability of the binocular. For instance, a 7 x 50 binocular has twice the light gathering ability of a 7 x 35 binocular and four times the light gathering ability of a 7 x 25 binocular. This might lead you to assume that bigger is better when it comes to the diameter size of the objective lenses, but in reality, the size of the lens must be considered along with exit pupil and intended usage to determine the best binocular for you.



Field of View (FOV)

The size of the area that can be seen while looking through a pair of binoculars is referred to as the field of view. The angular field of view is usually indicated on the outside of the binocular, in degrees. The linear field of view refers to the area that can be observed at 1,000 yards, and is expressed in feet. A larger field of view translates to a larger area seen through the binocular. Field of view is related to magnification, with greater magnification creating a smaller field of view, in general. Also a wider field of view generally results in less eye relief. A large field of view is especially desirable in situations where the object viewed is likely to move, or when the user is moving.

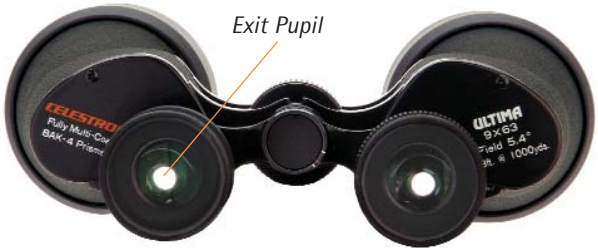
You can use angular field of view to calculate the approximate linear field of view by multiplying the angular field of view by 52.5. For example, if the angular field of view of a particular binocular is 8 degrees, then the linear field of view will be 420 feet, i.e. the product of 8 x 52.5.



Considerations In Choosing Binoculars

Exit Pupil

The diameter, in millimeters, of the beam of light that leaves the eyepiece of a particular pair of binoculars is the "exit pupil". The larger the exit pupil, the brighter the image obtained will be (except in bright daylight where your eye's pupil shrinks). Having a large exit pupil is advantageous under low light conditions and at night. For astronomical applications, the exit pupil of the binocular should correspond with the amount of dilation of your eye's pupil after it has adapted to the dark. This number will be between 5mm and 9mm. 9mm of dilation is the maximum amount for the human eye, and this number tends to decrease with age. To calculate exit pupil, divide the size of the objective lens by the magnification of the binocular. For example, the exit pupil of a 7 x 42 binocular is 42/7 = 6mm.



Optical Coatings

The optical elements (10 to 18 glass surfaces) of the binocular are coated to reduce internal light loss and glare, which in turn ensures even light transmission, resulting in greater image sharpness and contrast. Choosing a binocular with good lens coatings will translate to greater satisfaction with the product you ultimately select. Lens coatings range in quality as listed below from lowest quality to highest quality:

Uncoated – No glass surfaces are coated. Less than 50% of the light is transmitted through the binocular resulting in very low contrast images with a lot of glare making them virtually unusable.

Coated – One or more surfaces are coated. Overall quality is poor.

Fully coated – All air-to-glass surfaces are coated with a single layer of anti-reflecting magnesium fluoride coating (MgF_2). Throughput transmission is typically close to 80% and more than acceptable for most users.

Multi-coated – One or more surfaces are coated with multiple layers of a chemical compound and the other surfaces are fully coated. Multi-coatings increase light transmission resulting in brighter and sharper images with higher contrast levels.

Fully multi-coated – All air-to-glass surfaces are coated with multiple layers of a chemical compound. Fully multi-coated binoculars maximize throughput light transmission in a range of 90-95%. The results are extremely bright and sharp images with maximum contrast.

Phase Coatings

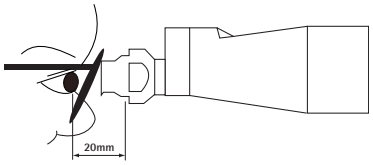
Phase coatings are a relatively new technology. These coatings are applied to roof prism binoculars only. Phase coatings are coatings applied to correct the phase shift of roof prisms which causes a deterioration of image quality. The very best roof prism binoculars in years past suffered from a loss in contrast, resolution, and sharpness albeit ever so slight. In roof prisms light waves reflected off of the prism edges (roof) are phase shifted (1/2 a wavelength of light) differently through each barrel of the binoculars. The phase shifting of the light waves cause a reduction in optical quality. Once phase coatings are applied to the roof prism surfaces, the reflected light off of the roof prisms is phase corrected (similar) through each barrel of the binocular. Thus, maximum resolution can be achieved for the particular aperture size and image sharpness and contrast are greatly enhanced.

Without Phase Coatings

With Phase Coatings

Considerations In Choosing Binoculars

Eye Relief



This refers to the distance, in millimeters, that a binocular can be held from the eye with the full field of view still being comfortably observed. Eyeglass wearers in particular benefit from longer eye relief.

Near Focus

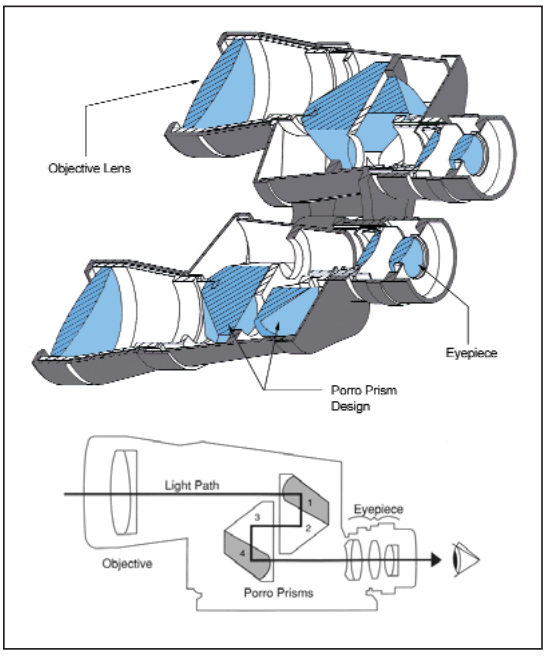
The distance between the binocular and the nearest object you can focus on, while maintaining a good image and sharp focus, defines the near focus of a binocular.

