

SWIR continuous zoom – commercial off the shelf lens

# CAMELLIA

SWIR 20 - 140mm F/3.8 Continuous zoom  
Lens for 9.6 x 7.68mm detectors

**IN  
PRODUCTION**

## FEATURES / APPLICATIONS / CAPABILITIES

- Compact design with superb performances
- True high performance zoom lens built for SWIR detectors

PARAMETER		VALUE	NOTES
Main	Sub		

🕒 OPTICAL			
<b>Focal Length / F#</b>		20 – 140 mm / F3.8	Continuous zoom lens, Nominal values
<b>Working spectral band</b>		0.9 – 1.7μ	
<b>Detector (FPA) type / size</b>		Up to 9.6 x 12.8 mm	12μ, 15μ or 20μ pitch
<b>FOV (degrees)</b>		Narrow: 3.88°(H) x 3.1° (V) Wide: 27.6°(H) x 22.0° (V)	F/3.8 constant for all zoom positions.
Optical Coatings			
	<b>All internal surfaces</b>	High efficiency AR coating	Average transmission: > 85%
	<b>Front surface</b>	High durability AR coating	Other coatings available on request.
<b>Optical Back Focal Length</b>		16.25 mm	Nominal, to FPA
⚙️ MECHANICAL			
<b>Mechanical Back Focal Length</b>		17.5	C-Mount standard
<b>Focus / Zoom mechanism</b>		Motorized	Iris exist – can be motorized
<b>LOS shift during focusing</b>		0.15 mm on PFA (10 pixels)	Typical value
<b>Focus / Zoom indication position</b>		Included	Through encoder of motor and opto-switch.
<b>Total Weight</b>		~ 1.4 kg	
<b>Structure</b>		Open frame, Front element sealed to front element flange.	
<b>External Dimensions</b>		Max dimension: 109mm diameter x 187 mm Length	
💡 ELECTRICAL			
<b>Power Input</b>		12VDC, 1.0 A	Nominal
<b>Communication Protocol</b>		RS-422/232 Full Duplex	Baud rate 19,200, n, 8, 1
🌿 ENVIRONMENTAL			
<b>Operating Temperature</b>		-20°C to +50°C	
<b>Storage Temperature</b>		-30°C to +70°C	
<b>Shock and Vibrations</b>		Per applicable standard	
<b>Front lens sealing</b>		IP67	

