

❖ **EL-2800-MCL**
2.8-megapixel Progressive Scan CCD



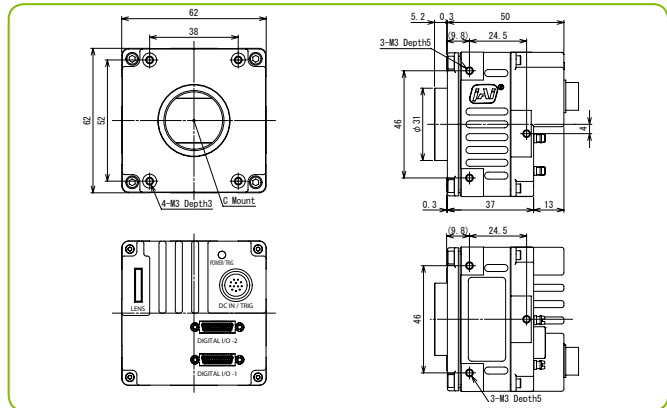
- *2/3" progressive scan CCD*
- *50 fps at full resolution*
- *4.54 μm square pixels with 4:3 aspect ratio*
- *Latest Sony ExView HAD pixel technology for increased sensitivity and NIR response*
- *Monochrome or color models with built-in color interpolation on color model*
- *Fixed and variable partial scanning for increased frame rates*
- *Vertical and horizontal binning on monochrome model*
- *Flat-field, color-shading, and pixel blemish correction*
- *8/10/12-bit digital output over two-channel Mini Camera Link interface*
- *C-mount lens mount*
- *Automatic Level Control (ALC) for dynamic lighting conditions*
- *Programmable P-iris lens control or optional 3-axis DC-iris control for operation of motorized lenses, pan/tilt heads, or other analog accessories*

Specifications for EL-2800-MCL

Elite Series

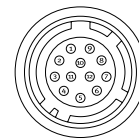
Specifications		EL-2800-MCL
Sensor		2/3" progressive scan CCD (ICX674)
Pixel Clock		54 MHz
Frame rate, full frame		50 frames/sec.
Active area		8.71 mm (h) x 6.54 mm (v)
Cell size		4.54 μm (h) x 4.54 μm (v)
Active pixels		1920 (h) x 1440 (v)
Horizontal output frequency		40.693kHz
Read-out modes Full Programmable partial scan		1920 (h) x 1440 (v) 50 fps Start line from 0 to 1430, height from 8 to 1440 lines
Binning		(1L steps mono, 2L steps color) 24,574 μs per line 1x2, 2x1, 2x2 (monochrome only)
Sensitivity (EL-2800M)		0.87 lux (no IR cut, shutter off, max. gain, f1.4, 50% video)
Sensitivity (EL-2800C)		1.7 lux (shutter off, max. gain, f1.4, 50% green)
S/N ratio mono color		>57 dB. (0 dB gain) >55 dB. (0 dB gain, green)
Video signal output mono color		8/10/12-bit monochrome 8/10/12-bit raw Bayer, or RGB/YUV interpolated
Auto-iris lens video output		0.7Vp-p, with 0.3V horiz. sync
Gain Monochrome Color		Manual/automatic -3 dB to +24 dB Manual/automatic 0 dB to +24 dB
White balance (EL-2800C)		Manual, one-push auto, or continuous (3000K to 9000K)
Gamma		0.45-1.0 (16 steps) or 256-point LUT
Synchronization		Internal
Inputs/Outputs		GPIO in/out through Hirose 12-pin connector
Trigger input		Line1, Line2, PG1, PG2, Software1
Trigger modes		EPS, PIV, Trigger Width, RCT (with ALC), Delayed Readout, Sequence
Electronic shutter Timed exposure Auto shutter		10 μs to 8 sec in 1 μs steps 1/50 to 1/100,000 sec.
Auto level control (ALC)		Shutter range from 1/50 to 1/100,000, gain range from 0 dB to +24 dB, auto iris control Tracking speeds and max values adjustable
Pre-processing functions		Flat field correction, color shading correction (EL-2800C), blemish compensation (512 pixels)
3-axis control		Programmable control of motorized lenses, pan/tilt heads, and other analog accessories
Operating temperature		-5° C to +45° C
Storage temperature		-45° C to +70° C
Humidity		20 - 80% non-condensing
Vibration		10G (20 Hz to 200 Hz XYZ)
Shock		80 G
Regulations		CE (EN 61000-6-2, EN 61000-6-3), FCC part 15 class B, RoHS/WEEE
Power		12V to 24V DC ± 10%. 5.22W typical (full frame @ 12V)
Lens mount		C-mount
Dimensions (H x W x L) C-mount		62 mm x 62 mm x 55.5 mm
Weight		260 g

Dimensions



Connector pin-out

DC In / Trigger



HIROSE HR10A-10R-12PB-01

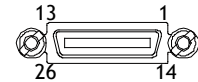
Connector Pin-out

Pin	Signal
1	GND
2	+12V to +24V DC input
3	Opto in 2(-)* / GND
4	Opto in 2(+)* / Auto iris lens
5	Opto in 1(-)
6	Opto in 1(+)
7	Opto out 1(-)
8	Opto out 1(+)
9	Opto out 2(-)
10	Opto out 2(+)
11	+12V to +24V DC input
12	GND

* Pins 3 and 4 can be configured by internal switch selection

Mini-CL interface

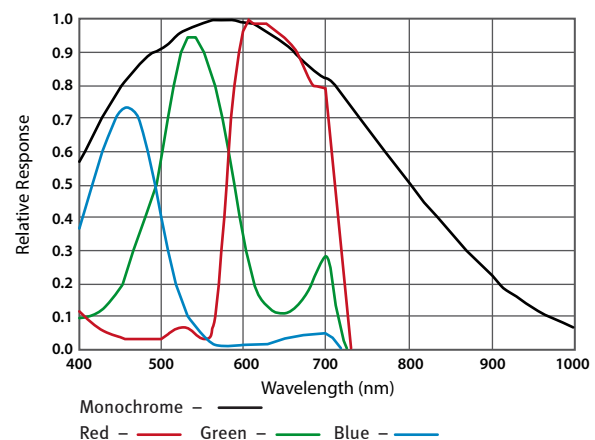
Interface 1



Pin	Signal	Function
1	GND	
13	GND	
14	GND	
26	GND	
2	15	-/+ TxOUT 0
3	16	-/+ TxOUT 1
4	17	-/+ TxOUT 2
5	18	-/+ TxClk
6	19	-/+ TxOUT 3
7	20	+/- RXD
8	21	+/- TXD
9	22	CC1- / CC1+
10	23	CC2+ / CC2-
11	24	CC3- / CC3+
12	25	CC4+ / CC4-

For Medium or Full implementations a second Mini-CL interface is provided. Video channel Y is on pin pairs (2,15), (3,16), (4,17), (5,18), and (6,19). Video channel Z is on pin pairs (8,21), (9,22), (10,23), (11,24) and (12,25). Consult manual for specific bit depths and pin assignments.

Spectral Response



Color Interpolation (in-camera)

RGB	50 fps (24-bit)
YUV	50 fps (4:1:1), 40 fps (4:2:2)

Ordering Information

EL-2800M-MCL	Monochrome camera with Mini Camera Link
EL-2800C-MCL	Color camera with Mini Camera Link

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