Brightness

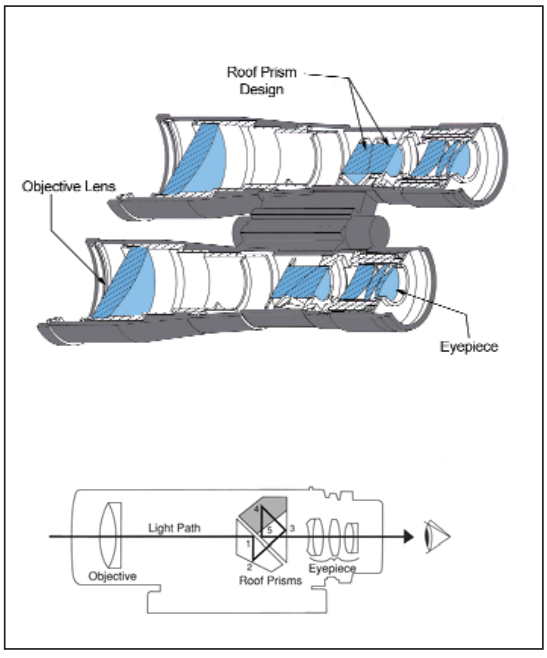
A binocular's ability to gather and transmit enough of the available light to give a sufficiently bright and sharp image defines its brightness. The brightness of a binocular also enhances color differentiation in the image observed. R.B.I. (Relative Brightness Index), Twilight Factor and R.L.E. (Relative Light Efficiency) are common indices used in the binocular industry, but are all somewhat flawed in their design and often prove fairly meaningless. Brightness is one criteria to be considered when purchasing binoculars, but is not the most important factor. Brightness is dependent on several factors: objective lens diameter, magnification, the type and quality of the objective lens glass, type of lens coatings and type of prisms used. In general, large objective lenses, low magnification and fully multicoated lenses are most desirable.

Prisms

The binocular's prisms serve to invert the image and come in one of two basic designs: Roof or Porro prism. By design, roof prisms are more lightweight and compact, for portability. Prisms are designated either BK7 (boro-silicate) or BAK-4 (barium crown). Both are economical and highly effective designs. The finer glass in the BAK-4 design is of a higher density (refractive index) and virtually eliminates internal light scattering, producing sharp, well-defined images.



Porro Prism Design



Roof Prism Design

Considerations In Choosing Binoculars

Contrast

Refers to the degree to which both dim and bright objects in the image can be differentiated from each other and from the background of the image. High contrast helps in observing fainter objects and in discerning subtle visual details. Contrast is affected by the resolution such that the finer the resolving power (in general), the better the contrast. High quality optical coatings provide better contrast in an image. The other factors affecting contrast are: collimation, air turbulence, and objective lens, prism and eyepiece quality.

Resolution

A measurement of the binocular's ability to distinguish fine detail and produce a sharp image. Better resolution also delivers more intense color. Resolution is related directly with the size of the binocular's objective lenses. Generally, a larger objective lens will deliver more detail to the eye than a smaller objective lens, regardless of the magnification of the binocular. Actual resolution is determined by the quality of the optical components, the type and quality of the optical coatings, atmospheric conditions, collimation (i.e. proper optical alignment), and the visual acuity of the user.

Collimation

The alignment of the optical elements of the binocular to the mechanical axis. Good collimation prevents eyestrain, headaches and inferior and double images while improving resolution.

Interpupillary Distance

Since the distance between each person's eyes varies, the two eyepieces on a pair of binoculars also need to be adjustable for individual use. Most binoculars are designed around a hinge that allows the user to bring the eyepieces closer together or farther apart. This is called adjusting the interpupillary distance (IPD).

Full size porro prism binoculars typically have an IPD scale that indicates the eyepiece distance in millimeters.

Focusing

A focusing mechanism is necessary to allow you to reach sharp focus on objects at different distances. Most binoculars have one of two types of focus mechanisms — center focus or individual focus.

Center Focus: This most common focusing mechanism uses a single wheel to move both eyepieces in and out to achieve focus. However, since a person's vision is slightly different from one eye to the other, center focus binoculars use a diopter adjustment to compensate. The diopter adjustment permits one of the eyepieces (usually the right) to be individually "fine focused" to the needs of each person's eyes.

Individual Focus: This type of focus allows for extra-precise focusing adjustments for image sharpness and clarity. As the name implies, individual focus binoculars allow each eyepiece to be rotated and focused individually, eliminating the need for a diopter adjustment.

The diopter adjustment or "ring" is usually located around the right eyepiece.

