

## Camera Link compliant, 12megapixels, 20 frame/sec **FCM12MPL** Monochrome **PROGRESSIVE SCAN CAMERA** **FSM12MPL** Color



### Overview

- The FC (S) M12MPL is a monochrome (color) progressive camera equipped with a high sensitivity and high-resolution CMOS sensor.
- Outputs progressive images in 20fps, with 12million pixels.
- The noise is reduced by adopting the rolling shutter receiving light at a large area.
- Digital image signal is output in 12/10/8-bit format complying with Camera Link .
- By global reset using a strobe light simultaneously, the random shutter (async reset) works like a global shutter mode.

### Specifications

Type	FCM12MPL	FSM12MPL
	Monochrome CMOS 1 inch size	Bayer color CMOS 1 inch size
Image sensor	Progressive scanning / Rolling shutter system Unit cell size 3.1μm×3.1μm	
Number of pixels	4,000(H)×3,000(V)	
Sensitivity	1.4V/lx · sec (on the element)	
Saturation exposure	17.8Ke- (on the element)	
Dynamic range	77.4dB (on the element)	
Video output signal	Progressive scanning : 20 frame/sec. (at 8bit) digital output / Camera Link (Base/Full Configuration) 8/10/12bit	
Built-in function	Global reset	
Lens mount	C mount	
Electronic shutter	100usec ~ 90msec	
Optical filter	None	
Operation ambient temperature	0 ~ 40°C (with no condensation)	
Power supply	DC12V±10% 200mA or less	
Weight	110g	
External dimension	48(W)×45(H)×36.7(D) ( connector excluded )	

### Features

- Either normal Camera Link board or PoCL board (with power over-lapping) can be connected.
- The high-sensitivity CMOS sensor enables the adoption of general purpose C-mount, despite the 12 million highpixels
- The Full Configuration (with two Camera Link cables) for a high-speed reading applications, or the Base Configuration (with single Camera Link cable) in a low-speed reading application, can be selected depending on the application.
- Reduced size and weight by original mechanism and electrical circuit design.

### Applications

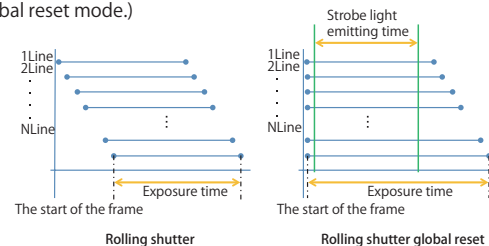
- Input device for electronic shutter image processor
- Appearance inspection device
- Monitoring equipment
- Inspection device for electronic packaging
- Inspection equipment for liquid crystal panel
- Data entry device for image processing unit employing computer

### Global reset shutter

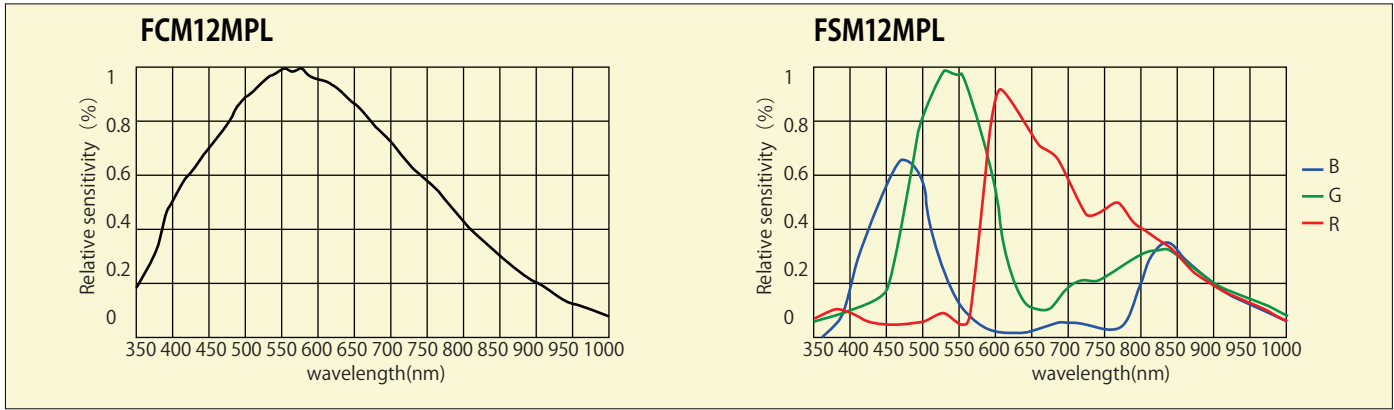
In the global reset mode, all pixels of the sensor are exposed simultaneously.

