

# Fire-i 400 Industrial Camera

## Technical Specifications

### Accuracy... Resolution... Speed!!!

**Device type** IIDC FireWire

Digital Camera

**Compliance** v 1.04

**Interface** FireWire, 2 ports ( 6 pins )

**Speed** 400 Mbps

**Sensor type** SONY® Wfine\* 1/4" CCD

**Scanning** progressive

**Effective pixels (H x V)** 659 x 494

**Pixel shape (H x V)** square, 5.6 x 5.6 µm

**Color** Yes, RGB filtering, Bayer

**Resolution TV-lines (H x V)** 480 x 480



**SAVE POWER!**

**ON Mode** (LED Color: Green)

Camera is transmitting,  
Power is 0.9 Watt

### Picture Calibration

Camera has Color Bar mo



### Optics C-Mount

Click here for **Fire-i400™**:

[C-Mount Lens Attachment Procedure](#), [C-Mount Lens Selection Data](#), [C-Mount Lens Manufacturers](#).

**Picture modes** progressive VGA uncompressed, modes selection by FireWire link

**Resolutions** 640x480, 320x240, 160x120

**Codings** YUV, RGB, Monochrome

**Video Modes / Frame rates**

	30 fps	15 fps	7.5 fps	3.75 fps
640x480 RGB-24 (24 bits)	-	X	X	X
640x480 YUV 4:2:2 (16 bits)	-	X	X	X
640x480 YUV 4:1:1 (12 bits)	X	X	X	X
640x480 Y-Mono8 (8 bits)	X	X	X	X
320x240 YUV 4:2:2 (16bits)	X	X	X	X
160x120 YUV 4:4:4 (24 bits)	X	X	X	-

**Picture settings** settings selection by FireWire link

**Gain** Auto/Manual 0 - 30 dB

**Shutter** Auto/Manual 1/3400s - 1/31s

**Black level** Auto/Manual

**Gamma** OFF (linear) = 1 / ON (visual) = 0.45

**Backlight compensation** 6 modes + OFF

**Sharpness** OFF (linear) = 0 / ON (visual) = manual

**White Balance** Auto/Manual

**Color Saturation** Manual

**Reference picture generator** Bars and ramps, all modes.  
ON/OFF

### General

**Temperature/Humidity, operation** -10 to 50C / 20 to 80 % rel., non cond.

**Temperature/Humidity, storage** -20 to 60C / 20 to 95 % rel., non cond.

**Dimensions (W x H x D)** 44.5 x 32.5 x 92 mm

**Weight** 200 gr camera

**Housing** metal, black

**Attachment** tripod screw, lens cap

**Accessory** Fire-i™ Software

**Power supply** 8 to 30 VDC, software switched by FireWire link

**Source** by 1394 link

**Standby power** 400 mW typ., 450 mW max.



Click here for full  
CCD Specification

**Operation power** 900 mW typ., 1 W max.

<b>Interface</b>	IEEE-1394a (FireWire) 400 Mbps, 2 ports (6 pins)
<b>Camera Type</b>	IIDC-1394 Digital Camera, V1.04 Specification compliant
<b>Sensor Type</b>	SONY® Wfine* 1/4" CCD Color, progressive, square pixels
<b>Resolution</b>	VGA 640 x 480
<b>Optics</b>	C-Mount
<b>Video Modes</b>	YUV (4:1:1, 4:2:2, 4:4:4), RGB-24bit, Monochrome-8bit
<b>Frame Rates</b>	30, 15, 7.5 and 3.75 frames per second
<b>Gain</b>	Automatic or Manual Control 0-30 dB
<b>Shutter</b>	Automatic or Manual Control 1/3400s-1/31s
<b>Gamma</b>	ON/OFF (visual use/image processing use)
<b>White Balance</b>	Automatic or Manual Control
<b>Color Saturation</b>	Adjustable
<b>Backlight Compensation</b>	6 modes + OFF
<b>Sharpness</b>	Adjustable
<b>Special Features</b>	Software sleep mode, Color bar generator
<b>Power Supply</b>	8 to 30 VDC, by 1394 bus Consumption 1W max, 0.9 W typical, 0.4 W sleep mode
<b>Dimensions (WxHxD)</b>	44.5 x 32.5 x 92 mm
<b>Housing &amp; Weight</b>	Metal, 200 gr
<b>Included Accessories</b>	Fire-i™ Software, Tripod screw, Lens cap, 4.5m FireWire 6-pins cable

## Image Sensor Characteristics

Item	Min.	Typ.	Max.	Unit
<b>G sensitivity</b>	350	440	0.6/0.7	mV
<b>Sensitivity comparison (R/B)</b>	0.3/0.4	0.45/0.55		
<b>Saturation signal</b>	500			mV
<b>Smear</b>		0.001	0.0025	%
<b>Video signal shading</b>			25	%
<b>R/B Uniformity with G</b>			8/8	%
<b>Dark signal</b>			4	mV
<b>Dark signal shading</b>			1	mV
<b>Line crawl G</b>			3.8	%
<b>Line crawl R</b>			3.8	%
<b>Line crawl B</b>			3.8	%
<b>Lag</b>			0.5	%

\*Wfine CCD is a trademark of Sony Corporation.