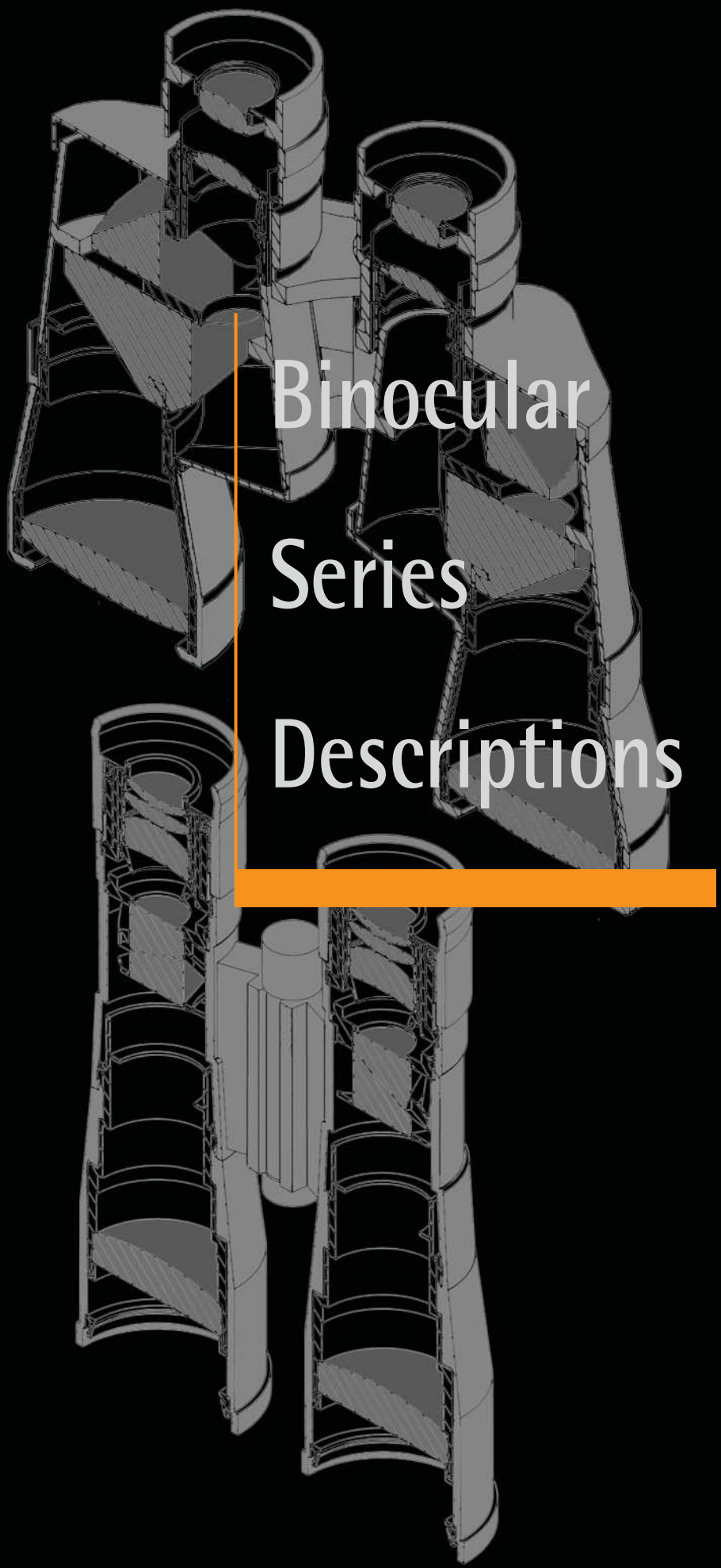












Binocular Series Descriptions

Roof Prism



The UpClose Series from Celestron is a complete line of compact and full size binoculars at very economical prices. All models are rubber covered to protect against rough handling. These binoculars are fully coated to give high contrast views.

UpClose Roof Prism Series Features:

- ***Fully coated optics***
- ***Protective rubber covering***
- ***Embossed logo for firm gripping***
- ***Ultra compact design with folding center bridge***
- ***Diopter adjustment for precise focusing***
- ***Water resistant body and nylon carrying case***
- ***Limited Lifetime Warranty***

UpClose Field Glasses Features:

- ***4.5 deg. field of view (236' @ 1000 yards)***
- ***Eye relief – 10mm***
- ***Lightweight and portable***
- ***Coated optics***
- ***Weight – 8 oz.***
- ***Water resistant case included***
- ***Limited Lifetime Warranty***

A series that has something for everyone whether for action sports, vacationing, nature viewing, wildlife observing or various other activities.

UpClose Field Glasses Model 71082 4 x 30

The UpClose 4 x 30 Field Glasses are very compact in size and an excellent value product due to its reasonable price. A great choice for children since these field glasses have no prisms which can break or be knocked out of alignment with rough handling. Take them with you anywhere for sporting events, bird watching, nature viewing, and many other outdoor activities.

Model 71135 16 x 32

Model 71133 10 x 25

Model 71132 8 x 21

Model 71134 12 x 25

SPECIFICATIONS

Model	71082	71132	71133	71134	71135
Size	4 x 30	8 x 21	10 x 25	12 x 25	16 x 32
Design	Field Glasses	Roof	Roof	Roof	Roof
Prisms	None	BK7	BK7	BK7	BK7
Coating	Standard Coating	Fully Coated	Fully Coated	Fully Coated	Fully Coated
Weatherproof	Water Resistant	Water Resistant	Water Resistant	Water Resistant	Water Resistant
Angular Field of View (FOV°)	4.5	7	5.5	4.5	3.7
Linear FOV (ft @ 1000 yd)	236	367	288	236	194
Exit Pupil (mm)	7.5	2.6	2.5	2.1	2
Eye Relief (mm)	10	11	10	10	10
Near Focus (ft)	18	7	18	14	25
Weight (oz)	8	7	9	9	11

UpClose™

Porro Prism



The UpClose Series has five full size models including two zoom models. These porro prism, full size models all feature a large center focus knob for easy focus. All are economically priced but have high quality optics for your enjoyment at sporting events, birding, wildlife viewing and many other activities.

UpClose Porro Prism Series Features:

- ***Rubber covered***
- ***Fully coated optics***
- ***Offered in both wide angle and zoom models***
- ***Molded finger impressions or embossed logos for a firm grip***
- ***Water resistant body and nylon carrying case***
- ***Diopter adjustment for fine focusing***
- ***Tripod adaptable***
- ***Limited Lifetime Warranty***

Model 71137
10 x 50
Wide Angle

Model 71139
7-15 x 35
Zoom

Model 71136
7 x 35
Wide Angle

Model 71140
10-30 x 50
Zoom

Model 71138
12 x 50

SPECIFICATIONS

Model	71136	71137	71138	71139	71140
Size	7 x 35 WA	10 x 50 WA	12 x 50	7-15 x 35	10-30 x 50
Design	Porro	Porro	Porro	Porro	Porro
Prisms	BK7	BK7	BK7	BK7	BK7
Coating	Fully Coated	Fully Coated	Fully Coated	Fully Coated	Fully Coated
Weatherproof	Water Resistant	Water Resistant	Water Resistant	Water Resistant	Water Resistant
Angular Field of View (FOV°)	8	7	5.2	5.5 @ 7x	4.1 @ 10x
Linear FOV (ft @ 1000 yd)	420	367	273	288 @ 7x	215 @ 10x
Exit Pupil (mm)	5	5	4.2	5 @ 7x	5 @ 10x
Eye Relief (mm)	11	11	12	15	14
Near Focus (ft)	15	24	26	18 @ 7x	27 @ 10x
Weight (oz)	24	25	25	21	29

TRAVELER™



The Traveler Series from Celestron is comprised of compact, go-anywhere binoculars with a hi-tech appearance. All models feature BAK-4 prisms and multi-coatings for brilliant views with maximum resolution and high contrast. Excellent all-around performance that enhances any activity you can imagine that would demand a super-light and portable binocular.

