



## PL-D775

CMOS | ROLLING SHUTTER

ON SEMI MT9P006 (COLOR) | ON SEMI MT9P031 (MONO)

The PL-D family of cameras links together the benefits of high frame rate CMOS technology with the high speed data throughput of USB 3.0 technology. The PL-D775 camera provides low noise images for outstanding value for a broad range of industrial applications.



### KEY FEATURES

5MP  
CMOS

14  
FRAMES  
Per Sec.

2.2µm

7.13mm

Sensor  
Size  
1/2.5"

12 BIT

COLOR

MONO

USB 3

USB  
VISION

### TYPICAL APPLICATIONS

Parts inspection  
Strength Testing  
Metrology

Biometrics  
Medical Imaging  
PCB & Flat Panel Display Inspection

## TECHNICAL SPECIFICATIONS

### SENSOR

Sensor	ON Semi MT9P006 (C) ON Semi MT9P031 (M)
Type	CMOS Rolling Shutter
Resolution	5 MP (2592 x 1944)
Pixel Pitch	2.2 $\mu$ m x 2.2 $\mu$ m
Active Area	7.13 mm diagonal
Peak QE	62% @ 575nm

### PERFORMANCE SPECIFICATIONS

FPN	< 1% of signal
PRNU	< 2% of signal
Dynamic Range	60 dB
Bit Depth	8 or 12-bit
Color Data Formats	Bayer 8, Bayer 12 packed Bayer 16 & YUV422
Mono Data Formats	Mono 8, Mono 12 packed & Mono 16

### FRAME RATES

Resolution	Free Running
2592 x 1944	14.1 fps
1280 x 1024	42.6 fps
640 x 480	127.5 fps

Frame rates will vary based on host system and configuration

\*Above calculations based on fixed frame rate mode

### INTERFACES

Interface   Data rate	USB 3.0   Micro-B   5Gbps
Board Level Trigger Connector	8-pin Molex 1.25mm pitch
Enclosed Trigger Connector	Hirose round 8-pin
Trigger	Software and hardware
Board Level Trigger Input	1 input, 3.3V (with internal pullup resistor)
Enclosed Trigger Input	1 optically Isolated, 5-12V DC at 4-11 mA
Board Level GPO/Strobe	2 outputs, 3.3V
Enclosed GPO/Strobe	2 outputs, 3.3V and 1 optically isolated max 40V DC, max 15mA
GPI	1 input, 3.3V (with internal pullup resistor)

### MECHANICALS

Dimensions (mm)	55 x 38.5 x 30.00
Weight (g)	35.8 (Board level without optics)
Mounting	C-Mount and S-Mount

### POWER REQUIREMENTS

Voltage Required	5V DC (from USB connector)
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### PIN NAME & FUNCTION

1	3.3V power output
2	TRIGGER/GPI 3.3V HCMOS input
3	Ground
4	GPO1, 3.3V HCMOS output
5	GPO2, 3.3V HCMOS output
6	Clock, 3.3V (I2C access for OEMs)
7	Data, 3.3V (I2C access for OEMs)
8	No connection

Board connector: Molex (8-pin, 1.25mm pitch, vertical); Cable receptacle: Molex 51021-0800; Cable crimp terminals: Molex 50079-8100

### ENCLOSED GPIO INTERFACE PIN OUTPUT DESCRIPTION

1	VBUS (Power output from USB3 cable)
2	TRIGGER + (optically isolated)
3	TRIGGER - (optically isolated)
4	GPO1 + (optically isolated)
5	GPO1 - (optically isolated)
6	GPO1, 3.3V HCMOS output (I2C - SCL for autofocus)
7	GPO2, 3.3V HCMOS output (I2C - SDA for autofocus)
8	Ground (logic and chassis ground)

### ENVIRONMENTAL & REGULATORY

Compliance	FCC, CE & RoHS
Shock & Vibration	300 G & 20 G (10Hz - 2KHz)
Operating Temperature	0°C to 50°C
Storage Temperature	-45°C to 85°C

