



	ORCA-Flash4.0 LT3 Digital CMOS camera	ORCA-Fusion BT Digital CMOS camera
Product		
Imaging device	Scientific CMOS image sensor	Scientific CMOS image sensor
Effective number of pixels	2048 (H) × 2048 (V)	2304 (H) × 2304 (V)
Pixel Size	6.5 μm (H) × 6.5 μm (V)	6.5 μm × 6.5 μm
Effective Area	13.312 mm (H) × 13.312 mm (V)	14.976 mm (H) × 14.976 mm (V)
Full well capacity	30 000 electrons	15 000 electrons
Readout noise	1. Rapid rolling : 1.9 electrons (rms) , 1.3 electrons (median) 2. Standard scan : 1.5 electrons rms / 0.9 electrons median	1. Fast scan : 1.6 electrons rms 2. Standard scan : 1.0 electrons rms 3. Ultra-quiet scan: 0.7 electrons rms
Exposure times	1. Internal trigger mode (Rapid rolling) : 1 ms to 10 s 2. Internal trigger mode *3 (Standard scan) : 3 ms to 10 s 3. Internal trigger mode with sub-array readout (Rapid rolling) : 40 μs to 10 s 4. Internal trigger mode with sub-array readout (Standard scan) : 129.99 μs to 10 s	1. Fast scan : 17 μs to 10 s 2. Standard scan : 65 μs to 10 s 3. Ultra quiet scan : 280 μs to 10 s
Cooling method	Forced-air cooled, peltier cooling	Peltier cooling
Cooling temperature	+10 °C (Forced-air cooled, FAN speed: Fast ambient temperature: +10 °C to +30 °C)	1. Forced-air cooled (Ambient temperature: +25 °C) : -8 °C 2. Water cooled (Water temperature: +25 °C) : -8 °C 3. Water cooled (Max cooling (Ambient temperature: +20 °C, water temperature: +20 °C) : Less than -15 °C
Dark current (typ.)	0.6 electrons/pixel/s (typ.) (Cooling temperature: +10 °C)	1. 1.0 electrons/pixel/s (cooling temperature: -8 °C , Ambient temperature: +25 °C) 2. 1.0 electrons/pixel/s (cooling temperature: -8 °C , Water temperature: +25 °C) 3. 0.7 electrons/pixel/s (cooling temperature: Less than -15 °C , Ambient temperature: +20 °C, water temperature: +20 °C)
Readout speed	Rapid rolling : 40 frames/s Standard scan : 30 frames/s	1. Fast scan, Full resolution, CoaXPress : 89.1 frames/s 2. Fast scan, Full resolution, USB 3.0 : 31.6 frames/s (16 bit), 42.2 frames/s (12 bit) ,63.3 frames/s (8 bit) 3. Standard scan, Full resolution, CoaXPress : 23.2 frames/s 4. Standard scan, Full resolution, USB 3.0 : 23.2 frames/s 5. Ultra quiet scan, Full resolution, CoaXPress : 5.42 frames/s 6. Ultra quiet scan, Full resolution, USB 3.0 : 5.42 frames/s
Lens mount	C-mount	C-mount (standard), F-mount (C15440-20UP01)
Power supply	AC 100 V to AC 240 V, 50 Hz / 60 Hz	AC 100 V to AC 240 V, 50 Hz/60 Hz
Power consumption	Approx. 75 VA	Approx. 155 VA
Interface	USB 3.1 Gen 1	CoaXPress (Dual CXP-6) and USB 3.0 Super Speed *5