Traveler Series Features:

- ***Offered in both compact and zoom models***
- ***Rubber coated texture for comfortable grip***
- ***Dent and scratch resistant***
- ***Diopter adjustment for exact focusing***
- ***Modern champagne and black rubber styling***
- ***Limited Lifetime Warranty***

Model 71576
10 x 26

Model 71578
10 x 25 Wide Angle

Model 71579
8-24 x 25

Model 71575
8 x 26

Model 71577
8 x 25 Wide Angle

SPECIFICATIONS

Model	71575	71576	71577	71578	71579
Size	8 x 26	10 x 26	8 x 25 WA	10 x 25 WA	8-24 x 25
Design	Roof	Roof	Porro	Porro	Porro
Prisms	BAK-4	BAK-4	BAK-4	BAK-4	BAK-4
Coating	Multi-Coated	Multi-Coated	Multi-Coated	Multi-Coated	Multi-Coated
Weatherproof	Water Resistant	Water Resistant	Water Resistant	Water Resistant	Water Resistant
Angular Field of View (FOV°)	5.5	5.8	8.1	6.5	4.5 @ 8x
Linear FOV (ft @ 1000 yd)	288	304	425	341	236 @ 8x
Exit Pupil (mm)	3.3	2.6	3.1	2.5	3.1 @ 8x
Eye Relief (mm)	10	10	12	10	14
Near Focus (ft)	12	10	9	10	9 @ 8x
Weight (oz)	10	10	11	11	13

Outland™ Waterproof



The Outland Waterproof Series from Celestron is a spectacular value in roof prism binoculars. Sleek, modern styling with rubber covering for a secure and comfortable grip. High performance optics feature BAK-4 prisms and multi-coatings to ensure high contrast and resolution. Great for hunters but well suited to any sport or nature activity. All models are waterproof for use in all weather conditions.

Outland Waterproof Series Features:

- ***Multi-coated optics***
- ***Waterproof and fog proof — unaffected by climate and temperature changes***
- ***Protective rubber covering***
- ***Twist-up eyecups for quick adjustment for optimum eye relief (full-size models)***
- ***Molded finger impressions for a firm grip in any weather condition***
- ***Moisture resistant neoprene carrying case***
- ***Limited Lifetime Warranty***

Model 71166
10 x 25

Model 71165
8 x 25

Model 71168
10 x 42

Model 71167
8 x 42

Model 71169
12 x 50

SPECIFICATIONS

Model	71165	71166	71167	71168	71169
Size	8 x 25	10 x 25	8 x 42	10 x 42	12 x 50
Design	Roof	Roof	Roof	Roof	Roof
Prisms	BAK-4	BAK-4	BAK-4	BAK-4	BAK-4
Coating	Multi-Coated	Multi-Coated	Multi-Coated	Multi-Coated	Multi-Coated
Weatherproof	Waterproof	Waterproof	Waterproof	Waterproof	Waterproof
Angular Field of View (FOV°)	6.5	5.8	5.8	5.8	5.2
Linear FOV (ft @ 1000 yd)	341	304	304	304	273
Exit Pupil (mm)	3.1	2.5	5.3	4.2	4.2
Eye Relief (mm)	12	10	22	18	18
Near Focus (ft)	24	29	20	20	11
Weight (oz)	14	14	24	24	31



The Ultima Series from Celestron features porro prism models that provide superb image quality with BAK-4 prisms and fully multi-coated optics. Super lightweight for their apertures and all have long eye relief. Excellent depth of field provides a good overview without the need for constant refocusing. All are excellent for long distance viewing whether for action sports, nature and wildlife viewing, or for astronomical observation. **Lifetime No Fault Warranty.**

Ultima Series Features:

- ***Fully multi-coated optics***
- ***Suited for terrestrial and astronomical use***
- ***Diopter adjustment for sharp focusing***
- ***Soft carrying case***
- ***Tripod adaptable***
- ***Large center focus knob for easy focusing***

Model 71126
8 x 56

Model 71127
10 x 50

Model 71128
9 x 63

SPECIFICATIONS

Model	71126	71127	71128
Size	8 x 56	10 x 50	9 x 63
Design	Porro	Porro	Porro
Prisms	BAK-4	BAK-4	BAK-4
Coating	Fully Multi-Coated	Fully Multi-Coated	Fully Multi-Coated
Weatherproof	Water Resistant	Water Resistant	Water Resistant
Angular Field of View (FOV°)	6.1	5	5.4
Linear FOV (ft @ 1000 yd)	320	262	283
Exit Pupil (mm)	7	5	7
Eye Relief (mm)	21	21	21
Near Focus (ft)	30	29	30
Weight (oz)	31	27	35

Noble™



The Noble Series from Celestron feature roof prism models for the serious bird watcher, the avid hunter as well as the serious sports enthusiast. All models are rubber covered and fully waterproof. The binoculars feature BAK-4 prisms and have multi-coatings for high quality optical performance with vivid colors and very high contrast views. All feature extreme close focus performance – the 8 x 32 as close as 5 feet! **Lifetime No Fault Warranty**.

Noble Series Features:

- ***Incredible near focus for avid bird watchers***
- ***Multi-coated optics***
- ***Nitrogen filled and completely waterproof***
- ***Available in compact roof prism design***
- ***Protective rubber covering with ribbed exterior for firm grip***
- ***Long eye relief ideal for eyeglass and sunglass wearers***
- ***Twist-up eyecups for quick adjustment for optimum eye relief***
- ***Soft carrying case***

Model 71206
10 x 50

Model 71204
8 x 32

Model 71205
8 x 42

SPECIFICATIONS

Model	71204	71205	71206
Size	8 x 32	8 x 42	10 x 50
Design	Roof	Roof	Roof
Prisms	BAK-4	BAK-4	BAK-4
Coating	Multi-Coated	Multi-Coated	Multi-Coated
Weatherproof	Waterproof	Waterproof	Waterproof
Angular Field of View (FOV°)	7.5	6.5	5
Linear FOV (ft @ 1000 yd)	393	341	262
Exit Pupil (mm)	4	5.3	5
Eye Relief (mm)	20	20	20
Near Focus (ft)	5	8	9
Weight (oz)	19	23	27



The Regal LS Series from Celestron are designed with high-performance phase coated optics for brilliant views with rich contrast. These spectacular binoculars enhance the enjoyment of any outdoor pursuit from nature study, spectator sports, hunting, birding, fishing, to stargazing. Ideal for the active outdoors individual, the Regal LS Series binoculars are fully multi-coated, waterproof and fog proof. They feature rubber covering, pop-up eye cups, long eye-relief, click-stop diopter adjustment, and extreme near focus. The Regal LS Series binoculars come with a soft case and neckstrap as well as a **Lifetime No Fault Warranty**.

