



1. General Requirements

These requirements apply to all lenses. Fill in all information that is available.

Parameter	Instruction	Value	Notes
Lens Type	Indicate type	<input type="checkbox"/> Infinite Conjugate <input type="checkbox"/> Finite Conjugate	Infinite conjugate lenses focus to infinity; finite conjugate lenses focus at a short distance only.
Maximum Aperture	Specify min f-no	f/	If a range is permissible, indicate it.
Iris Type	Select iris type	<input type="checkbox"/> Fixed <input type="checkbox"/> Insertable apertures <input type="checkbox"/> Manual <input type="checkbox"/> Motorized <input type="checkbox"/> Motorized with feedback <input type="checkbox"/> None	Lenses with a fixed iris have no adjustable f-stop. Insertable apertures are plastic plates with calibrated holes.
Minimum Aperture	Specify max f-no	f/	The practical limit is about f/22
Iris Closure	Select iris closure	<input type="checkbox"/> Iris must close to zero <input type="checkbox"/> Iris closes to max f-no <input type="checkbox"/> N/A	Full closure blocks all incoming light.
Image Diameter	Specify in mm	mm	This is typically the diagonal of the image sensor.
Pixel Pitch	Specify in μm	μm	If the pixels are not in a square matrix, specify both H and V pitch (spacing).
Vignetting	Specify in %	%	This is the falloff in brightness at the max. image diameter compared to the center.
Wavelength Range	Specify in nm	Min nm Max nm	This is the minimum and maximum wavelengths for which the lens will be optimally coated and produce minimum chromatic aberration. 3000 nm max.
Spot Wavelength	Specify in nm	nm	Any special requirements for operation at these wavelengths should be described in the applications information section below.
Focus Type	Select focus type	<input type="checkbox"/> Fixed <input type="checkbox"/> Manual <input type="checkbox"/> Motorized <input type="checkbox"/> Motorized with feedback	For fixed focus, infinite conjugate lenses are fixed at infinity and finite conjugate lenses are set at the operating distance.
Distortion	Specify in %	%	This is the maximum allowed displacement of any image point compared to the theoretical position scaled to the image diameter.

2. Specific Requirements – Infinite Conjugate

Fill this section in only for lenses that include infinity focus.

Parameter	Instruction	Value	Notes
Focal Length	Specify in mm	mm	If a zoom lens is required fill out the zoom section below.
Minimum Focus	Specify in m	m	The typical limit is about 10 x focal length except for macro lenses.



Optec NIR Lenses Custom Lens Description

3. Specific Requirements – Finite Conjugate

Fill in this section only for lenses that are used at short object distances.

Parameter	Instruction	Value	Notes
Operating Distance	Specify in mm	mm	Operating distances in the range 50-2000 mm are typical depending on magnification.
Magnification	Specify as ratio	:	The ratio is image side : object side. Ranges from 5:1 to 1:5 are typical.
Telecentricity	Specify side(s)	<input type="checkbox"/> Object side <input type="checkbox"/> Image side	Singly or doubly telecentric designs are possible. Max aperture is f/5.6.

4. Specific Requirements – Zoom Lenses (All Types)

Fill in this section only for zoom (variable focal length) lenses

Parameter	Instruction	Value	Notes
Focal Length Range	Specify in mm	Min mm Max mm	The practical ratio limit max/min is about 5:1. The minimum limit is roughly equal to the image diameter.
Minimum focus	Specify in m	m	The typical limit is about 10 x focal length
Zoom Type	Select zoom type	<input type="checkbox"/> Manual <input type="checkbox"/> Motorized <input type="checkbox"/> Motorized with feedback	Extremely accurate motorized zoom lenses can be supplied using external cams. Ask for details.

5. Mechanical Requirements

Parameter	Instruction	Value	Notes
Lens mount	Specify type	<input type="checkbox"/> Canon FD <input type="checkbox"/> "C" <input type="checkbox"/> Nikon F <input type="checkbox"/> Other -	The opening in the mount must be larger than the image diameter. Canon FD is preferred. If a custom mount or non-standard back focal distance is needed, describe in the Applications Information section below.
Finish	Specify type	<input type="checkbox"/> Black anodized <input type="checkbox"/> Other -	All lens barrels are aluminum. If other materials are needed, describe in the Applications Information section below.
Markings	Describe any special markings required		Markings are generally white on black.
Size	Describe limitations		Lens size and weight are generally defined by optical requirements but these limitations can be discussed
Weight	Describe limitations		



6. Electrical Requirements

Parameter	Instruction	Value	Notes
Interfaces	Describe requirements		Connectors and pinouts for motorized iris, focus and zoom can be specified.
Motor Voltage	Select motor type	<input type="checkbox"/> 6 VDC <input type="checkbox"/> 12 VDC <input type="checkbox"/> Other -	Miniature motors are used in all cases.
Feedback Values	Select resistance	Iris kohm Focus kohm Zoom kohm	Feedback pots are continuous rotation types.

7. Applications Information

Include any explanations from the sections above, any additional environmental (temperature, pressure, vibration, humidity, etc.), electrical (ESD, nearby transmitters, etc.) mechanical (mounting position, CG limits, mounting preferences, etc.) requirements and any applications data that can be provided.

For further information:

North America

Alternative Vision Corporation
5575-121 E River Rd #263
Tucson, AZ 85718 USA

Phone: +1-520-615-4073
Fax: +1 520-844-6332

E-mail: info@alt-vision.com

Website: www.alt-vision.com

All Other Areas

Optec S.p.A.
via Mantegna, 34
I-20015 Parabiago (MI) Italy

Phone: +39 (0331) 491945
Fax: +39 (0331) 495091

E-mail: info@optec-spa.com

Website: www.optec-spa.com

Local Representative