### SOFTWARE

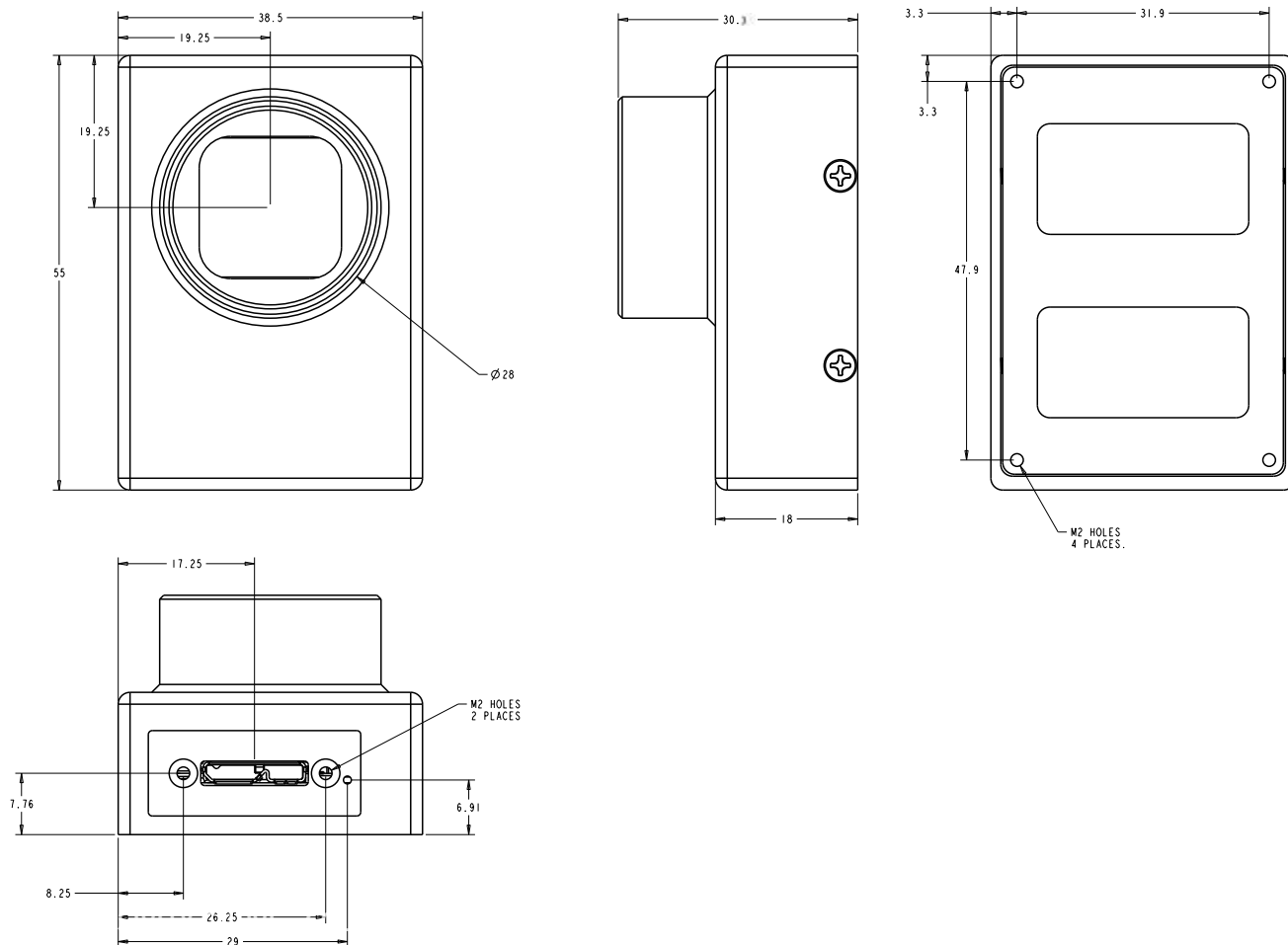
Pixelink Capture	Control & operate multi-camera
Pixelink SDK	Software Development Kit
Pixelink $\mu$ Scope	Acquisition, analysis & reporting
3rd. Party U3V Vision Applications	

### COMPUTER & OPERATING SYSTEM

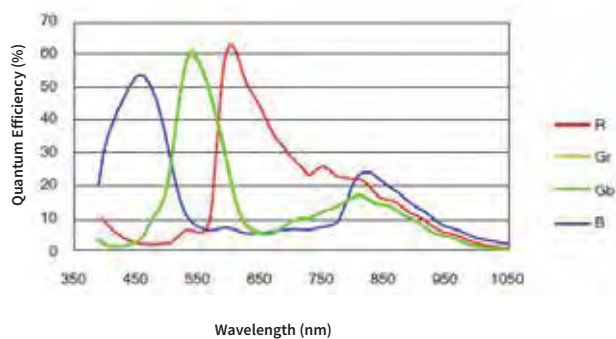
	Windows	Linux x86	Linux ArmV7	Linux ArmV8
Processor	Intel i5 or better	Intel i5 or better	Arm7 (32 bit)	Arm8 (64 bit)
Memory	4GB recommended	4GB recommended	2GB	2GB
Hard Drive Space	150 MB	150 MB	50 MB	50 MB
Operating System	Windows 7/8/10	Ubuntu 14.04/16.04 Desktop	Ubuntu 14.04/16.04	Ubuntu 14.04/16.04