Regal LS Series Features:

- ***High performance phase-coated optics***
- ***Waterproof***
- ***Fog proof***
- ***Rubber covering***
- ***Pop-up eye cups***
- ***Long eye relief***
- ***Click-stop diopter adjustment***
- ***Extreme near focus***
- ***Soft case included***


Model 72015
10 x 50


Model 72010
8 x 42


Model 72001
8 x 25


Model 72012
10 x 42


Model 72003
10 x 25

SPECIFICATIONS

Model	72001	72003	72010	72012	72015
Size	8 x 25	10 x 25	8 x 42	10 x 42	10 x 50
Design	Roof	Roof	Roof	Roof	Roof
Prisms	BAK-4	BAK-4	BAK-4	BAK-4	BAK-4
Coating	FMC-PC*	FMC-PC*	FMC-PC*	FMC-PC*	FMC-PC*
Weatherproof	Waterproof	Waterproof	Waterproof	Waterproof	Waterproof
Angular Field of View (FOV°)	5.2	5	6.5	6	5
Linear FOV (ft @ 1000 yd)	272	262	341	314	262
Exit Pupil (mm)	3.1	2.5	5.3	4.2	5
Eye Relief (mm)	19	17	20	16	20
Near Focus (ft)	6	6	6	6	9
Weight (oz)	16	16	25	25	29

*FMC-PC= Fully Multi-Coated-Phase Coated

Oceana™



The Oceana Series from Celestron features waterproof models for marine use. Choose from three feature-rich models - whether you want center focus, traditional individual focus, or a model with a compass and reticle. All are rubber covered to protect against rough handling. All provide maximum optical performance with BAK-4 prisms and multi-coatings for sharp images with high contrast and resolution. Each model has a large, 50mm objective lens to offer maximum image brightness even in low light conditions, like dusk and dawn. Limited Lifetime Warranty.

7 x 50 CF Center Focus Features:

- *Smooth center focus wheel*
- *Easy-to-grip, large objective diopter ring for smooth and more precise focusing*
- *Attached objective caps*
- *Completely waterproof — dry nitrogen charged and sealed with internal O-rings to prevent internal fogging - unaffected by climate and temperature changes*
- *Tripod adapter fitting for tripod mounting*

Model 71187
7 x 50 CF

Model 71188
7 x 50 IF

7 x 50 IF/RC Reticle/Compass Features:

- *Backlit illuminated liquid dampened magnetic compass - excellent navigational tool for land or sea*
- *Horizontal and vertical etched reticle to help determine relative size of objects*
- *Rangefinding dial calculates actual object distance or size*
- *Completely waterproof — dry nitrogen charged and sealed with internal O-rings to prevent internal fogging - unaffected by climate and temperature changes*
- *Individual eyepiece focus with diopter scale for quick and accurate focusing*
- *Excellent depth of field for minimal focus adjustments*
- *Nautical style padded canvas case and straps*
- *Attached objective caps*
- *Tripod adapter fitting for tripod mounting*

Model 71189
7 x 50 IF/RC

7 x 50 IF Individual Focus Features:

- *Completely waterproof — dry nitrogen charged and sealed with internal O-rings to prevent internal fogging - unaffected by climate and temperature changes*
- *Individual eyepiece focus with diopter scale for quick and accurate focusing*
- *Excellent depth of field for minimal focus adjustments*
- *Nautical style padded canvas case and straps*
- *Attached objective caps*
- *Tripod adapter fitting for tripod mounting*

The Oceana Model 71189 IF/RC features a rangefinder scale with backlit compass.

SPECIFICATIONS

Model	71187	71188	71189
Size	7 x 50 CF	7 x 50 IF	7 x 50 IF/RC
Design	Porro	Porro	Porro
Prisms	BAK-4	BAK-4	BAK-4
Coating	Multi-Coated	Multi-Coated	Multi-Coated
Weatherproof	Waterproof	Waterproof	Waterproof
Angular Field of View (FOV°)	7	7	7
Linear FOV (ft @ 1000 yd)	367	367	367
Exit Pupil (mm)	7.1	7.1	7.1
Eye Relief (mm)	24	26	26
Near Focus (ft)	25	18	18
Weight (oz)	40	35	38



The SkyMaster Series of large aperture binoculars from Celestron offer phenomenal performance for astronomical viewing. They are also a great choice for terrestrial use, especially over long distances. All models feature high quality BAK-4 prisms and have multi-coatings for enhanced contrast. The 80 and 100mm models are waterproof and feature structural reinforcement of the main body for maximum stability and secure optical alignment–in addition, they have a built-in super-rigid photo tripod adapter.

SkyMaster Series Features:

- ***Waterproof (80 and 100 mm)***
- ***Multi-coated optics***
- ***High quality BAK-4 prisms***
- ***Large aperture perfect for low light conditions and stargazing***
- ***Integrated tripod adapter rod (80mm & 100mm)***
- ***Long eye relief ideal for eyeglass wearers***
- ***Diopter adjustment for fine focusing***
- ***Limited Lifetime Warranty***

80mm and 100mm models come with this deluxe padded soft carrying case.

70mm comes with a tripod adapter

Model 71009
15 x 70

Model 71017
25 x 100

Model 71016
20 x 80

SPECIFICATIONS

Model	71009	71016	71017
Size	15 x 70	20 x 80	25 x 100
Design	Porro	Porro	Porro
Prisms	BAK-4	BAK-4	BAK-4
Coating	Multi-Coated	Multi-Coated	Multi-Coated
Weatherproof	Water Resistant	Waterproof	Waterproof
Angular Field of View (FOV°)	4.4	3.3	3
Linear FOV (ft @ 1000 yd)	231	173	157
Exit Pupil (mm)	4.7	4	4
Eye Relief (mm)	18	15	15
Near Focus (ft)	43	51	80
Weight (oz)	48	82	157

OptiView™

OptiView Polarizers

Reduce reflections and glare, deepen the blue sky, intensify colors and penetrate haze with Celestron's OptiView filtered binocular. OptiView binoculars have integrated drop-down polarizing filters designed to block out unwanted glare and reflected light. OptiView binoculars are particularly useful for viewing outdoors over water and snow, or indoors for looking through glass or highly reflective areas- all without affecting the color of the object being observed.

