

Panasonic®

Machine Vision B/W CCD Camera

GP-MF130

**High speed shutters
up to 1/96,000 second.**



This lightweight, compact and high sensitive unit shows excellent cost/performance and enables high speed electronic shutter speed of up to 1/96,000-sec for FA applications.

Application

- Position SMT / wafer / PCB inspection
- FA / Robots
- Image Processing

Key Features

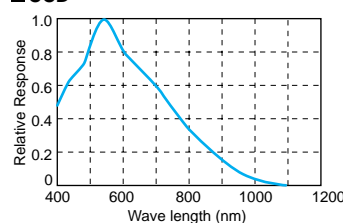
- Dimensions: 29 mm (width) x 29 mm (height) x 65 mm (length) (w/o I/O connectors). Ultra-Compact and lightweight.
- Variable electronic shutter speed: 1/60, 1/100, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/8,000, 1/16,000, 1/32,000, 1/64,000, 1/96,000 sec.
- Long lens mount base design that allows wide range of lens selection.
- Equipped two (2) Video output terminals.
- 570 line horizontal resolution.
- Selectable field / frame integration
- 1.0 lx minimum scene illumination at F1.4.
- 56 dB signal-to-noise ratio.
- C-mount
- Removable IR cut filter.
- Designed to withstand strong Vibration / Shock resistant.

The shutter speed can be set as below

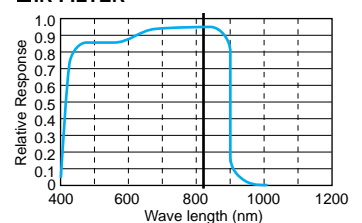
Switch 1				Shutter Speed
2	3	4	5	
off	off	off	off	off
on	off	off	off	1/100
off	on	off	off	1/500
on	on	off	off	1/1,000
off	off	on	off	1/2,000
on	off	on	off	1/4,000
off	on	on	off	1/8,000
on	on	on	off	1/16,000
off	off	off	on	1/32,000
on	off	off	on	1/64,000
off	on	off	on	1/96,000
Other Combinations				Not Specified

Spectral Response

■ CCD




■ IR FILTER




MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

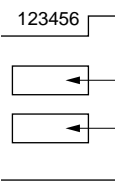
Right Side View
Actual size



Rear View
Actual size



Left Side View



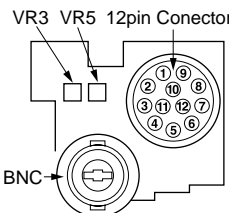
SW1

- 1: Field / Frame
- 2: Electronic shutter D0
- 3: Electronic shutter D1
- 4: Electronic shutter D2
- 5: Electronic shutter D3
- 6: Not used

SW2

- 1: Not used
- 2: Not used
- 3: Not used
- 4: Not used
- 5: HD 75Ω OFF/ON
- 6: VD 75Ω OFF/ON

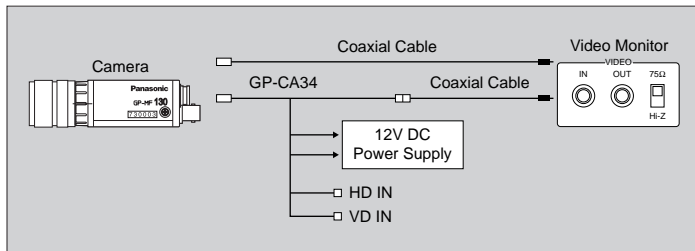
Rear View



VR3: Pedestal Control
VR5: Manual Gain Control
BNC Connector: Video out 2
HR10A10R12PB

Pin No.	Description
1	Ground
2	+12V IN
3	Ground for Video Out
4	Video Out
5	Ground for HD
6	HD IN
7	VD IN
8	Ground
9	No connection
10	No connection
11	No connection
12	Ground for VD

SYSTEM CONNECTIONS




SPECIFICATIONS


Pick-up Device	Interline Transfer type CCD with 768 (H) x 494 (V) pixels.
Image Size	1/3" (6.00 (H) x 4.96 (V) mm) 2 : 1 interlace 1-line interlace (Frame accumulation) 2 : 1 interlace 2-line interlace (Field accumulation)
Synchronization	Internal or External (Selectable Automatically) Internal : Built-in sync generator External : 4.0 V[p-p]/75 ohms Horizontal drive and Vertical drive pulses for 2 : 1 interlace
Horizontal Resolution	570 lines at center
Minimum Illumination	1.0 lx (0.1 foot-candles), (F1.4, Manual Gain Max (+6 dB), 2 : 1 interlace, without shutter)
Signal to Noise Ratio	56 dB Typical (Manual Gain Off (0 dB), 2 : 1 interlace without shutter)
Gamma	1.0
Gain Selection	0 - 6 dB, (Adjustable by Manual Gain Control on rear panel)
Electronic Shutter	10-step (1/100 s to 1/96 000 s) at normal
Lens Mount	C-Mount
Vibration Resistance	10 G (10 Hz - 150 Hz) (2 hours each for three axes)
Shock Resistance	80 G (IEC 68) *IEC=International Electrotechnical Commission
Power Source	DC +12 V, 170 mA
Ambient Temperature	-10°C - +50°C (14°F - 122°F)
Dimensions	29 (W) x 29 (H) x 65 (D) mm [1-1/8" (W) x 1-1/8" (H) x 2-9/16" (D)]
Weight	86 g (0.19 lbs.) (Camera Only)

OPTIONAL ACCESSORIES

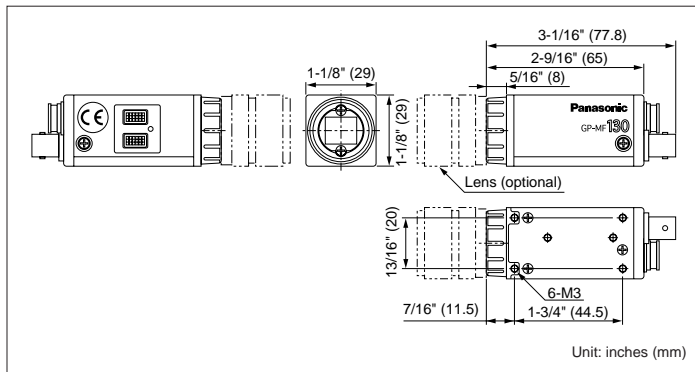
Camera Cable
GP-CA34



Camera Cable
GP-CA33



APPEARANCE



• Weights and dimensions are approximate. • Specifications are subject to change without notice. • These products may be subject to export control regulations.

Panasonic

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