# MECHANICAL DRAWINGS & RESPONSIVITY CURVES

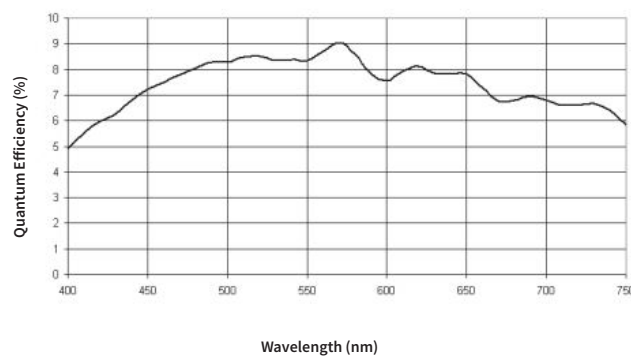
## MECHANICAL DRAWINGS



## RESPONSIVITY CURVE - COLOR



## RESPONSIVITY CURVE - MONO



## PIXELINK'S INDUSTRY LEADING SOFTWARE

### PIXELINK CAPTURE

**Pixelink Capture** is a powerful software tool designed to allow users to stream real-time, high quality video that can be viewed in a preview window. It is a multi-camera application that can configure "n" number of cameras and the user can view up to four cameras simultaneously. In order to control all four cameras separately, Pixelink Capture offers a unique multi-camera layout view, which can be customized and organized under the same window. Camera control capabilities include image size, color and exposure which can be adjusted interactively through an easy-to-use control interface prior to image or video clip capture.

Visit [pixelink.com](http://pixelink.com) for more detailed information.

### PIXELINK SDK

Providing full control of all camera functions, the **Pixelink SDK** is the software package of choice for developers and system integrators who are integrating Pixelink cameras into their applications. The Pixelink SDK provides access to the full Pixelink Application Programming Interface (API) and provides sample applications and wrappers for many 3rd party controls, such as LabVIEW, along with full documentation. The Pixelink SDK is compatible with Microsoft Windows and popular Linux platforms. When using the Pixelink SDK, developers can integrate Pixelink cameras into their custom applications with ease.

Visit [pixelink.com](http://pixelink.com) for more detailed information.

### INTERNATIONAL SALES

**Pixelink Canada**  
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1.833.247.1211

### NORTH AMERICAN SALES

**Pixelink U.S.A.**  
200 Commerce Drive  
Rochester, NY 14623, U.S.A.  
1.585.359.4000  
1.800.828.6778

## AVAILABLE CONFIGURATIONS

PL-D775CU  
PL-D775CU-BL  
PL-D775CU-T  
PL-D775CU-AF16  
PL-D775CU-AF25  
PL-D775CU-BL-AF16

PL-D775CU-BL-AF25  
PL-D775CU-S-BL  
PL-D775CU-S-BL-AF2.6  
PL-D775CU-S-BL-AF7.5  
PL-D775CU-S-BL-AF9.6  
PL-D775CU-CS-BL

PL-D775MU  
PL-D775MU-BL  
PL-D775MU-T  
PL-D775MU-AF16  
PL-D775MU-AF25  
PL-D775MU-BL-AF16

PL-D775MU-BL-AF25  
PL-D775MU-S-BL  
PL-D775MU-S-BL-AF2.6  
PL-D775MU-S-BL-AF7.5  
PL-D775MU-S-BL-AF9.6  
PL-D775MU-CS-BL

**Color Space**  
C = Color  
M = Mono  
NIR = Near Infrared

**Interface**  
F = Firewire  
G = GigE  
U = USB

**Housing**  
CS = CS Mount  
S-BL = S Mount Board Level  
BL = Board Level  
T = Trigger  
CYL = Cylindrical Case

**Autofocus**  
AF = Autofocus Lens (in mm)