Scattered light from the Sun becomes polarized when reflected off of glass, water or even moisture particles in our atmosphere. Using a polarizer filters out all this unwanted light and reduces the affect of reflected polarized light (glare) in the earth's atmosphere.

Without polarizing filter.

Polarizing filter reduces glare off water, deepens blue of sky, increases the contrast between sky and clouds.

OptiView LPR

Celestron OptiView LPR binoculars have built-in light pollution reduction (LPR) filters designed to selectively reduce the transmission of certain wavelengths of light, specifically those produced by artificial light (see chart below). This includes mercury, and both high and low pressure sodium vapor lights common in most city street lights. In addition, they block unwanted natural light caused by neutral oxygen emission in our atmosphere (i.e. sky glow). As a result, OptiView LPR binoculars darken the background sky, making deep-sky observation of nebulae, star clusters and even galaxies possible from urban areas. While blocking unwanted light, OptiView LPR binoculars permit the transmission of more desirable wavelengths including hydrogen alpha, hydrogen beta, doubly ionized oxygen and ionized nitrogen. This will improve your views of emission nebulae, both from urban and rural settings.

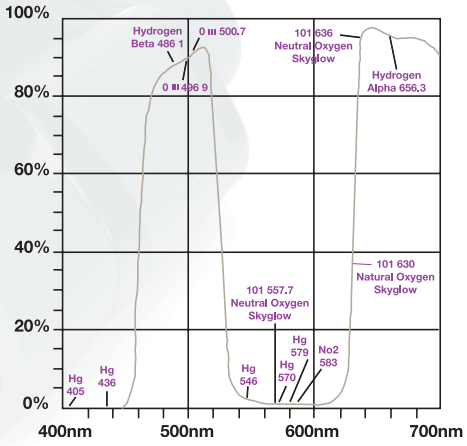
Some examples of objects that will show improved contrast are: the Orion Nebula, the Andromeda Galaxy and the Lagoon Nebula. Celestron OptiView LPR Filters are made of high quality, flat, polished optical glass with over 40 layers of coating. They're also protected with a broadband anti-reflection coating to prevent ghosting and to improve contrast.

Convenient thumb wheels to rotate filters into place.

SPECIFICATIONS

Model	72101	72102
Size	10 x 50 Polarizer	10 x 50 LPR
Design	Porro	Porro
Prisms	BK7	BK7
Coating	Fully Coated	Fully Coated
Weatherproof	Water Resistant	Water Resistant
Angular Field of View (FOV°)	7	7
Linear FOV (ft @ 1000 yd)	367	367
Exit Pupil (mm)	5	5
Eye Relief (mm)	13	13
Near Focus (ft)	26	26
Weight (oz)	30	30

Warranty: Limited Lifetime






The Celestron VistaPix series consists of a high quality integrated binocular and a state-of-the-art digital camera in one compact, easy-to-use unit. VistaPix comes complete with everything you need to see and store images, and view them on your personal computer or laptop. You simply aim and focus the binoculars, then press a button, and the digital camera automatically records the image you see into its internal memory. Once you download and save your images to your PC via the supplied USB cable, you can zoom in, crop, and manipulate them using the included VistaPix Photo Manager Software. Imagine photographing exactly what you see, and creating images that you can print or e-mail. The VistaPix 10 x 25 model even *allows you to view your images directly from your TV.* The VistaPix 8 x 30 SD model includes a high-capacity 16MB memory card and is expandable to 256MB. VistaPix is perfect for all kinds of activities including sporting events, family gatherings, concerts, birding, surveillance, nature, to name a few. With VistaPix, what you see is what you'll keep! **All models have a 2-year limited warranty**.

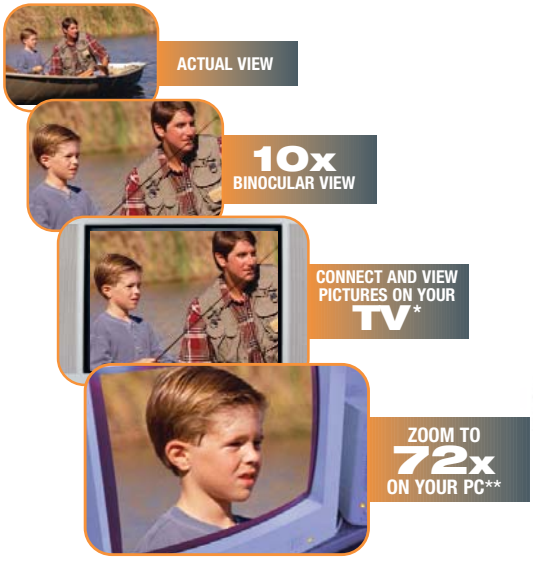
Model 72200
8 x 22 Binocular

Model 72201
8 x 30 Binocular

Model 72203
8 x 30 Binocular with SD Card
1.3 Megapixel Digital Camera

Model 72202
10 x 25 Binocular
1.3 Megapixel Digital Camera

VistaPix™



*Model 72202 ONLY **With supplied software.

< All VistaPix models feature video capture! >

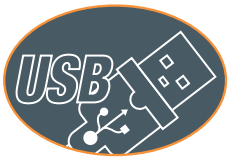
SEE IT!

See up close with 10x binocular (or 8x with some models).

SAVE IT!

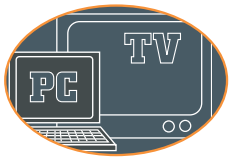
Click and save with built-in digital camera.

CONNECT IT!



Connect to your PC with supplied USB cable.

VIEW IT!



View on your TV with supplied video cable or download images on your PC. (Model 72202 only.)

ZOOM IT!

Digitally enlarge images up to 72x with supplied software.

