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ELDIM iSENSE high performance, digital cameras are designed for use in quantitative imaging applications. Featuring Kodak scientific grade CCD sensors with up to 6.3 million pixels, iSENSE cameras provide high, true dynamic range from a 16 bit A/D converter and a low noise signal digitalization. iSENSE camera control software provides manual and automated settings for ease of operation, as well as image and measurement data export to other applications. With the performance and feature options available, there is sure to be an iSENSE camera to meet your demanding imaging requirements.

| FEATURES | BENEFITS |
|---|--|
| <ul style="list-style-type: none"> - Up to 16 bit digitization with Correlated Double Sampling - -30°C +/- 0.1°C absolute CCD temperature - System flat-fielded calibration - Telecentric-on-CCD technology | <ul style="list-style-type: none"> - High dynamic range even at low light level - Better repeatability - Uniformity testing capability - Flexibility for any sample sizes |
| <ul style="list-style-type: none"> - Fast and monitored mechanical shutter | <ul style="list-style-type: none"> - Aperture time controlled for true quantitative and flux measurements |
| <ul style="list-style-type: none"> - Open software package based on ActiveX technology - Complete software solution including camera control, viewer, analysis and developer kit | <ul style="list-style-type: none"> - Easy data extraction and integration within existing measurement process - Full automation of measurements, analysis and plug in - No extra cost |
| <ul style="list-style-type: none"> - USB 2 Plug and Play | <ul style="list-style-type: none"> - Easy to install - Run on laptop |
| <ul style="list-style-type: none"> - ELDIM optical lab capabilities - ELDIM high grade custom optics | <ul style="list-style-type: none"> - High accuracy photometry and colorimetry - Lower MTF and smaller distortion |

High Performance Digital CCD Camera

| | | | |
|--------------------------------------|--|-------------|-------------|
| Number of pixels | 768 x 512 | 1536 x 1024 | 3088 x 2056 |
| Digital output | 16 or 14 bit (Software selectable) | | |
| Dynamic range /SNR | 80 dB at 5 MHz, gain 1x 87 dB at 25 KHz, gain 1x | | |
| Truedynamic/Effective number of bits | 13.3 bit at 5 MHz, gain 1x 14.5 bit at 25 KHz, gain 1x | | |
| Total noise | 9 electrons RMS at 5 MHz, gain 1x 4 electrons RMS at 25 KHz, gain 1x | | |
| Peltier cooling | Stabilized at -30 +/- 0.1°C | | |
| User gains | Three detection modes or gains, software selectable : high sensitivity (2x), high dynamic range (1x), high SNR (0.5x) | | |
| High fill factor | 100% | | |
| Spectral range | 300nm to 900nm - Blue enhanced | | |
| Integration time | Adjustable from 5 to 120 000 ms | | |
| Non-linearity (PRNL) | <1% | | |
| Non-uniformity (PRNU) | <1% | | |
| Repeatability | <0.5% | | |
| Binning mode | 1 to 10 | | |
| Region of interest | Programmable size and position down to one pixel | | |
| Trigger input | TTL level (rising-falling edge), BNC connector | | |
| Digital interface | USB 2 Plug & Play | | |
| Lens mount | C-mount or F-mount | | |
| Shutter control | Fast and auto-calibrated mechanical shutter | | |
| Dimensions | 20 (L) x 13.5 (W) x 12 (H) cm / 2.6 kg | | |
| Support | Field upgradeable | | |
| Operating conditions | 0 - 40°C / 0 - 85% non condensing humidity | | |

EZCom Software Features

| | |
|--|---|
| O.S. | Windows 98, 2000, XP |
| Automatic/Manual control | Sensitivity, dynamic optimization, gain, dark current compensation, ROI and binning |
| Data and image processing and archiving | Versatile display (false color, grey level) and scaling ratio, cross-sections, isocurves and mathematical functions |
| Camera remote control data extraction analysis | 32-bits open software (ActiveX technology) from/to Visual Basic, C++ and Labview applications |

Detailed Sensor Specifications

| | | | |
|-----------------------|---|-----------------|------------------|
| CCD sensor | KAF 401E | KAF 1602E | KAF 6303E |
| CCD grade | Scientific grade | | |
| Pixel size | 9 x 9 µm | | |
| Sensor format | 3/2 | | |
| Scan area | 8.4 x 5.5 mm | 13.97 x 9.29 mm | 27.65 x 18.48 mm |
| Full well capacity | 100 000 electrons | | |
| Scan rate | User selection : 25 KHz to 5 MHz | | |
| Transfer frequency | 480 Mbit/s | | |
| Dark current noise | 0.04 electron/pixel/sec. at -30°C | | |
| A/D conversion factor | 1.5 - 6 electrons/count | | |
| Quantum efficiency | 30% at 400nm, 60% at 550 nm, 30% at 850nm | | |

Options

| | |
|--------------------------|--|
| Anti-blooming CCD Sensor | Avoid saturated pixel overflow into adjacent pixels |
| Glass filters | Up to 9 filters available on wheel for sensor filtering |
| Color Imaging | RGB CCD sensor |
| Optics | Catalog optics or ELDIM high grade optics |
| Colorimeter / Photometer | Human eye response vision - compliant with NVIS measurements Calibration (flat field correction, photometry and colorimetry) |

Note : Specifications are typical and subject to change.