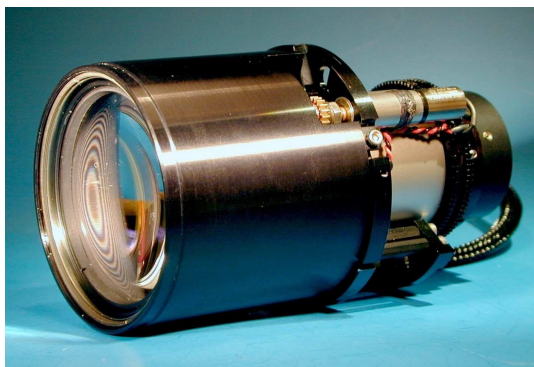


Cerco[®] NON BROWNING ZOOMS & OBJECTIVES

1) NON BROWNING (radiation tolerant) ZOOMS

CERCO[®] non-browning zoom lenses and optical attachments are off the shelf products ; more often, small quantities could be delivered from stock in a short time.

Zoom type, reference number	35-135 F/2.7 ref. 2082	18-78 F/2.7 ref. 2219	22-90 F/3.5 ref 1682	11-49 F/3.5 ref 2217
Optical characteristics				
Focal length (mm)	35 to 135	18 to 78	22 to 90	11 to 49
Motorised F/stop	F/ 2.7 to F/ 22	F/ 2.7 to F/ 22	F/ 3.5 to F/ 32	F/ 3.5 to F/ 22
Motorised Focus range	80 cm to infinity	23 cm to infinity	25 cm to infinity	12 cm to infinity
Max picture size (mm)	16 mm	16 mm	11 mm	11 mm
Video format	1" and 2/3 "format	1" and 2/3 "format	2/3" format	2/3" format
Angular field of view (Focus at long distance)	<i>Video 1"</i> Wide 15.7°x 21° Tele 4.1°x 5.5°	<i>Video 1"</i> Wide 28°x 38° Tele 7.2°x 9.6°	<i>Video 2/3 "</i> Wide 17,1°x 22.6° Tele 4.3°x 5.7°	<i>Video 2/3 "</i> Wide 32°x 41° Tele 7.7°x 10.2°
Object frame (mm) at close up focus (mm) and tele focal length	<i>Video 1"</i> : 65 x 86	<i>Video 1"</i> : 27 x 35	<i>Video 2/3"</i> 15 x 20	<i>Video 2/3"</i> 16 x 22
Average transmission over 550 to 800 nm wavelengths range	0.82 (begin of life) > 0.50 (1 MGy dose)	0.76 (begin of life) 0.40 (1 MGy dose)	0.83 (begin of life) > 0.50 (1 Mgy dose)	0.79 (begin of life) > 0.48 (1 Mgy dose)
physical characteristics				
Camera interface	"C" mount	"C" mount	"C" mount	"C" mount
Max overall diameter	Ø 76 mm	Ø 76 mm	Ø 50 mm	Ø 50 mm
Length from C mount	132 mm	166.5 to 180 mm	93 mm	97 to 113 mm
Weight	900 g	980 g	280 g	330 g
Motorisation				
Gear motor, Voltage (standard)	DC 12 V	DC 12 V	DC 12 V	DC 12 V
Environment				
Temperature operating	+ 10°C to + 70°C	+ 10°C to + 70°C	+ 10°C to + 70°C	+ 10°C to + 70°C
Non-operating	-20°C to + 85°C	-20°C to + 85°C	-20°C to + 85°C	-20°C to + 85°C
Radiation tolerance cumulated dose and max rate	up to 2 MGy (max rate 5 kGy/h)	up to 2 MGy (max rate 5 kGy/h)	up to 2 MGy (max rate 5 kGy/h)	up to 2 MGy (max rate 5 kGy/h)



radiation tolerant 35-135 F/ 2.7 zoom



radiation tolerant 22-90 F/ 3.5 zooms

2) RADIATION TOLERANT OPTICAL ATTACHEMENTS FOR ZOOMS

Wide angle attachment (focal reducer) X 1/ 1.8 :

reference CERCO 1656

To be adapted at front of the 22-90 F/3.5 zoom ; the assembly corresponds to a 12.5-50 F/3.5 for 2/3 video format, with focus distances from 8 cm to infinity ; Field of view varies from 28°x38° to 7.5°x10°.

The production of this wide angle attachment will stop at end of 2009

Range extender X 2 :

reference CERCO 1818

22-90 F/3.5 zoom is equivalent to a 44-180 F/7 when fitted at C mount with attachment ref. 1818

35-135 F/2.7 zoom is equivalent to a 70-270 F/5.4 when fitted at C mount with attachment ref. 1818

3) Cerco[®] NON BROWNING FIX FOCAL LENSES

Cerco non-browning fix focal lenses are manufactured by specific batch against small or large volume orders (minimum quantity 3 pieces)

Most of lens types are available on two versions :

- version 00 with motorized iris diaphragm and focus travel
- version 02 with fix aperture (at max F/stop) and ∞ fix focus

Cerco non-browning lenses withstand cumulated radiation : dose up to 500 Mrad (max rate 1 Mrad/ hour)

Camera interface : C Mount



Types	Ref. number	Video format	Field of view	F/ number	Focus
8 F/1.5 N	CERCO 1935-00	2/3"	45° x 58°	F/1.5 to F/16 motorized	∞ fixed
12 F/1.5 N	CERCO 1745-02	1 " and 2/3"	43° x 55°	F/1.5 fixed	∞ fixed
12 F/1.5 N	CERCO 1745-00	1 " and 2/3"	43° x 55°	F/1.5 to F/16 motorized	∞ fixed
16 F/2.8 N	CERCO 1725-02	1 " and 2/3"	31° x 41°	F/ 2.8 fixed	∞ fixed
16 F/2.8 N	CERCO 1725-00	1 " and 2/3"	31° x 41°	F/2.8 fixed	5 cm to ∞ motorized
25 F/2.8 N	CERCO 1751-02	1 " and 2/3"	22° x 29°	F/ 2.8 fixed	∞ fixed
25 F/2.8 N	CERCO 1751-00	1 " and 2/3"	22° x 29°	F/2.8 to F/16 motorized	8 cm to ∞ motorized
35 F/2.8 N	CERCO 1746-02	1 " and 2/3"	15.5° x 21°	F/ 2.8 fixed	∞ fixed
35 F/2.8 N	CERCO 1746-00	1 " and 2/3"	15.5° x 21°	F/2.8 to F/16 motorized	18 cm to ∞ motorized
50 F/2.8 N	CERCO 1754-02	1 " and 2/3"	11° x 14.5°	F/ 2.8 fixed	∞ fixed
50 F/2.8 N	CERCO 1754-00	1 " and 2/3"	11° x 14.5°	F/ 2.8 to F/16 motorized	35 cm to ∞ motorized
75 F/ 3.5 N	CERCO 1754-02	1 " and 2/3"	6.5° x 5°	F/ 3.5 fixed	∞ fixed

Note : the delivery of non-browning zooms or lenses outside the European Union and some other countries is dependant on an export licence delivered by the French Authorities ; in such case, an end user certificate will be requested.

NB : SODERN reserves the right to change technical characteristics without notice

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