SPECIFICATIONS

Binocular Specifications:

Model	72200	72201	72202	72203
Size	8 x 22	8 x 30	10 x 25	8 x 30
Coating	Fully Coated	Fully Coated	Multi-Coated	Multi-Coated
Prism	Roof	Roof	Roof	Roof
Angular Field of View (FOV°)	7	5.8	4.6	5.8
Linear FOV (ft @ 1000 yd)	367	304	241	304
Near Focus (ft)	16	11	10	16
Eye Relief (mm)	11	12	10	12
Tripod Adaptable	Yes	Yes	No	Yes

Digital Camera Specifications:

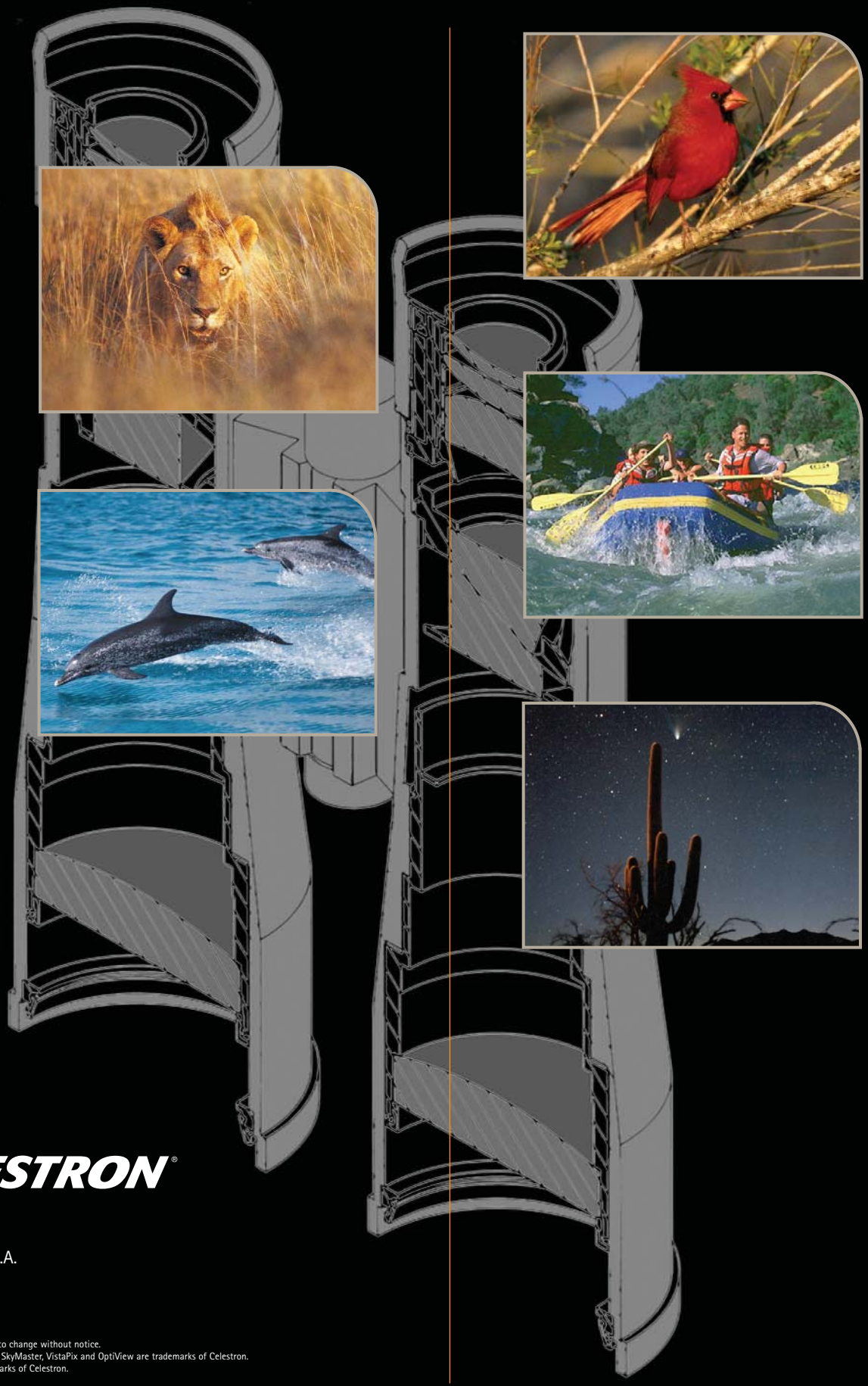
Resolution	640 x 480	640 x 480	1280 x 960	1280 x 960
Megapixels	0.3	0.3	1.3	1.3
Image Sensor	CMOS	CMOS	CMOS	CMOS
Memory	8MB SDRAM	8MB SDRAM	16MB Flash	16MB SD Card
Angular Field of View (FOV°)	7.5 x 5.6	6.4 x 5	7.3 x 5.8	9 x 7.3
Focus Range	33 ft. to infinity	33 ft. to infinity	49 ft. to infinity	49 ft. to infinity
TV Out Preview	N/A	N/A	NTSC/PAL	N/A
Hi-Res Images	160	160	40	45*
Lo-Res Images	580	580	160	182*
Self-Timer	10 sec.	10 sec.	10 sec.	10 sec.
Continuous Video (approx.)	2 min.	2 min.	1 min.	2 min.
Weight	9 oz.	12 oz.	12 oz.	14 oz.
Batteries Required (not included)	2-AAA (Alkaline)	2-AAA (Alkaline)	4-AAA (Alkaline)	2-AAA (Alkaline)

*With included 16MB memory card.

