



# CMV-51-TEC

Global Shutter CMOS

8424 x 6032 - 4.6µm PIXEL - 35mm Format



*The CMV-51-TEC features the latest generation Gpixel GMAX4651 4.6µm charge-domain global shutter sensor. 51MP equates to 24x the resolution of full HD. The CMV-51-TEC is ideal for OLED inspection and demura applications in color or monochrome.*

The CMV-51-TEC offers outstanding quality by using the Gpixel GMAX4651 CMOS sensor, which is thermo-cooled to 5°C. The image sensor has 14 digital outputs each running up to 50Mhz. This results in 10.1 fps at full resolution in CameraLink full mode. Higher frame rates can be achieved in ROI/windowing mode. Thermo-cooling ensures minimum dark current, thermo-noise and hot pixels by maintaining the temperature of the sensor at 5°C.

## CMV-51 TEC CMOS HIGHLIGHTS

- ✓ 8424 X 6032 = 51M 4.6µm x 4.6µm pixels
- ✓ Dimensions 38.75 X 27.75mm imaging area with ~ 35mm Full Frame
- ✓ Thermo-Cooled sensor to 5°C @ 20°C
- ✓ No row or column defects
- ✓ Monochrome and RGB Bayer versions
- ✓ Dynamic range 65.8dB
- ✓ Well depth 18.0Ke
- ✓ Windowing ROI capability
- ✓ Field Updatable Firmware and Extensive Built In Test (BIT)
- ✓ CameraLink output: Base, Medium, Full and Deca
- ✓ M58, Nikon F, Canon EF, and OEM lens mounts

Preliminary

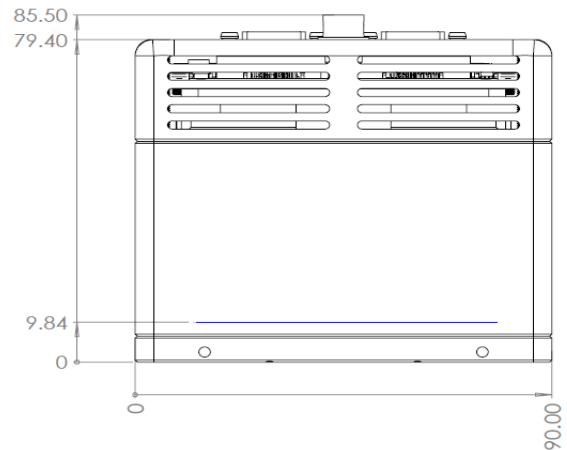
## CMV-51 TEC CMOS SPECIFICATIONS

Sensor	Cpixel GMAX4651 Monochrome, Bayer Color
Active Pixels	8424 (H) x 6032 (V), 51Mpix
Pixel Size	4.6µm x 4.6µm with CDS
Active Image Size	37.75 x 27.75mm (~35mm Full Frame)
Sensor Outputs	14 lvs outputs from sensor. Digitized 12 bits, Output 8/10/12 bits
Frame Rate	See Table
Dynamic Range	65.8dB @ gain x3.5
Pixel Clock Speed	Up to 50Mhz, 14 channels
Full Well Charge	18000e @ gain x 3.5
Global Shutter Charge Domain Pixel	PLS < -92dB (1/40000)
Dark Noise	7.6e rms @ gain x5
Peak QE	67.1%
Min / Max Exposure	33µsec / 65sec
TEC	5°C minimum @ 20°C
Sensor Defects	See Table
Defect Correction	Pixel, Hot Pixel, Shading, Black Clamp
Exposure Modes	Free Run, Triggered Program, Triggered Pulse Width
Power	7-12VDC at 8-24W - Reverse power protected
Lens Mount Options	M58, Nikon F, Canon EF, OEM
Options	USB3
Operating Temperature	0°C to +70°C (TBD)
Import Category	Digital Still Image Camera

All illunis cameras come with our free camera control software, which allows interactive setup of all camera parameters.



## M58 DIMENSIONS



## APPLICATIONS

- ✓ LCD/FPD INSPECTION > 8K FPD RESOLUTION
- ✓ OLED INSPECTION
- ✓ MICRO LED INSPECTION
- ✓ DEMURA
- ✓ LONG EXPOSURE APPLICATIONS
- ✓ SCIENTIFIC IMAGING
- ✓ MILITARY
- ✓ BIOMETRIC

Data Interface	bits / pixel	Frame Rate
Camera Link Base	8 / 10 / 12	2.6
Camera Link Medium	8 / 10 / 12	5.2
Camera Link Full	8 x 8	10.5
Camera Link Deca	8 x 10	10.5

Defect	Grade 1	Grade 2	Grade 3
Max # of Defect Pixels	TBD	TBD	TBD
Acceptable Cluster Size	TBD	TBD	TBD
Max # of Clusters	TBD	TBD	TBD
Max # of Defect Row and Columns	0	0	0

# Get in Touch

✉ [info@illunis.com](mailto:info@illunis.com)



### CONTACT US

illunis, LLC  
14700 Excelsior Boulevard  
Minnetonka, MN 55345 USA

☎ +1.952.975.9203  
 📠 +1.952.294.8308 (fax)  
 ✉ [info@illunis.com](mailto:info@illunis.com)  
 🌐 [www.illunis.com](http://www.illunis.com)