By combining this feature and external strobe lighting, it is possible to get the equivalent effect to asynchronous shuttering of the global shuttering.

\*Always use strobe lighting for the exposure time in global reset mode. (Compared with the global shutter, it requires a cut-off of the external light in the global reset mode.)

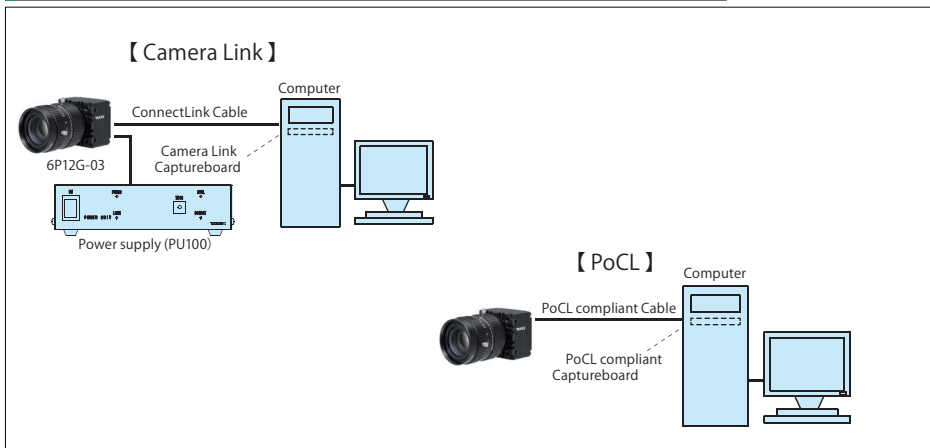


Spectral Sensitivity

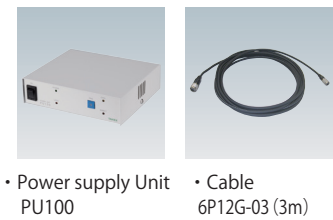


Configuration Diagram

※(Sold separately)

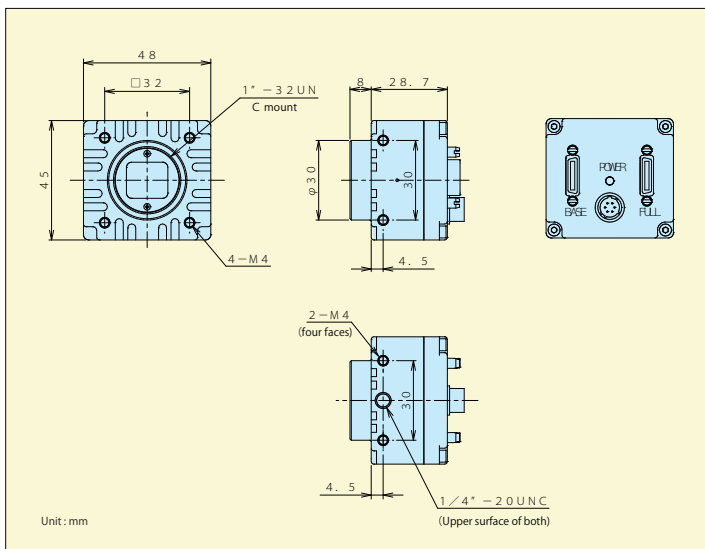


Example of option Items

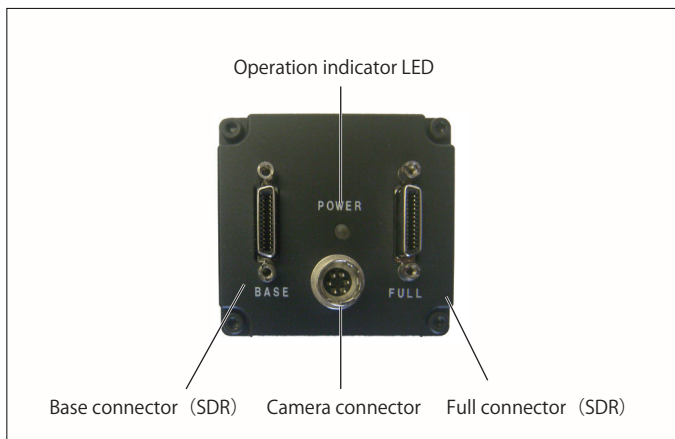


- Power supply Unit PU100
- Cable 6P12G-03 (3m)

Dimensional Outline Drawing



Back panel



● It may be changed without a notice about all items (product name, a model, specifications, external form dimensions, materials, the price) explained by this catalogue.  
 ● We do not take responsibility about any accident damage by an error in the use of deficiency in the construction and deficiency of the maintenance check and this product, the natural disaster (surge, including lightning-induced).



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