Model Number	Size	Design	Prisms	Coating	Weather Proof	Angular Field of View (FOV°)	Linear FOV (ft @ 1000 yd)
UpClose							
71132	8x21	Roof	BK7	Fully Coated	Water Resistant	7	367
71133	10x25	Roof	BK7	Fully Coated	Water Resistant	5.5	288
71134	12x25	Roof	BK7	Fully Coated	Water Resistant	4.5	236
71135	16x32	Roof	BK7	Fully Coated	Water Resistant	3.7	194
71136	7x35	Porro	BK7	Fully Coated	Water Resistant	8	420
71137	10x50	Porro	BK7	Fully Coated	Water Resistant	7	367
71138	12x50	Porro	BK7	Fully Coated	Water Resistant	5.2	273
71139	7-15x35	Porro	BK7	Fully Coated	Water Resistant	5.5 @ 7x	288 @ 7x
71140	10-30x50	Porro	BK7	Fully Coated	Water Resistant	4.1 @ 10x	215 @ 10x
Traveler							
71575	8x26	Roof	BAK-4	Multi-Coated	Water Resistant	5.5	288
71576	10x26	Roof	BAK-4	Multi-Coated	Water Resistant	5.8	304
71577	8x25	Porro	BAK-4	Multi-Coated	Water Resistant	8.1	425
71578	10x25	Porro	BAK-4	Multi-Coated	Water Resistant	6.5	341
71579	8-24x25	Porro	BAK-4	Multi-Coated	Water Resistant	4.5 @ 8x	236 @ 8x
Outland							
71165	8x25	Roof	BAK-4	Multi-Coated	Waterproof	6.5	341
71166	10x25	Roof	BAK-4	Multi-Coated	Waterproof	5.8	304
71167	8x42	Roof	BAK-4	Multi-Coated	Waterproof	5.8	304
71168	10x42	Roof	BAK-4	Multi-Coated	Waterproof	5.8	304
71169	12x50	Roof	BAK-4	Multi-Coated	Waterproof	5.2	273
Ultima							
71127	10x50	Porro	BAK-4	Fully Multi-Coated	Water Resistant	5	262
71126	8x56	Porro	BAK-4	Fully Multi-Coated	Water Resistant	6.1	320
71128	9x63	Porro	BAK-4	Fully Multi-Coated	Water Resistant	5.4	283
Noble							
71204	8x32	Roof	BAK-4	Multi-Coated	Waterproof	7.5	393
71205	8x42	Roof	BAK-4	Multi-Coated	Waterproof	6.5	341
71206	10x50	Roof	BAK-4	Multi-Coated	Waterproof	5	262
Regal LS							
72001	8x25	Roof	BAK-4	Fully Multi-Coated, Phased-Coated	Waterproof	5.2	272
72003	10x25	Roof	BAK-4	Fully Multi-Coated, Phased-Coated	Waterproof	5	262
72010	8x42	Roof	BAK-4	Fully Multi-Coated, Phased-Coated	Waterproof	6.5	341
72012	10x42	Roof	BAK-4	Fully Multi-Coated, Phased-Coated	Waterproof	6	314
72015	10x50	Roof	BAK-4	Fully Multi-Coated, Phased-Coated	Waterproof	5	262
Oceana							
71187	7x50CF	Porro	BAK-4	Multi-Coated	Waterproof	7	367
71188	7x50IF	Porro	BAK-4	Multi-Coated	Waterproof	7	367
71189	7x50IF/RC	Porro	BAK-4	Multi-Coated	Waterproof	7	367
SkyMaster							
71009	15x70	Porro	BAK-4	Multi-Coated	Water Resistant	4.4	231
71016	20x80	Porro	BAK-4	Multi-Coated	Waterproof	3.3	173
71017	25x100	Porro	BAK-4	Multi-Coated	Waterproof	3	157
OptiView							
72101	10x50POL	Porro	BK7	Fully Coated	Water Resistant	7	367
72102	10x50LPR	Porro	BK7	Fully Coated	Water Resistant	7	367

Specifications

Exit Pupil (mm)	Eye Relief (mm)	Near Focus(ft)	Dimensions (HxWxD)mm	Weight (oz)	Tripod Adaptable	Warranty
2.6	11	7	95 x 108 x 32	7	No	Limited Lifetime
2.5	10	18	114 x 114 x 44	9	No	Limited Lifetime
2.1	10	14	114 x 114 x 32	9	No	Limited Lifetime
2	10	25	140 x 146 x 38	11	No	Limited Lifetime
5	11	15	127 x 178 x 57	24	Yes	Limited Lifetime
5	11	24	165 x 197 x 64	25	Yes	Limited Lifetime
4.2	12	26	171 x 197 x 64	25	Yes	Limited Lifetime
5	15	18@ 7x	133 x 178 x 57	21	Yes	Limited Lifetime
5	14	27@ 10x	191 x 197 x 64	29	Yes	Limited Lifetime
3.3	10	12	121 x 108 x 44	10	No	Limited Lifetime
2.6	10	10	121 x 108 x 44	10	No	Limited Lifetime
3.1	12	9	102 x 127 x 57	11	No	Limited Lifetime
2.5	10	10	102 x 127 x 57	11	No	Limited Lifetime
3.1	14	9 @ 8x	121 x 114 x 64	13	No	Limited Lifetime
3.1	12	24	108 x 108 x 51	14	No	Limited Lifetime
2.5	10	29	108 x 108 x 51	14	No	Limited Lifetime
5.3	22	20	159 x 127 x 57	24	No	Limited Lifetime
4.2	18	20	159 x 127 x 57	24	No	Limited Lifetime
4.2	18	11	159 x 140 x 64	31	No	Limited Lifetime
5	21	29	171 x 191 x 64	27	Yes	Lifetime No Fault
7	21	30	203 x 197 x 64	31	Yes	Lifetime No Fault
7	21	30	229 x 203 x 70	35	Yes	Lifetime No Fault
4	20	5	121 x 127 x 51	19	Yes	Lifetime No Fault
5.3	20	8	146 x 127 x 51	23	Yes	Lifetime No Fault
5	20	9	171 x 133 x 57	27	Yes	Lifetime No Fault
3.1	19	6	114 x 108 x 38	16	No	Lifetime No Fault
2.5	17	6	114 x 108 x 44	16	No	Lifetime No Fault
5.3	20	6	146 x 127 x 51	25	Yes	Lifetime No Fault
4.2	16	6	146 x 127 x 51	25	Yes	Lifetime No Fault
5	20	9	178 x 133 x 57	29	Yes	Lifetime No Fault
7.1	24	25	178 x 197 x 64	40	Yes	Limited Lifetime
7.1	26	18	178 x 197 x 64	35	Yes	Limited Lifetime
7.1	26	18	146 x 203 x 76	38	Yes	Limited Lifetime
4.7	18	43	279 x 216 x 83	48	Included	Limited Lifetime
4	15	51	318 x 254 x 89	82	Built-in	Limited Lifetime
4	15	80	406 x 279 x 127	157	Built-in	Limited Lifetime
5	13	26	178 x 196 x 64	30	Yes	Limited Lifetime
5	13	26	178 x 196 x 64	30	Yes	Limited Lifetime



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